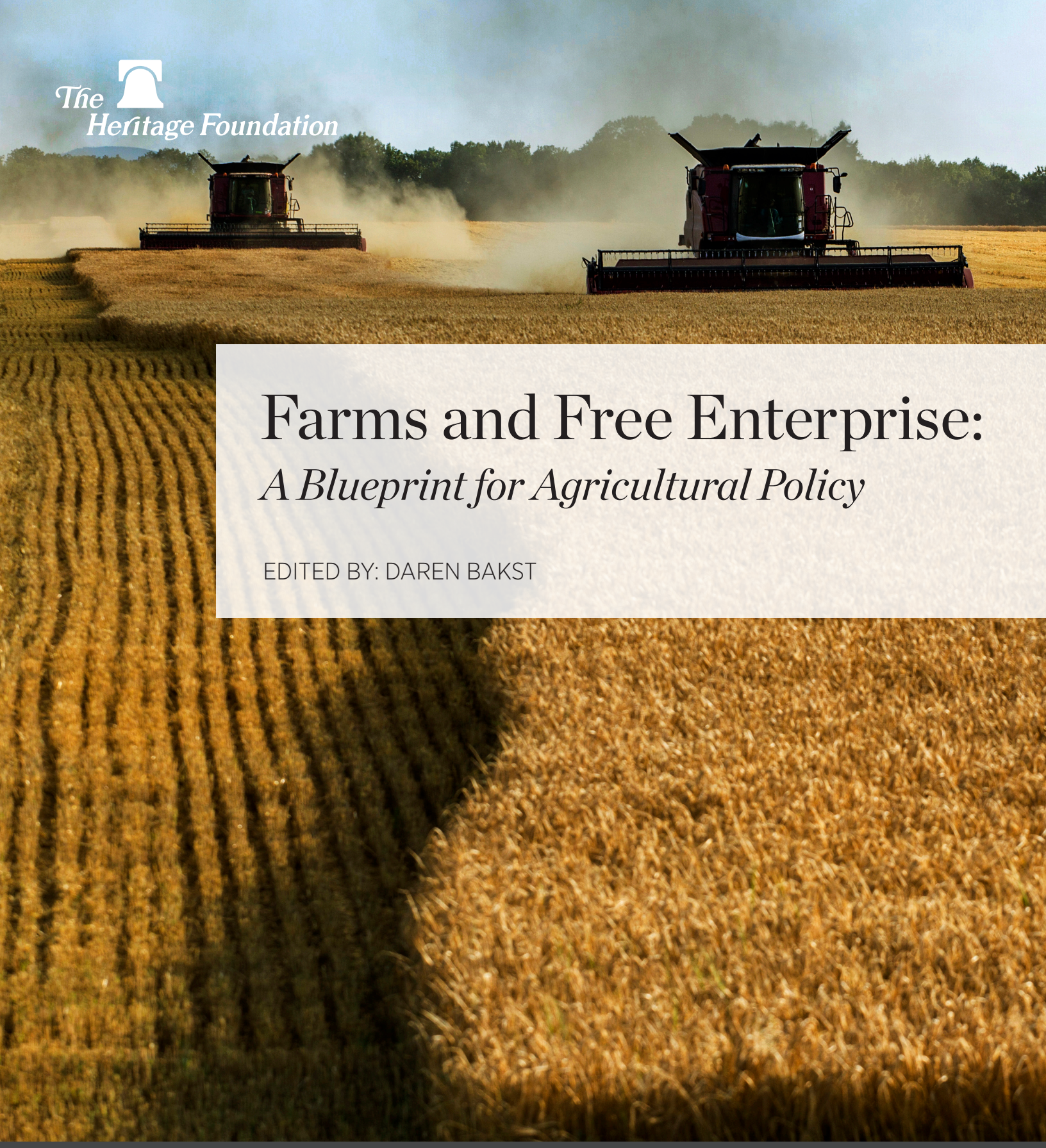

The Heritage Foundation

Farms and Free Enterprise:

A Blueprint for Agricultural Policy

EDITED BY: DAREN BAKST

MANDATE FOR LEADERSHIP SERIES

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FOREWORD

"I had rather be on my farm than be emperor of the world."

—George Washington

Centuries before the birth of Christ, there lived a Roman politician named Lucius Cincinnatus. The fortunes of his career had reduced him to a modest living, tilling the soil of his own fields. But he had a reputation for faithful governance.

In those days, Rome was often at war with its neighbors. On one of these occasions, when the situation looked grim, the leaders of Rome came to Cincinnatus to offer him absolute power if he could save them from their enemies. He met them standing at his plow, as he donned his official robes.

He rallied all the men of military age and set out for victory. Within 15 days, Cincinnatus had conquered the enemies of Rome, shown mercy toward the defeated, and returned to his plow. He gave up a dictatorship for the sake of the Republic and the land he loved.

His legacy was mirrored by that of George Washington, who was so beloved by the American people after the Revolutionary War that he could have well become a despot in his own right. But after serving two terms as President, he too returned to his crops and fields. To this day, The Society of the Cincinnati is composed of the descendants of Revolutionary War officers who celebrate the ideal of Cincinnatus as upheld by Washington.

To give up the reins of government for the reins of the workhorse not only reinforces the importance of liberty and patriotism; it points to the timeless role of the land and those who work it. The agriculture which feeds us precedes government in directly serving the needs of the American people.

And yet today, unlike its honored namesake, the *city* of Washington prefers being an "emperor" which meddles in farming across the nation—quite a reversal.

Subsidies for politically connected industries prop up businesses and insulate them from foreign competition, disproportionately favoring big agricultural producers. Sometimes this has nothing to do with the food we eat, like the government handouts to make inefficient ethanol from corn.

An oppressive regulatory regime drives up costs for farms and consumers, while mandatory labeling requirements and other faddish fears of modern farming techniques sacrifice plentiful, safe food to the altar of pseudo-science.

So many of these measures are excused and justified with appeals to the importance of American agriculture and the vital role of our farms. It is very easy to signal that one cares deeply about agricultural issues by taking money from some citizens and giving it to others—a favorite and practiced pastime in Congress.

Even politicians who normally seek to prevent the government from picking winners and losers in other sectors of the economy, like technology, the Internet, or energy development are loathe to stop interfering in agriculture, lest they be blamed for the failure of a business that was unable to stand on its own.

But we must apply the same free-market reasoning we use for any economic question: supply and demand of our food should be determined by the market, precisely because it is so essential to our day-to-day lives. Agriculture is too important to be left in the hands of the federal government.

Instead, we should treat food like any other product which we want readily and cheaply available to the consumer, from cell phones to cars. Competition—the more open, the better—will always benefit regular Americans.

Our leaders will best honor the vital role of agriculture in our society by letting us return to our plowshares unmolested by the government, and leaving despotism with the rest of the fertilizer.

It is the Washington thing to do.

Jim DeMint, President
The Heritage Foundation
September 2016

PREFACE

Proponents of reforming agricultural policy need to address farm bill issues before farm bill legislation is introduced in Congress. Once legislation is introduced, the general framework for the policies that will be contained in the next farm bill are too well entrenched. A proactive approach will ensure that those who are seeking reforms are not, at best, tinkering with flawed policy in an effort to make bad policy less egregious.

This report tries to address this problem by identifying and promoting solutions before the next farm bill is introduced; it develops an alternative to the farm bill. The goal is to provide legislators a clear choice: Support a free-enterprise alternative to the farm bill or maintain the status quo of costly and harmful subsidies.

Agricultural policy is broader than the subsidies contained in the farm bill; this report also provides recommendations on addressing key agricultural issues that are usually not included in the farm bill, such as the Renewable Fuel Standard, water regulation, and most agricultural trade. These issues need to be addressed and the farm bill is an appropriate legislative vehicle to do so.

No existing policy was deemed off-limits from scrutiny. The principles outlined on p. 5 helped to evaluate existing policy and to identify concrete recommendations for policymakers. This report covers many issues, but it certainly is not exhaustive given the breadth of agricultural policy. However, it should provide a valuable starting point for further discussion on many of the most important issues affecting agriculture.

Numerous authors, advisory task force members, and special advisers all participated in helping with the analysis. Advisory task forces were created to provide assistance and feedback for Part I of this report on agricultural risk as well as for the biofuels and free trade sections in Part II. Special advisers provided assistance and feedback on their respective issue areas within Section 8, "Eliminating and Reducing Regulatory Obstacles in Agriculture," and the New Zealand discussion in Section 5.

Advisory task force members and special advisers provided assistance and feedback only. Their inclusion in this report does not necessarily indicate support for the report (or any part of the report). The views expressed in the report are those of the authors alone and do not necessarily represent the views of the advisory task force members, special advisers, or the views of organizations with which they are associated.

Daren Bakst,
Research Fellow in Agricultural Policy
The Heritage Foundation

INTRODUCTION

Daren Bakst

Agriculture affects all Americans because even if Americans are not farmers or ranchers, they are all agriculture consumers. Therefore, agriculture, and the policy issues impacting agriculture, should be of importance to everyone. These issues extend far beyond farm subsidies and include everything from environmental regulation to agricultural trade. There is no question that farm subsidies, and specifically the farm bill, play a central role in current agricultural policy.

Every five years or so, Congress passes legislation that reauthorizes many of the agricultural programs, including costly subsidies that are provided to agricultural producers. This legislation is referred to as the farm bill. A key goal of this report is to provide an alternative to the farm bill. It is important to clarify what is meant here by an "alternative to the farm bill." The alternative consists of legislative solutions that can give legislators a choice between the status quo and policies that believe in farmers, ranchers, and the market, not in cronyism and big government.

To develop such an alternative, the existing farm bill had to be addressed. This report does not cover every part (i.e. title) of the farm bill, but instead primarily focuses on commodity programs (such as price and income supports) and federally subsidized crop insurance, which make up the taxpayer-funded "safety net" for agricultural producers. In addition, the report is not limited to focusing on existing farm bill policies. Agricultural policy is a broad area, covering a wide range of issues. This report addresses some of these key issues: biofuels and the Renewable Fuel Standard (RFS), agricultural trade, and regulatory obstacles impacting agriculture (e.g., Clean Water Act, Endangered Species Act). The many policy recommendations identified in this report connected to these issues should also be included in any legislation that serves as the alternative to the farm bill, if not addressed sooner.

About 80 percent of the costs of the farm bill are connected to the nutrition title of the bill, consisting mostly of the food stamp program. This publication is focused on agriculture and not on nutrition programs. As such, it does not address substantive policy issues connected to the food stamp program.

There is one critical process issue connected to food stamps that does need to be addressed and is mentioned again in the Blueprint on p. 9. The food stamp program needs to be separated from agricultural programs and considered on its own in separate legislation.

The purpose of separation is to ensure that agricultural programs and nutrition programs, which have no business being combined together, are debated and considered on their own merits. They are combined together for political purposes to get the programs passed; legislators who support agricultural programs will support food stamp policies in order to get their agricultural programs enacted, and vice-versa. As a result, neither gets the attention they deserve, and this logrolling makes enacting any meaningful reforms more difficult.

Critics of separation say that if there is separation the agricultural programs and food stamp program would not get passed. The irony may be lost on them. This claim is precisely why these programs need to be separated. After all, what does it say about the existing programs if they could not get passed if considered on their own?

Farming Should Be Left to Farmers

This report focuses on policy issues only. In no way does it make recommendations on how to farm; it specifically makes recommendations on how to free up farmers from government meddling. Agricultural producers themselves are the ones who are best able to make decisions regarding farming and ranching. Current policy, however, does not show this level of deference. Subsidies act to distort decision-making, and regulatory obstacles make it more difficult for farmers to engage in farming activities. Yet, many politicians and bureaucrats develop policies that are intrusive and fail to respect the

expertise of farmers. They also presume that agricultural markets can be manipulated and planned. The federal government should get out of the way and allow farmers and ranchers to do what they do best, which is provide agricultural products for this nation and the world.

Part I: Addressing Risk in Agriculture

Part I of this publication is devoted entirely to the question of agricultural risk. There is a preliminary analysis before analyzing the various programs that make up the commodity title of the farm bill, such as the Agricultural Risk Coverage program and the sugar program, and analyzing the federal crop insurance program. Recommendations on whether to keep any of these programs depended on why they exist in the first place.

The question that is addressed at the outset of Part I is whether there is something different about agricultural risk that justifies federal government intervention, including whether risk can be managed through private means. This was a question that took a significant amount of time to answer. From an economic and sound policy standpoint, there simply is nothing about agricultural risk that justifies federal government intervention. Further, farmers have many private solutions to manage their risk, from crop diversification, private unsubsidized insurance, to the commodities markets. This does not even include any additional solutions that would exist when the market can operate without the government crowding out private options.

Status quo proponents often try and justify subsidies by pointing to the importance of agriculture (after all, it does help meet the basic need of eating). However, even if an assumption was made that agriculture is more important than other sectors of the economy, this does not answer why farmers need subsidies. In other words, what problem is being solved by taking billions of taxpayer dollars and giving it to farmers? Agricultural producers can and should be able to manage risk. Transferring money to them because of the nebulous argument that agriculture is important is unjustified. In addition, this argument that agriculture is really important is actually justification for why free enterprise and not harmful government intervention should exist in agriculture.

After addressing whether agricultural risk can be effectively managed, the second section of Part I highlights the many problems with subsidies. The problem with government intervention is not merely that such intervention is unnecessary. It is also extremely harmful, making the status quo untenable.

Sections 3 and 4 analyze the commodity programs of the farm bill and the federally subsidized crop insurance program. The purpose of these sections was not to get into the weeds but to examine whether these programs need to exist. The material does provide important information on participation in these programs, their costs, how they work, and their major flaws.

Section 5 identifies the policy recommendations. As a general matter, there should be a shift away from providing subsidies to agricultural producers to address risk. While a "safety net" is unjustified, to have a smoother transition, this shift should not happen all at one time. To take a step towards getting rid of subsidies, taxpayers should not be compelled to ensure that farmers are covered for shallow losses and minor dips in expected revenue. Farmers should not be insulated from the market and the challenges that all businesses face on a daily basis.

Except for disaster assistance, all commodity programs should be eliminated and the federal crop insurance program should be reformed to cover deep yield losses and disasters only. States should be provided a generous one-time payment that they could use to assist farmers during the transition away from massive federal subsides; they could also use the money for other agricultural purposes. This payment would be funded from one year's worth of savings that would be achieved through the reforms outlined.

Part II: Critical Issues

The first section of Part II focuses on another area where the federal government provides massive subsidies: biofuels. The Biofuels and Renewable Fuels Standard (RFS) section primarily focuses on the RFS. While the RFS is not part of the farm bill, it is a critical agricultural-related program that needs to be addressed, including in any alternative to the farm bill. The RFS is a federal mandate requiring the use and sale of biofuels that creates serious problems, such as higher costs for drivers, higher costs for food, and a diversion of scarce resources. The section recommends repealing the RFS in its entirety and letting producers drive alternative fuel innovation.

There is a role though for the federal government in agriculture: promoting free trade. The free trade

section goes well beyond anything connected to the farm bill. It highlights the importance of agricultural trade and the many benefits that the U.S. has received from trade agreements and participation in the World Trade Organization. The section recommends that the U.S. get rid of its own trade-distorting policies and meet international trade obligations. Plus, the U.S. needs to be more aggressive in going after trade barriers imposed by other countries.

When discussing government intervention in agriculture, it does often focus on how the federal government provides subsidies. However, this publication goes well beyond this and recognizes the other side of the government intervention equation: In what ways does government intervention, such as with regulation, make it more difficult for farmers and ranchers?

The last section of the publication highlights many key regulatory obstacles that hinder farmers and ranchers, from water regulation, the Endangered Species Act (ESA), to mandatory labeling of genetically engineered food. This section could have included even more regulatory problems, but it highlights many of the major regulatory obstacles and what needs to be done to address them.

Format of Publication

The free enterprise principles that helped shape the analysis and recommendations can be found on p. 5. Readers can also find most of the recommendations listed in the Blueprint on p. 9.

The various sections were written to be widely accessible, but they are in-depth. They help to provide a significant foundation for readers on the respective topic. To provide a useful resource that condenses the information contained in each section, a "Key Points" document has been included at the beginning of Part I and preceding each critical issues section in Part II.

A Comprehensive Report

This publication does provide in-depth analysis and recommendations to address many policy questions. There are many titles of the farm bill that have not been addressed, such as conservation and rural programs. As explained, it is also important to recognize that agricultural policy is far broader than just the farm bill. This report does cover some of those issues, but there are many other issues that it does not cover.

For the subject matter that the report does address, it is designed to be comprehensive. Of course, there are areas where additional research will be beneficial. For example, the report discusses much-needed Endangered Species Act (ESA) reform and highlights several important points. A more in-depth analysis of ESA reform would certainly help flesh out what needs to be done to change that statute.

Though there are some other gaps that need to be filled, this report is a detailed alternative to the farm bill, which is, at a minimum, a valuable starting point to change the status quo. There will be critics of certain sections; certainly, any change to the status quo of massive subsidies will be met with resistance. However, the goal of this report is to help start a constructive dialogue, recognizing that agricultural policy is complex and needs to reflect thoughtful discourse.

EIGHT GUIDING PRINCIPLES FOR AGRICULTURAL POLICY: *A Free-Enterprise Vision*

Daren Bakst

Over the past 80 years, agriculture has changed dramatically. However, farm bill programs and their progeny are grounded in the same central-planning philosophies that existed during the Depression. Even some policymakers who claim to be strong proponents of free enterprise and limited government tend to forget these core beliefs when it comes to these programs.

Agricultural policy is not restricted to those farm bill programs that limit choice, stifle innovation, distort consumer prices, and cost taxpayers billions of dollars a year. It also includes food safety, international trade, environmental policy and property rights, research and innovation, and general issues applicable to all sectors of the economy, such as labor policy.

There are alternatives to agriculture beyond the status quo of central planning and subsidies. The same free-enterprise solutions that have allowed the U.S. to flourish are just as applicable to agriculture as they are to other sectors of the economy. The following are eight guiding principles for agricultural policy.

1. Markets—Not Government Incentives and Controls—Should Inform Farming Decisions

Many farmers make decisions based on restrictions imposed by central-planning policies and the subsidies that distort their choices through misguided incentives. These policies include loans, disaster assistance, price and revenue guarantees, supply restrictions, import barriers, payments to idle land, marketing orders (which are effectively government-sanctioned cartels), and subsidized crop insurance.

Too often, there is an assumption made by proponents of the status quo that the federal government can use central planning to best allocate resources. No government has the knowledge to plan economies. Instead, agricultural policy should be responsive to markets, thereby freeing farmers to produce what they deem fit—not what a government subsidy encourages.

2. The Government Should Not Distort Food Prices

Prices provide a signal to agricultural producers as to where to allocate resources and best respond to market demand. By insulating agricultural producers from prices, the government undermines this critical signal necessary to inform producers regarding how best to meet market demand. As the Organization for Economic Co-operation and Development (OECD) explains "price interventions will isolate farmers from underlying market fundamentals such as high prices that signal a negative supply shock or low prices that signal over-supply."[1]

Some existing policies also artificially drive up food prices, such as the sugar program[2] and the Renewable Fuel Standard.[3] Artificially higher food prices hurt low-income individuals the most because a greater share of their incomes go to food costs compared to individuals with higher incomes.

3. Agricultural Producers Should Succeed (or Fail) on Their Own Merits

Government should not intervene in the market to help ensure that agricultural producers are profitable, such as through the "shallow loss" program that protects farmers from even minor losses.

Like other business leaders, farmers should succeed or fail on their own merits and assume the risks and reap the rewards of doing business. In addition, though, government should not intervene in the market by making it difficult, if not impossible, for farmers to succeed financially. Burdensome regulations can harm farmers as can restrictions limiting access to capital and labor necessary to meet the unique needs of farms.

4. Property Rights Are the Cornerstone of American Agriculture

Farmers and ranchers are the best stewards of their property. Property ownership creates powerful incentives to maintain property. Many farmers and ranchers depend on their land for their very livelihood: According to the U.S. Department of Agriculture, "With a value of $2.38 trillion, farm real estate (land and structures) accounted for four-fifths of the total value of U.S. farm sector assets in 2014."[4]

Too often, farmers and ranchers bear an excessive cost for government regulations that place restrictions on how they use their property. This problem is particularly egregious with laws such as the Endangered Species Act. Farmers and ranchers bear costs that should be borne by society generally, not by a narrow group of property owners alone. In many instances, the restrictions are so great as to amount to regulatory takings, which should trigger just compensation to the harmed property owners.

Clearly defined and strongly enforced property rights might also help develop solutions to address many agricultural challenges. For example, water rights can be used by the property owner to participate in water markets, likely serving as the best means to allocate scarce water resources.

5. The Regulatory Burden on the Agricultural Sector Should Be Minimized and Sound Regulatory Approaches Used

Regulations can hinder farmers and other businesses throughout the food supply system. Farm-specific regulations should generally be limited to covering health and safety. Furthermore, when agencies promulgate regulations, they should have clear statutory authority and use sound regulatory and scientific analysis, including adopting the least costly alternative to achieve its objective. Unnecessary, duplicative, or outdated regulations should be repealed.

One-size-fits-all regulation does not work, especially given the diverse work of farmers and the unique agricultural challenges that exist on the state and local levels. Regulation should become more decentralized with states and local governments having more influence and responsibility as the federal government plays a smaller role.

6. Obstacles to Agricultural Research and Innovation Should Be Removed

Groundbreaking innovations in fields such as agricultural biotechnology will help the agricultural sector feed not only Americans, but the world as well.[5] These innovations can yield many benefits including greater productivity, reduced food costs, and improved nutrition. However, misinformation campaigns instead of sound science are creating obstacles that are undermining innovations.

Any approval process for these innovations should be streamlined, consistent, and based on sound science. When approval is arbitrary and unpredictable, innovators are discouraged from moving forward with their research.[6] Other unnecessary government obstacles that hinder research and innovation should be removed, including any taxpayer-funded research that discourages private research.

7. Promoting Free Trade in Agriculture Benefits Farmers and Consumers

Trade opportunities are lost when Congress subsidizes domestic agriculture industries, thereby inviting other countries to respond in kind, or even to retaliate if the U.S. is in violation of World Trade Organization rules.[7] While other countries will inevitably create protectionist schemes, taking comparable action only hurts American consumers by restricting competition and making free trade more difficult.

Trade policy should not focus on the narrow interests of one industry. Such an approach usually comes at the expense of consumers, other industries, and the economy as a whole.

Free trade in agriculture should be aggressively pursued. This means eliminating domestic trade barriers, which would promote competition by giving consumers access to foreign agricultural products, and aggressively seeking the removal of barriers that block American products from entering foreign markets.

8. Agricultural Policy Should Not Promote Special Interests

Everyone is affected by agricultural policy because, after all, everyone eats. When agricultural policy debates occur, farming interests and other "stakeholder" interests are usually involved in the

formulation of policy, but consumer and taxpayer interests are not. When crafting agricultural policy, lawmakers should remember two important facts: (1) Agriculture exists to meet the needs of the market; and (2) The government is not spending its own money on agriculture programs; it is using taxpayer money. The market, not government intervention, is the appropriate tool to sort out all of the various interests.

Agricultural policy debates should be conducted in an open and transparent manner. Political maneuvers should not be used as a way to push legislation through at the expense of thoughtful discourse on agricultural policy, as is currently employed in the farm bill, which combines farm programs with food stamps.

Moving Forward

A free enterprise vision for agriculture starts with recognizing the flaws of government intervention while embracing freedom and individual rights. Such broad-based principles, if applied, can help transform agricultural policy, moving it from an era of excessive government control that bestows public largesse to the few to an era of respecting individual freedom that benefits all.

ENDNOTES:

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A FREE-ENTERPRISE BLUEPRINT FOR AGRICULTURAL POLICY

A key part of a free-enterprise vision for agricultural policy is identifying the problematic ways the government intervenes in agriculture. However, this is not limited to eliminating harmful subsidies. A central focus must be on identifying the ways that the government creates obstacles for farmers and ranchers, such as through federal regulation. There is in fact a critical role for government to play in agriculture: aggressively promoting free trade.

This Blueprint shows many of the recommendations identified in *Farms and Free Enterprise: A Blueprint for Agricultural Policy*. These recommendations provide a free-enterprise alternative to agricultural policy, including an alternative to the farm bill. Policymakers can continue to choose the status quo and place their faith in big government and cronyism, or they can choose a new path that respects farmers, consumers, and the market.

ADDRESS AGRICULTURAL PROGRAMS ON THEIR OWN MERITS

- Separate Agricultural Programs from the Nutrition Title of the Farm Bill

MOVE AWAY FROM SUBSIDIES TO ADDRESS AGRICULTURAL RISK

- Eliminate All Title I Programs (Except Disaster Assistance Programs)
- Properly Focus the Federal Crop Insurance Program, and Specifically
  - Eliminate revenue-based policies
  - Cover deep losses only
  - Do not undermine the program through ad-hoc disaster assistance
- Treat Farmers and Ranchers the Same as Other Businesses When Addressing Disasters
- Involve States in the Transition Away from Federal Intervention in Agricultural Risk, and Specifically:
  - Provide one-time block grants to states
  - Allow for a flexible use of the money

END FAVORED TREATMENT FOR BIOFUELS AND THE RENEWABLE FUEL STANDARD

- Eliminate the Bioenergy Programs in the Farm Bill
- Repeal the Ethanol Mandate in Its Entirety and Allow Consumers a Choice at the Pump
- Let Producers Drive Alternative Fuel Innovation

PROMOTE FREE TRADE IN AGRICULTURE

- Unilaterally Liberalize Traditional Tariff Barriers
- Enact Policies to Become Fully Compliant with International Trade Obligations
- Make More Vigorous Demands (and Offers) in WTO Negotiations
- Increase Trade Barrier and Subsidy Monitoring, Reporting and (If Necessary) Litigation

REDUCE AND ELIMINATE KEY REGULATORY OBSTACLES

- Prohibit the Application of Title VII of Dodd–Frank to Farmers
- Protect the Ability of States, Communities, and Individuals to Manage Water Resources
- Prohibit Federal Efforts to Regulate (Directly or Indirectly) Nonpoint Sources of Water Pollution
- Repeal the EPA and Army Corps' "Waters of the United States" Rule
- Reform the Endangered Species Act
- Transfer Management of Federal Lands to States and Private Citizens
- Repeal the Federal Law Mandating the Labeling of Genetically Engineered Food

PART I:
Addressing Risk in Agriculture

KEY POINTS:
Addressing Risk in Agriculture

Brief Overview

Agricultural producers, similar to other businesses, face significant risk. The United States Department of Agriculture's (USDA) Economic Research Service identifies five different types of farming risk: human and personal risk (such as human health), institutional risk (regarding governmental action), and financial risk (such as access to capital), price or market risk, and production risk (such as weather and pests). Of these, policymakers usually focus on the last two types.

Unlike most other businesses, however, federal government programs assist agricultural producers in protecting against risk. There is an opportunity to move away from government intervention and to free up agricultural producers to engage in farming activities without the market distortions created by this intervention.

The starting point for policy reform regarding agricultural risk should not be tinkering with the so-called safety net programs: Title I commodity programs (including the Agricultural Risk Coverage program, sugar program, and disaster assistance programs) and the federal crop insurance program. Instead, the very existence of these programs needs to be questioned. There is no justification for these programs or for any other special treatment for agricultural producers.

Farmers Have the Financial Means to Manage Risk

An image of farmers struggling to save their small farm and stave off poverty permeates agricultural policy and, to a large extent, the public's perception of modern-day agriculture. The evidence suggests otherwise:

- **Most agricultural production comes from large farms.** The reality is that American's food and fiber comes almost exclusively from large agricultural producers, who are quite capable of managing risk. Based on 2012 data:
  - Farms with $5 million or greater in agricultural sales accounted for about a third of all sales and farms with $1 million or more in sales accounted for about two-thirds of all sales;
  - 89 percent of all sales come from about 12 percent of all farms;
  - Only 4 percent of farms (those with sales of $1 million or greater) accounted for 67 percent of all agricultural sales.
  - 75 percent of all farms had sales less than $50,000, accounting for only three percent of all sales; and
  - More than half of all farms had sales of less than $10,000. These farms accounted for less than 1 percent of all sales.
- **Farm households have higher income compared to all U.S. households.** For decades, average and median farm household incomes have been consistently higher than all U.S. household incomes. For the 10-year period 2005–2014, the average and median income for farm households was 35 percent and 19 percent greater than all U.S. households, respectively. Based on 2014 USDA data, 69 percent of farm households had income in the top half of all U.S. households.
- **Farm households have much higher net worth than total U.S. households.** In 2013, the median net worth for farm households ($801,980) was 10 times greater than that of total U.S. households ($81,200).
- **USDA joint income-wealth indicator.** The United States Department of Agriculture

(USDA) has developed the joint income-wealth indicator, which captures the vast income and wealth of farm households. Only 2 percent of farm households were in the bottom half of all households in terms of both income and wealth, based on 2011 data.

- **Small farm households are also doing well financially.** The vast majority of even the smallest farm households are doing well. In 2011, small farm households that had less than $10,000 in sales still had greater average incomes than that of total U.S. households.

- **Importance of off-farm income.** Off-farm income plays a critical role in modern day farming. Few farms truly rely on farm income. According to the USDA, most farm households earn all of their income from off-farm sources. In 2014, at least 71 percent of farm households had farm income less than 25 percent of total household income, including 50.6 percent of farm households who reported negative farm income.

  In other words, risk management in agricultural production plays a very small role in the income of most farm households. Indeed, for many farms, their farm income is dwarfed by their non-farm income and their net worth. Consequently, reducing farm risks affecting farm prices or output will not have a significant effect on the financial status of these farms.

Key Financial Indicators Show Farmers' Ability to Manage Risk

When examining financial indicators even over long periods, farms are in extremely good financial condition:

- **Debt-to-asset and debt-to-equity ratios are extremely low.** Two primary measures to determine the solvency (and thereby the financial vulnerability) of a business are the debt-to-asset and debt-to-equity ratios. The USDA's Economic Research Service uses a debt-to-asset ratio of no more than 40 percent to determine whether a farm has a favorable financial position. The average debt-to-asset ratio for farms over the past 55 years has not even come close to being 40 percent, and has not even reached 23 percent during that time. The average over this period of time has been 15.5 percent, and from 2005–2014 it was 12.2 percent.

  Regarding the debt-to-equity ratio, the University of Minnesota's Center for Farm Financial Management developed a useful standard for financial ratios. They indicate a "strong" debt-to-equity ratio is no more than 43 percent. The average debt-to-equity ratio for farms over the past 55 years has not even come close to being more than 30 percent. The average over this period of time has been 18.4 percent, and from 2005–2014 it was about 14 percent.

- **Exit rates are very low.** The exit rate is the rate at which businesses go out of business. It no doubt covers voluntary decisions and is not necessarily related to financial distress. Exit rates are comparable to non-farm small businesses, and more likely, they are significantly lower. Further, the data suggest that most "exits" are intergenerational transfers of land (only 23 percent of land expected to be transferred to new owners was going to be transferred through sales to non-relatives).

Special Treatment Is Not Necessary for Farmers to Effectively Manage Risk

Farmers should have to deal with various risks connected to their businesses—just like other business owners. Yet, proponents of the status quo still seek to point to some unique aspects of agriculture that justify government intervention. Their arguments can be refuted:

- **Price volatility is not unique.** There certainly can be volatility in agricultural commodity prices. However, other major sectors of the economy have price volatility that is comparable to agriculture.

- **Other businesses have to address natural disasters too.** Many of the natural disasters that can affect agriculture, such as hurricanes, tornadoes, or earthquakes, can affect other industries. Other industries are also subject to a wide variety of risks, such as problems with critical inputs affected by weather, natural disasters, and "acts of God."

- **Farming is not vulnerable to some risks that other businesses face.** For example, many businesses are more vulnerable to downturns in the economy than agriculture—people must eat, but may choose to reduce consumption of critical products such as gas.

- **Free enterprise is the best approach even if one believes agriculture is "special."** Often, proponents turn to the argument that agriculture is more important than other industries (after all, farmers provide America its food) and that is why they deserve special handouts. There is no real explanation, however, as to what problem is being addressed by the federal government that could not be addressed through private means.

  Even if agriculture were "special," such status would be an argument for free enterprise in agriculture—not central planning and government interventionist policies.

Most Farmers Do Not Even Receive Subsidies

Many farmers and ranchers do not receive any subsidies. Most subsidies go to large producers and a greater percentage of large family farms receive commodity payments than do small family farms. Farmers may not receive subsidies for many reasons, such as their production levels, and because many farmers of certain commodities are not eligible for certain subsidies. For example, fruit and vegetable growers receive very few subsidies.

- **Few farms receive commodity payments.** According to the USDA's Structure and Finances of U.S. Farms: Family Farm Report, 2014 Edition, only 25 percent of all farms received payments from agriculture commodity-related programs, which send payments to producers of certain crops. Farms with annual gross cash farm income of $350,000 or more received 62 percent of commodity-related payment dollars, while only constituting 23 percent of all farms that received payments.

- **Most farms do not participate in crop insurance**. Based on 2011 data, 85 percent of all farms did not participate in the crop insurance program. Like price and income support payments of the Title I commodity programs, subsidies for crop insurance that benefit participating farmers are highly concentrated. An Environmental Working Group study of the 2011 crop insurance year indicates the top 20 percent of policyholders were the beneficiaries of 73 percent of the total premium subsidies.

- **The percentage of large family farms receiving commodity payments is much greater than the percentage for small family farms.** Data regarding commodity payments from the USDA "Family Farm Report 2014 Edition" show that 21 percent of small family farms (family farms with less than $350,000 in gross cash farm income) received payments, whereas 77 percent of midsize and large-scale family farms (family farms with $350,000 or more in gross cash farm income) received payments.

The Problem with Subsidies: Why the Status Quo Is Untenable

Subsidies create significant harm. Some of the problems with these taxpayer-funded "safety net" subsidies, which cost about $15 billion a year, include:

- **Moral hazard.** Taxpayer programs designed to shield farmers and ranchers from economic risks present an opportunity for increased moral hazard. Moral hazard occurs when individuals take actions that increase risks because of the protection they are afforded through insurance or other risk-mitigation programs. With farm subsidies, moral hazard often results in taxpayers bearing the cost of those actions.

- **Artificial increase in land prices.** Programs that aid the incomes of established, highly capitalized producers have contributed to skyrocketing costs for agricultural land. Increases in land prices were driven primarily by high commodity prices, but income from federal agricultural subsidies are also capitalized into the price of land. As landowners can predict payments from commodity programs, they can incorporate this steady stream of future income into the value of their land. A report conducted by the USDA's chief economist in 2003, a time of relatively low commodity prices, reported that "some studies indicate that total government payments in recent years have increased U.S. farmland values 15–25 percent."

- **Subsidies increase obstacles for beginning farmers.** One of the biggest obstacles faced by an entrepreneur looking to get into farming is access to quality land. High prices are not the issue; rather, the problem is the government's role in driving up prices. Federal agricultural subsidies are making it more difficult for beginning farmers to purchase land.

- **Response to subsidies, not markets.** Subsidies present the opportunity for farmers to "farm" the federal programs. In other words, farmers may make planting decisions based on the incentives offered by federal programs rather than on the market.

- **Harm to rural development.** The economic health and well-being of rural communities is often cited by proponents of increased federal spending on agricultural programs.

  In fact, job growth and economic innovation have been shown to lag national trends in rural communities most dependent on federal agricultural subsidies. In 2005, research conducted by the Federal Reserve Bank of Kansas City concluded, "Farm payments are not providing a strong boost to the rural economy in those counties that most depend on them. Job gains are weak and population growth is actually negative in most of the counties where farm payments are the biggest share of income." As a way to measure innovation, the article examined the rate of growth of new businesses, finding, "From 1990 to 2002, the growth in new business establishments was generally the weakest in counties most dependent on farm payments."

- **Environmental costs.** Federal agricultural subsidies aimed at reducing agricultural risk can have a negative effect on the environment. While high commodity prices are the main driver in decisions to plant crops on wetlands, pasture, or other marginal lands, federal subsidies, most notably highly subsidized crop insurance, contribute by shifting most of the cost of any potential loss to taxpayers while reserving gains for producers.

The Problems of Title I Commodity Programs

Agricultural commodity programs are a legacy of the government's attempts to raise farm income during the Great Depression—programs that continue today despite the fact that farm household income greatly exceed that of non-farm households. Three of the critical programs, with some of their specific problems, include:

- **Price Loss Coverage (PLC) Program.** The PLC program makes payments to enrolled farmers when the national average farm price for a commodity falls below a "reference price" set in the farm bill. The actual price a farmer receives for their crop does not matter. Payments are based on national averages.

  Consequently, target prices can be much higher than what the market can produce. The reference price for certain commodities is set so high as to make payments likely, especially given current price projections, making PLC look less like a safety net program and more like a program designed to transfer income to certain producers.

- **Agricultural Risk Coverage Program (ARC).** On a crop-by-crop basis, farmers can participate either in the ARC program or in the PLC program. The ARC program is often referred to as a shallow loss program (i.e. a program that covers even minor dips in revenue). Any myth that commodity programs are supposed to be a safety net as opposed to an income guarantee gets quickly dispelled by this program. Under ARC, payments are based on calculated revenue rather than simply a commodity's price. The benchmark is set at 86 percent of the five-year Olympic average (highest and lowest years removed from the calculation).

- **The Federal Sugar Program.** The sugar program artificially inflates the price of sugar, and therefore the income of sugar producers, by providing both a price floor and numerous programs that decrease the supply of sugar. Some of these programs include annual marketing allotments limiting the amount of sugar each domestic processor is allowed to sell and restrictions on imports. As a result, U.S. sugar costs about double the world price.

Government intervention increases both the wholesale cost of sugar and the price of products made with sugar, in essence creating a hidden tax estimated to cost on average $3.7 billion a year. The Department of Commerce found unnecessarily high prices are a determining factor in food manufacturers deciding to relocate to foreign countries and the high prices result in three confectionary industry job losses for every one sugar growing or harvesting job saved.

The Failure of Crop Insurance

The federal crop insurance program was greatly expanded in 1980 to replace a standing disaster payment program. The expansion of the federal crop insurance program was seen as an alternative way to provide disaster protection for farmers that would reduce costs and address moral hazard (parties taking on risky practices because they do not incur the risks). The program has been a complete failure, particularly when looking at costs:

- **The crop insurance program is far costlier than the program it replaced.** The disaster assistance that Congress deemed to be too costly in 1980 was replaced with a crop insurance program that is six times greater in costs, adjusted for inflation. From the outset, the program was a failure. In 1990, the Bush Administration proposed eliminating the crop insurance program.

- **Farmers will not participate without excessive subsidies.** Farmers did not participate in any meaningful way in the program for many years, despite generous subsidies. There has been so much attention to driving up participation rates that success with participation has somehow become the narrative that crop insurance is a success (e.g. farmers are widely participating and therefore must find the program valuable, therefore it is a success). Forcing taxpayers to pay an increasing amount of subsidies to get farmers to participate in a program that they would not pay for if they were charged the full costs does not demonstrate the success of the program. However, it does show that enough financial incentive, not surprisingly, will convince farmers to enroll in something they otherwise would not buy on their own.

- **Crop insurance does not require disasters.** There is a myth that crop insurance protects farmers from serious unforeseen losses connected to events such as natural disasters. In fact, the federal crop insurance program does not require a disaster or even yield losses to have occurred for farmers to receive indemnities. Crop insurance, promoted as an alternative to the costly disaster payment program, has instead morphed into a price support program that addresses very modest losses and indeed can reward farmers whose income is higher than usual. In 2014, 77 percent of policies earning a premium were revenue-based policies that do not require a disaster or even a yield loss to trigger an indemnity payment, but can be triggered by a decline in prices alone.

- **The program hurts farmers.** Farmers are beneficiaries from the crop insurance program, but they are also hurt as well. They do not have access to private insurance products that very well could be available absent government intervention. The federal government has crowded out any competition.

Policy Recommendations

There are several critical policy recommendations regarding agricultural risk:

- **Regulation needs to be addressed.** Farmers and ranchers have to address institutional risk, which covers uncertainties connected to governmental policies, such as with regulation. These uncertainties include whether policymakers will change the law, how agencies will enforce the law, and how farmers and ranchers need to comply with the law. In addressing government intervention generally, a critical question is how the government intervenes in a way that makes it more difficult for farmers and ranchers to meet market needs.

- **Move away from subsidies.** There should be a shift away from providing subsidies to address risk in agriculture. To have a smooth transition away from subsidies, and because private risk management has been crowded out and even discouraged due to government intervention, this entire shift should not be done all at once. Any existing special protection for farmers

during the move away from subsidies should at most protect from deep yield losses that farmers actually suffer from unforeseen events such as natural disasters and disease. Anything beyond this is exceeding any concept of a safety net. As it is, a taxpayer-funded safety net for agricultural producers is counterproductive and an overly generous use of taxpayers' money.

- **Eliminate most Title I commodity programs.** Title I commodity programs should be eliminated, except for the Permanent Disaster Assistance Programs and the Noninsured Crop Disaster Assistance Program (NAP). This means getting rid of programs such as the Agricultural Risk Coverage and Price Loss Coverage programs, the sugar program, and the dairy program.

- **Properly focus the crop insurance program.** To maintain this program is certainly questionable, but it can serve as the general taxpayer-funded safety net through a transition away from subsidies, so long as the program gets focused back on protecting against deep yield losses and disasters. Specifically:

  - **Eliminate revenue-based policies.** The program should subsidize yield-based policies only. The recent shift towards revenue-based policies is a means to provide excessive protection for farmers for even minor dips in revenue. These policies go way beyond the concept of a safety net. Farmers have succeeded without such policies, which have accounted for more covered acreage than yield-based policies only since 2003.

  - **Cover deep losses only.** Agricultural producers could still get the same coverage levels that exist now, and such policies would be reinsured through the Federal Crop Insurance Corporation. However, taxpayers should only subsidize coverage up to 70 percent (ensuring that there is at least a deep loss).

  - **Do not undermine the program through ad-hoc disaster assistance.** There will inevitably be calls for ad-hoc disaster assistance, as there is now even with generous crop insurance and commodity programs in place. This federal crop insurance program would be the approach to address disasters during the move away from subsidies. If farmers do not want to participate, this is their decision. Providing ad-hoc disaster assistance itself undermines federally subsidized crop insurance because of double indemnities, and if money goes to those who do not participate, this creates a disincentive to participate in the federal crop insurance program.

- **Treat farmers and ranchers the same as other businesses when addressing disasters.** There are many federal programs unrelated to agriculture that exist to address disasters. To the extent that businesses are provided any assistance under these various programs, agricultural producers should be treated equally and offered the same type of assistance. Furthermore, these programs should represent the full extent of federal disaster assistance to farmers.

- **Involve states in the transition away from federal intervention in agricultural risk.** States can help smooth the transition away from federal subsidies. Specifically:

  - **Provide one-time block grants to states.** There should be a one-time lump sum payment to states (not farmers) to help with the transition away from federal subsidies. It should be a one-time payment only because this is not meant to be the start of a new federal program.

    States would receive some of the savings achieved from eliminating most of the Title I programs and subsidized revenue-based policies from the federal crop insurance program. It would be a one-time payment based on one year of savings from eliminating these programs.

  - **Allow for a flexible use of the money.** States could use the money for agricultural purposes. The federal government should not place any restrictions on its use so long as it is clearly for agriculture. Through this block grant, states could have a significant role in this transition away from federal intervention or use it for other agricultural purposes.

INTRODUCTION: *Addressing Risk in Agriculture*

Daren Bakst

Agricultural producers, similar to other businesses, face significant risk. The United States Department of Agriculture's (USDA) Economic Research Service identifies five different types of farming risk: human and personal risk (such as human health), institutional risk (regarding governmental action), financial risk (such as access to capital), price or market risk, and production risk (such as weather and pests). Of these, policymakers usually focus on the last two types.

Unlike most other businesses, however, federal government programs assist agricultural producers in protecting against risk. In analyzing these subsidies,[1] often referred to as the federal "safety net," key foundational questions had to be asked: Is there something about agricultural risk that makes private risk management insufficient? Why would government intervention in risk management be appropriate for agricultural producers but not for other businesses?

Part I provides an in-depth analysis[2] of these and other questions regarding agricultural risk and examines the federal programs that make up the taxpayer-funded safety net: commodity programs and federally subsidized crop insurance. It also provides detailed and concrete policy recommendations. Ultimately, the purpose of this report is to instigate a discussion about the reforms necessary to free the agricultural sector from harmful government intervention.

America's Robust Agricultural Sector

Most domestic agricultural production comes from large producers. For example, only 4 percent of farms (those with sales of $1 million or greater) accounted for 67 percent of all agricultural sales in 2012. It is also important to recognize that more than half of all farms in the U.S. had less than $10,000 in sales, accounting for less than one percent of all agricultural sales.

Fortunately, agricultural producers are doing well financially. In fact, farm households have much higher incomes and wealth than non-farm households.

Even very small farms with less than $10,000 in sales are also generally doing well financially. That is because while their farm income may be low, they help manage risk by relying on off-farm income. Agriculture has evolved so that off-farm income plays a critical role for farmers, including these small farms. This is an excellent example of a private risk management tool that farmers frequently utilize. The financial health of agricultural producers demonstrates that they have means to build the costs of risk management into their business models. Several critical measures demonstrate agricultural producers' ability to manage risk. For example, debt-to-asset and debt-to-equity ratios, two key indicators of solvency and financial vulnerability, are extremely low (the debt is low compared to assets and equity).

Freeing the Agricultural Sector to Manage Risk Privately

There are many private ways that agricultural producers can manage risk. Too often, when discussing agricultural risk, the focus turns to federally subsidized multiple peril crop insurance. Multiple peril crop insurance is merely one way to manage risk and only one type of insurance (farmers buy other insurance, such as crop-hail insurance and property insurance). One of the primary ways that farmers manage risk is through off-farm income, as mentioned previously. Agricultural producers rely heavily on off-farm income to reduce dependence on making money from agricultural operations. There are many other private risk management solutions, from diversification to hedging risk through the commodities markets.

Risk also needs to be put into perspective. As explained in Section 1:

> By having to minimize or eliminate potential losses, a business is encouraged to develop new solutions and evolve to remain competitive. This helps the business by finding new ways to be profitable; consumers also benefit from new and improved goods and services. Riskier actions and investments can often mean greater rewards. When protected by taxpayers from risk, businesses are encouraged to remain complacent and discouraged from learning how to manage risk on their own—something farmers generally can do very well.

All businesses have to face risk. The risks in different industries can be significant, just as in agriculture. The nature of these risks can also be unique. However, taxpayers are not expected to manage risk for these other industries. This begs the questions as to why agriculture should be treated differently, especially when there are private means to effectively manage risk.

A frequent argument is that agriculture should receive favorable treatment because it is more "important" than other sectors of the economy. There are claims that we need subsidies for food security. These arguments likely arise due to the fact that agricultural producers provide a necessity to the public (i.e., food) but there is no real explanation though as to what problem is being addressed by the federal government that could not be addressed through private means.

The federal government should not be determining what industry is more important than another, or picking winners and losers. Ironically, even if agriculture is somehow "special," this status would be an argument for free enterprise in agriculture, not central planning and government interventionist policies.

Subsidies to Address Risk are Harmful

Even if one improperly concluded that agricultural risk cannot be effectively managed or farmers are incapable of managing risk, this does automatically mean that government intervention is warranted.

Government intervention creates numerous problems and makes the status quo of agricultural subsidies an untenable situation. Subsidies distort planting decisions of farmers so that instead of responding to the market, they make decisions based on the incentives provided by the subsidies.

Farm subsidies often lead to moral hazard in which risk is not borne by farmers but instead passed on to taxpayers. The result is agricultural producers taking actions they otherwise would not take, such as planting crops on environmentally sensitive land. Property owners, including farmers and ranchers, are the best stewards of their property. However, subsidies can create incentives that would alter their actions connected to their property. Subsidies can crowd out private solutions to address risk and actually discourage the use of risk management. The list of problems with subsidies is seemingly endless.

The Federal Taxpayer-Funded Safety Net

The commodity programs and the federal crop insurance program cost taxpayers about $15 billion a year. These are major costs, but they are only part of the problems with subsidies, as has been explained.

Most farmers do not even receive subsidies. In 2011, only 25 percent of agricultural producers received payments from commodity-related programs. These payments are also very concentrated. As explained in Section 3:

> From FY 2005 to FY 2014 just five crops (corn, cotton, wheat, rice, and soybeans) accounted for approximately 90 percent of commodity payments administered by the USDA's Farm Service Agency. While these are some of the most widely grown crops, payments from the USDA are also highly concentrated, with a small number of farmers of commodities receiving large payments. From 1995 to 2012, the top 10 percent of commodity payment recipients received 77 percent of commodity payments.

Based on 2011 data, only about 15 percent of farms participate in the federal crop insurance program. An Environmental Working Group study of the 2011 crop insurance year indicates the top 20 percent of policyholders were the beneficiaries of 73 percent of the total premium subsidies.

There are many reasons why the percentage of farms receiving subsidies is low. Farmers may not receive subsidies because of their production levels and because many farmers of certain commodities are simply not eligible for certain subsidies. For example, fruit and vegetable growers receive very few subsidies.

- **Commodity programs.** When Congress eliminated the direct payment program in the 2014 farm bill, it did not stop there. Instead, it created two massive new commodity programs, the Agricultural Risk Coverage (ARC) and Price Loss Coverage (PLC) programs, which are proving to be much costlier than projected and even more expensive than the direct payment program.

  The ARC program is an example of how extreme agricultural subsidies have become. Under this program, taxpayers protect farmers from even shallow losses (i.e. minor losses). The commodity programs also include the federal sugar program. This program is the epitome of central planning, restricting the supply of sugar and thereby driving up prices. The program also hurts other industries, particularly the sugar-using industries.

- **Federal Crop Insurance Program**. In the 1970s, the Agriculture and Consumer Protection Act of 1973 and the Rice Production Act of 1975 authorized the disaster payments program. The costs for these programs were soon deemed to be extremely high and therefore an alternative was sought. Moreover, these programs were thought to have moral hazard problems. In 1980, Congress passed the Federal Crop Insurance Act, which established the federal crop insurance program as the primary form of providing disaster protection for farmers, providing premium subsidies for farmers to purchase multiple peril crop insurance.

  Crop insurance has been a failure. For example, the program was supposed to be a more cost-effective way to provide disaster protection. The costs of the crop insurance program are about six times greater than the disaster payment program, adjusted for inflation.

  Participation in the program from the outset was very low, and has required continually ramping up the subsidies that benefit farmers. In 1990, the Bush Administration proposed eliminating the crop insurance program. By then (barely 10 years after passage of the 1980 Act), it was clear the program had been a failure.

  The program remains though, and goes well beyond addressing disasters. Revenue-based policies, which did not even exist until 1997, protect against dips in expected revenue due to low prices, low yields, or both. The federal crop insurance program was supposed to be a lower-cost alternative to help farmers with disasters. Instead, it has become a high-cost way to help farmers receive their expected revenue, regardless of whether a farmer has had a bumper crop or whether a disaster has even occurred.

Policy Recommendations

Detailed policy recommendations are addressed in Section 5. As a general matter, there should be a shift in federal government intervention to help agricultural producers address risk. While a "safety net" is unjustified, to have a smoother transition, this shift should not happen all at one time.

This special protection during the move away from subsidies should at most protect from deep yield losses that farmers actually suffer from unforeseen events such as natural disasters and disease. Anything beyond this is exceeding any concept of a safety net. As is explained, this means eliminating most of the commodity programs and stopping subsidies for revenue-based insurance policies in the federal crop insurance program. Further, as another way to ease the transition, states would receive a one-time payment based on the savings achieved from eliminating these programs.

Conclusion

A common assertion (or a variation of it) is getting rid of subsidies would somehow spell the end for U.S. farmers. This argument is an insult to farmers and ranchers. U.S. agricultural producers are sophisticated business people who can succeed without taxpayer help, just like other businesses. Moving away from subsidies will free up agricultural producers to better use their ingenuity and expertise to achieve even greater success.

For policymakers to take a step back and genuinely consider why the numerous subsidies exist in the first place would be an important step in determining the proper role of government when it comes to agricultural risk. When they do, it will be clear that maintaining the status quo needs to end.

ENDNOTES: INTRODUCTION

1. The term "subsidies" is frequently used throughout this report as a "catch-all" to cover the wide range of government intervention in Title I programs and the federal crop insurance program. This includes payments to farmers, premium subsidies, quotas, and other federal interventions to address agricultural risk.
2. Many of the data in Part I were developed in early 2016.

SECTION 1:
The Ability of Agricultural Producers to Manage Risk

Brian Wright

The 2014 farm bill, like previous farm bills, provides farmers various direct and indirect subsidies ostensibly aimed at addressing various risks.[1] These subsidies include commodity programs, such as the new shallow loss program that protects farmers from even minor losses they might incur, and the federal crop insurance program, which shifts almost all risk to taxpayers by forcing them to subsidize on average about 62 percent of the premiums that participating farmers pay for the program. (For a more in-depth discussion of commodity programs and crop insurance, see Sections 3 and 4, respectively.)

However, before addressing the merits of these programs, a foundational question must be asked: Why should the federal government create any programs to help agricultural producers manage risk in the first place?

There are two underlying and faulty assumptions that drive this government intervention:

1. Agricultural producers do not have the financial means to manage agricultural risk; and

2. Agricultural risk cannot be effectively managed and requires government intervention.

This section will primarily address these assumptions, showing why producers are well-positioned to manage risk and have many options to do so without any government intervention.

Agricultural Producers Have the Financial Means to Manage Risk

An image of farmers permeates agricultural policy and, to a large extent, the public's perception of modern-day agriculture: struggling farmers trying to save their small farm and stave off poverty and destitution. This myth has contributed to keeping agricultural policy from moving forward and is exacerbated by closely connected myths such as the family farm is disappearing (in fact, 99 percent of all farms were family farms in 2014, and most large farms are family farms).[2]

The reality is that American's food and fiber comes almost exclusively from large agricultural producers. The following data for 2012, based on all farms (regardless of whether they receive subsidies) demonstrate this point (see Chart 1 for additional data):

- Two-thirds of all agricultural sales come from farms with sales of $1 million or greater. Further, farms with sales of $5 million or greater accounted for 32 percent of all agricultural sales.

- Only 4 percent of farms (those with sales of $1 million or greater) accounted for 67 percent of all agricultural sales.

- An astonishing 89 percent of all sales come from about 12 percent of all farms. (These farms had sales of $250,000 or greater.)

- Almost all sales (97 percent) come from just one-quarter of all farms.

- As for smaller farms, most farms (75 percent of all farms) had sales less than $50,000, accounting for only 3 percent of all sales.

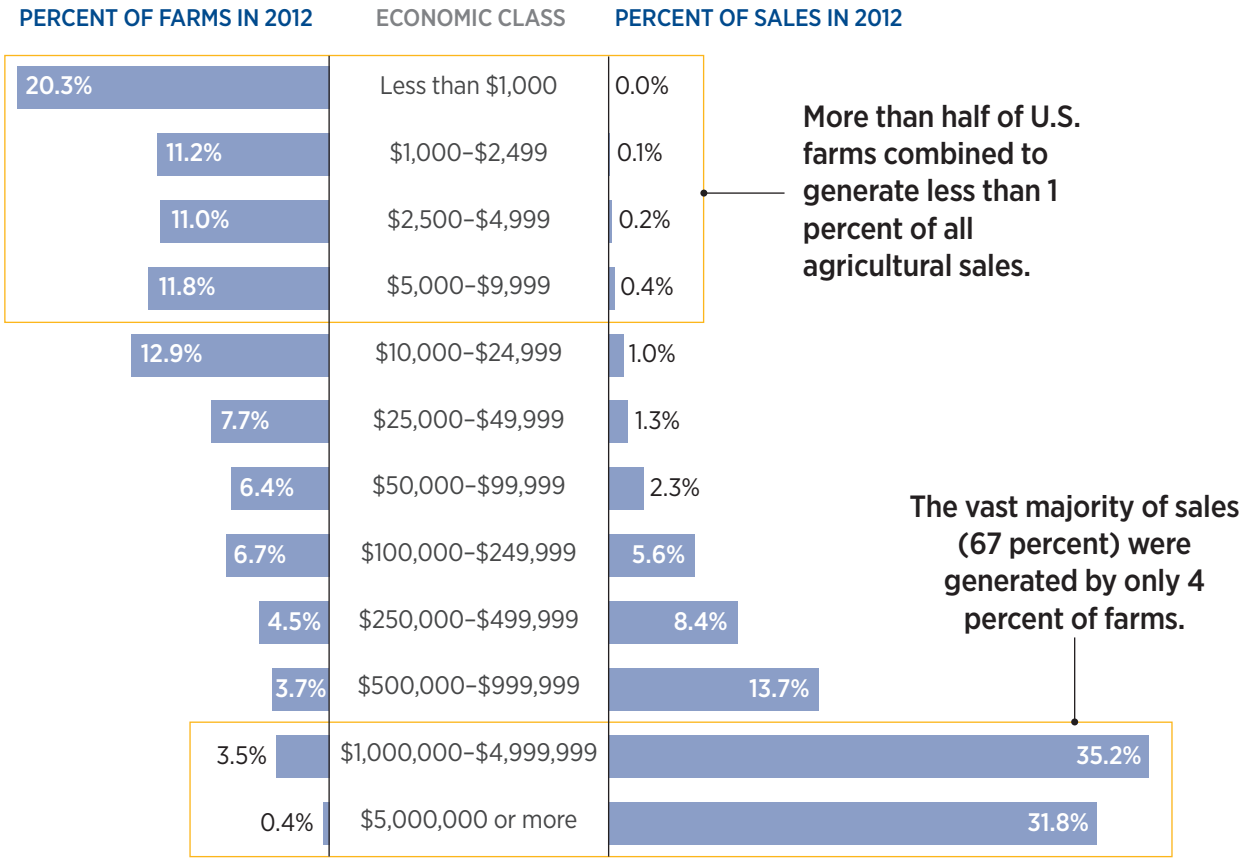
- More than half of all farms had sales of less than $10,000. These farms accounted for less than 1 percent of all sales.

In the distant past, assistance to farmers was based in part on the poverty of farmers, serving as a social welfare program. As explained in a USDA report entitled "A Safety Net for Farm Households":

> Farmers' deep poverty was a rationale for assistance in the past. In 1940's, per capita income of farmers was, on average, 50.7 percent that of nonfarmers. Moreover, given that most people lived on farms in

CHART 1

Small Percentage of Farms Generate Majority of Agricultural Sales



SOURCE: U.S. Department of Agriculture, National Agricultural Statistics Service, *2012 Census of Agriculture,* Farm Typology, Vol. 2, Part 10, January 2015, p. 1, http://www.agcensus.usda.gov/Publications/2012/Online_Resources/Typology/typology13.pdf (accessed January 5, 2016).

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> the first half of the 20th century, efforts to alleviate poverty among farmers likewise eased the burden of poverty for a large segment of the population [internal citations omitted].[3]

Conditions, though, have drastically changed. The financial situation of agricultural producers can hardly be considered a justification for government intervention to address agricultural risk.

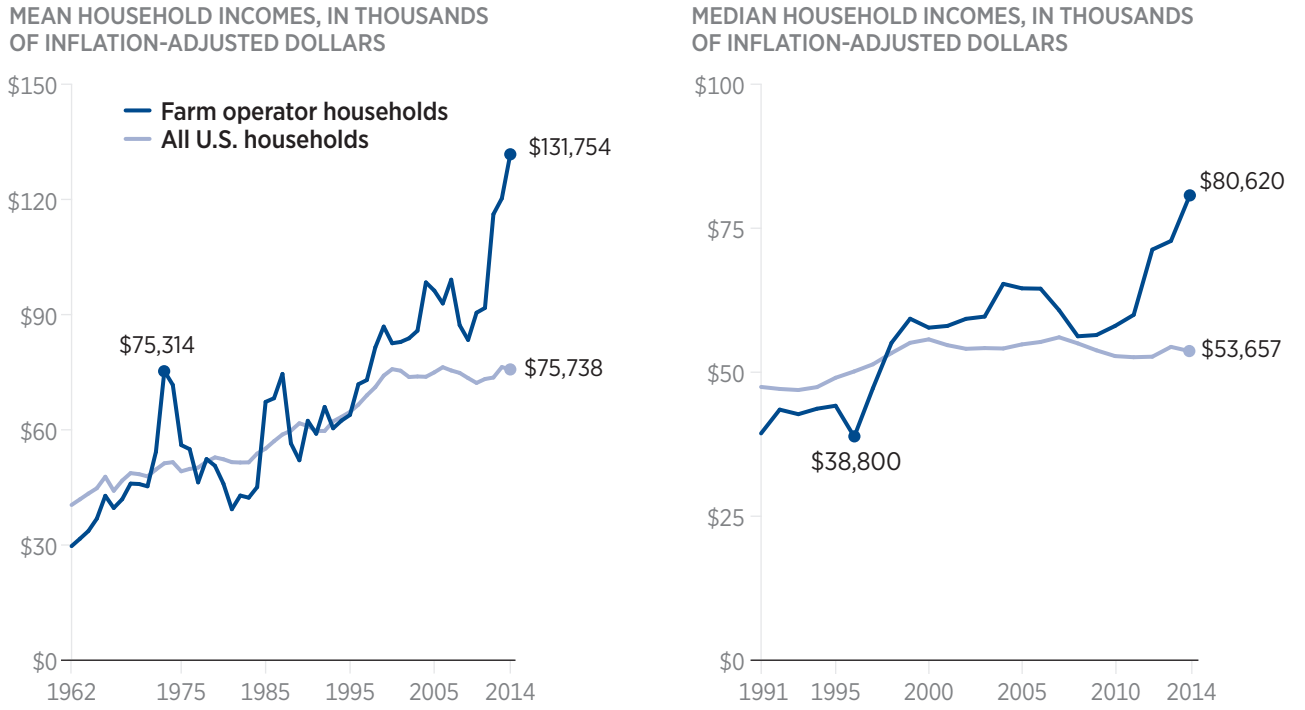
Farm Households Have Higher Income Compared to All U.S. Households. For decades, as shown in Chart 2, average and median farm household incomes have been consistently higher than all U.S. household incomes. For the 10-year period 2005–2014, the average and median income for farm households was 35 percent and 19 percent greater than all U.S. households, respectively.[4]

Farm Households Have Higher Net Worth Than Total U.S. Households. In 2013, the median net worth for farm households ($801,980) was 10 times greater than that of total U.S. households ($81,200).[5] (See Chart 3.)

Small Farm Households Are Also Doing Well Financially. The majority of even the smallest farm households are doing well. While most farms are very small and do not generate much in terms of agricultural sales, this does not mean they are not doing well financially. In 2011, small farm households that had less than $10,000 in sales still had greater average incomes than that of all U.S. households.[6]

CHART 2

Mean and Median Farm Household Income Is High



SOURCE: U.S. Department of Agriculture, Economic Research Service, "Historic Data on Mean and Median Farm Operator Household Income and Ratio of Farm Household to U.S. Household Income," 1960–2014, http://www.ers.usda.gov/data-products/farm-household-income-and-characteristics.aspx (accessed January 5, 2016).

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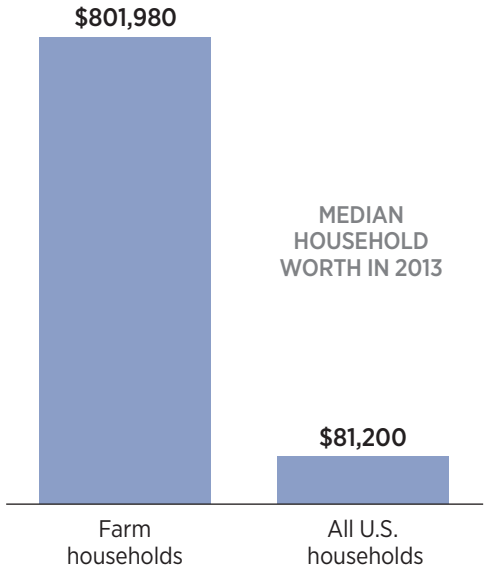
The USDA's Income-Wealth Measurement. The United States Department of Agriculture (USDA) has developed a useful measure, called the joint income-wealth indicator, which captures the vast income and wealth of farm households, by farm type.[7] In 2011, only 2 percent of farm households were in the bottom half of all households in terms of both income and wealth, categorized as low income-low wealth. About 97 percent of farm households had wealth in the top half of all U.S. households and about 57 percent of farm households had income in the top half of all U.S. households.[8] It should be noted that the USDA recently released a document "America's Diverse Family Farms, 2015 Edition" that highlights some newer data (2014), finding that the wealth figure was 97 percent (the same[9]) but 69 percent (as opposed to 57 percent) of farm households had income in the top half of all U.S. households.[10]

Even farm households classified as low-sales farm households (less than $150,000 in gross cash farm income[11]) had an almost identical low income-low wealth indicator as all farms. Only 2.2 percent (compared to 2 percent for all farm households) of these low-sale farms were in the bottom half of all households in terms of both income and wealth.[12]

Government subsidies do not explain the large income and wealth across farm households; even the current massive federal government intervention in agricultural policy accounts for only a small part of total farm income. In 2011, about 65 percent of farms received no government payments (including non-agricultural-risk-related payments such as conservation payments), 75 percent of farms did not receive commodity payments, and 85 percent of farms did not participate in the crop insurance program.[13] It is also important to recognize that from 2005–2014, the average annual percentage

CHART 3

Median Farm Household Net Worth Is Very High



SOURCES: U.S. Department of Agriculture, Economic Research Service, "Principal Farm Operator Household Finances, 2009–2015," http://ers.usda.gov/data-products/farm-household-income-and-characteristics.aspx (accessed January 5, 2016), and Jesse Bricker, et al., "Changes in U.S. Family Finances from 2010 to 2013: Evidence from the Survey of Consumer Finances," Federal Reserve *Bulletin*, Vol. 100, No. 4 (September 2014), p. 8 http://www.federalreserve.gov/pubs/bulletin/2014/pdf/scf14.pdf (accessed January 5, 2016).

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of income for farm households that came from off-farm income (unrelated to farming or subsidies) was 84 percent of total income.[14]

Agricultural Risk Can Be Effectively Managed

The USDA's Economic Research Service identifies five different types of farming risk and provides these definitions:[15]

- **Production risk** derives from the uncertain natural growth processes of crops and livestock. Weather, disease, pests, and other factors affect both the quantity and quality of commodities produced.
- **Price or market risk** refers to uncertainty about the prices producers will receive for commodities or the prices they must pay for inputs. The nature of price risk varies significantly from commodity to commodity.
- **Financial risk** results when the farm business borrows money and creates an obligation to repay debt. Rising interest rates, the prospect of loans being called by lenders, and restricted credit availability are also aspects of financial risk.
- **Institutional risk** results from uncertainties surrounding government actions. Tax laws, regulations for chemical use, rules for animal waste disposal, and the level of price or income support payments are examples of government decisions that can have a major impact on the farm business.
- **Human or personal risk** refers to factors such as problems with human health or personal relationships that can affect the farm business. Accidents, illness, death, and divorce are examples of personal crises that can threaten a farm business.

Human and personal risk (such as human health), institutional risk (regarding governmental action), and financial risk (such as access to capital) are clearly common risks across almost all businesses. Policymakers usually focus on price or market risk and production risk. These risks are manageable. Similar levels of risk exist in many other lines of business, and are managed efficiently without such high levels of public intervention.

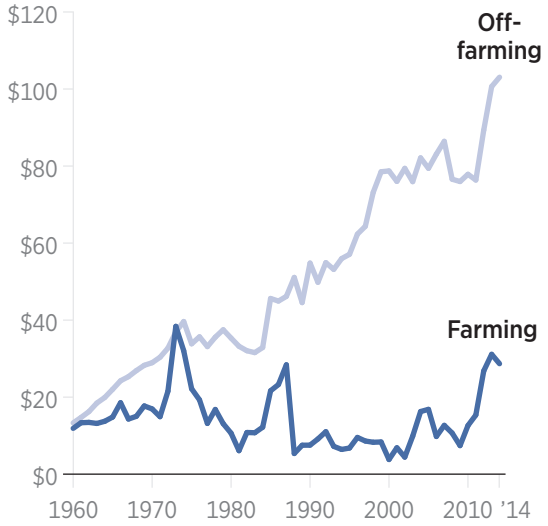
Risk Is Inherent in Any Business

Putting risk in perspective is important. By having to minimize or eliminate potential losses, a business is encouraged to develop new solutions and evolve to remain competitive. This helps the business by finding new ways to be profitable; consumers also benefit from new and improved goods and services. It also helps the economy by weeding out inefficiency and bad ideas, allowing resources to be put to better use. Riskier actions and investments can often mean greater rewards. When protected by taxpayers from risk, businesses are encouraged to remain complacent and discouraged from learning how to manage risk on their own—something farmers generally can do very well. When subsidies are present, businesses, including farms, will divert resources and attention

CHART 4

Average Farm Household Income by Source

IN THOUSANDS OF 2014
INFLATION-ADJUSTED DOLLARS



SOURCE: U.S. Department of Agriculture, Economic Research Service, "Historic Data on Mean and Median Farm Operator Household Income and Ratio of Farm Household to U.S. Household Income, 1960–2014," http://www.ers.usda.gov/data-products/farm-household-income-and-characteristics.aspx (accessed January 5, 2016).

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away from risk management because taxpayers are already protecting them against risk. Further, when evaluating actions and possible investments, the level of risk can be distorted for businesses, turning an otherwise unacceptably risky and unwise action into something that may be acceptable from the perspective of a business, because it will not feel the full downside of its decision.

Agricultural Risk Is Not a Significant Issue for Most Farmers

Agriculture can be a risky business. However, risk management is not going to be a significant issue for most farmers. This may come as a surprise, but it reflects the reality of agriculture that is often lost in policy debates.

Few Farm Households Rely on Farm Income. According to the USDA, most farm households earn *all* of their income from off-farm sources.[16] In 2014, at least 71 percent of farm households had farm income less than 25 percent (including zero or negative farm income) of total household income,[17] including 50.6 percent of farm households who reported negative farm income.[18] In other words, risk management in agricultural production plays a very small role in the income of most farm households. Indeed, their farm income is dwarfed by their non-farm income and their net worth. Consequently, reducing farm risks affecting farm prices or output will not have a significant effect on the financial status of these farm households.

In 2011, 58 percent of farms consisted of farms designated by the USDA as "retirement farms" (the operator of the farm is retired from farming) and "off-farm occupation farms" (the operator's primary occupation is a non-farm occupation).[19] In 40 percent of the retirement farms, nothing was produced at all.[20] Reducing farm risk will also not have a significant effect on the financial status of these farm households.

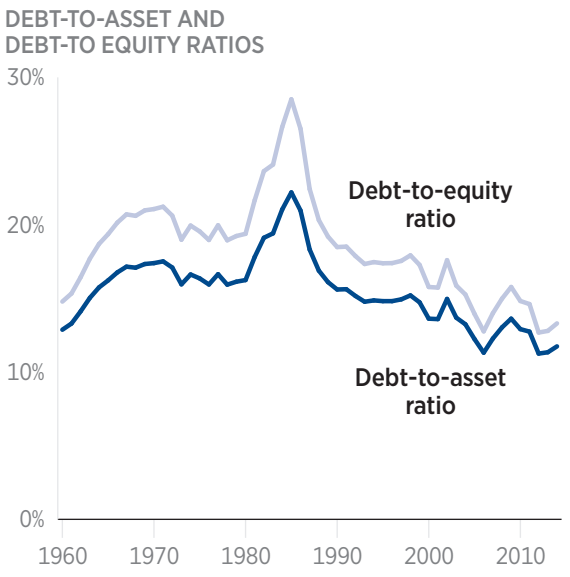
This negative farm income may seem contradictory to the points stated above about how well farm households are doing from an income standpoint. However, this is not the case regarding the financial wherewithal of farm households: one of the most important points to understand about the agricultural sector is that most farm households receive the bulk of their income from off-farm sources.

The ratio of average off-farm income to average total income for farm households has increased significantly since 1960, and from 2005–2014 it was 84 percent; that is, 84 percent of the average total income came from off-farm income (See Chart 4 that shows off-farm income compared to farm income).[21] During this same time (1960–2014), average farm household income has consistently been greater than the average income for all U.S. households. (As discussed previously, see Chart 2.)[22]

Most Farms Are, in Effect, Hobby Farms. In 2014, 20 percent of all farms were "point" farms, which did not have the minimum $1,000 in sales required to be considered a farm. These farms, as the USDA explains, "had sufficient crops and livestock to normally have sales of $1,000 or more."[23] Further, in 2014, most farms (51 percent) had sales less than $10,000.[24] These extremely small farms are more akin to hobby farms than farms designed to generate money. Risk management in farming is not going to play a significant role given their limited scope.

CHART 5

Financial Ratios Show Healthy Agricultural Sector



SOURCE: U.S. Department of Agriculture, Economic Research Service, "Farm Sector Financial Ratios, 1960–2014," http://www.ers.usda.gov/data-products/farm-income-and-wealth-statistics/data-files-us-and-state-level-farm-income-and-wealth-statistics.aspx (accessed January 5, 2016).

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Measuring Farmer Success in Addressing Risk

There are numerous ways to determine how successful farmers are doing in terms of managing risk. In addition to high income and wealth levels for farmers, there are specific measures that can illuminate whether farming is particularly difficult from a risk perspective.

Debt-to-Asset and Debt-to-Equity Ratios Are Extremely Low. Two primary measures to determine the solvency (and thereby the financial vulnerability) of a business are the debt-to-asset and debt-to-equity ratios. The USDA's Economic Research Services uses a debt-to-asset ratio of no more than 40 percent to determine whether a farm has a favorable financial position.[25] As shown in Chart 5, the average debt-to-asset ratio for farms over the past 55 years has not even come close to being 40 percent, and has not even reached 23 percent during that time. The average over this period of time has been 15.5 percent, and from 2005–2014, it was 12.2 percent.[26]

Regarding the debt-to-equity ratio, the University of Minnesota's Center for Farm Financial Management developed a useful standard for financial ratios.[27] They indicate a "strong" farm debt-to-equity ratio is no more than 43 percent. As shown in Chart 5, the average debt-to-equity ratio for farms over the past 55 years has not even come close to being more than 30 percent. The average over this period of time has been 18.4 percent, and from 2005–2014 it was almost 14 percent.[28]

Discussing both ratios, the USDA has explained, "the [agricultural] sector remains well insulated from the risks associated with commodity production (such as adverse weather), changing macroeconomic conditions, and any fluctuations in farm asset values."[29]

Exit Rates Are Very Low. The exit rate is the rate at which businesses go out of business. It no doubt covers voluntary decisions and is not necessarily related to financial distress. A 2006 USDA report "Understanding Farm Exits"[30] found that the farm exit rate was about 9 or 10 percent annually, which according to the USDA was comparable to exit rates for non-farm small businesses (8 percent).[31] In a 2015 publication, the Small Business Administration (SBA) indicated exit rates for small businesses had been much higher than this 8 percent since at least 1977 and were about 10 percent in 2012.[32] This USDA study appears to be an outlier, with other studies showing annual farm exit rates at about 3.5 to 6.75 percent per year.[33] Another USDA report assumed an exit rate of 4.5 percent during the 1990s (the same time period analyzed by the USDA farm exit study) based on the studies it identified.[34] At worst, exit rates are comparable to non-farm small businesses, and more likely, they are significantly lower.

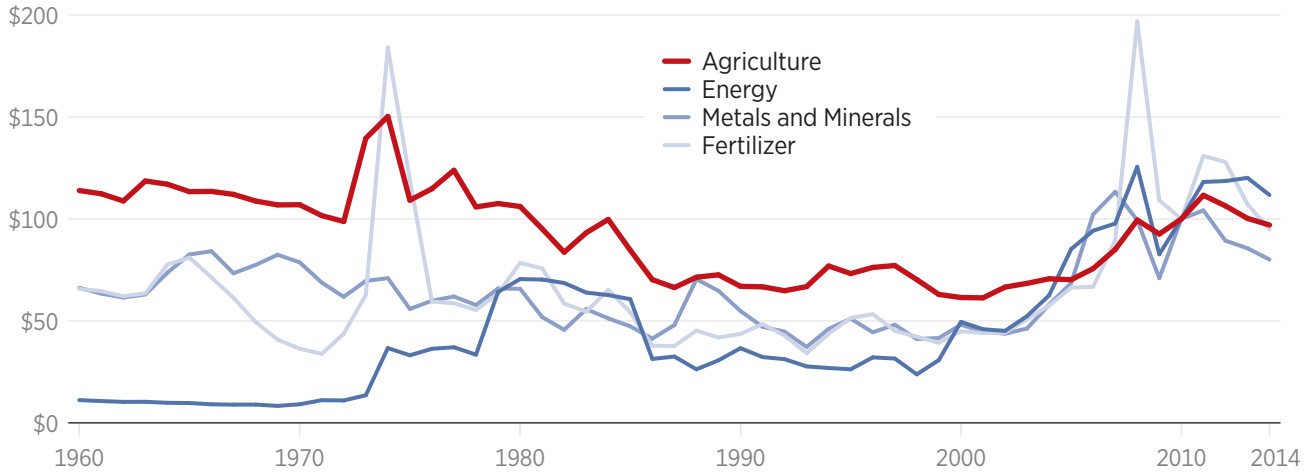
In addition, the USDA's "2014 Tenure, Ownership, and Transition of Agricultural Land Survey" found that landowners planned to transfer 91.5 million acres of farmland (10 percent of all farmland) to new owners. Only 23 percent of the land was expected to transfer through sales to non-relatives.[35] These data suggest that most "exits" are intergenerational transfers.

Price or Market Risk Is Not Unique. Agricultural producers' primary concern regarding price or market risk is the volatility of agricultural commodity prices. There certainly can be volatility. However,

CHART 6

Commodity Price Movements

ANNUAL INDICES (2010=100), IN 2005 INFLATION-ADJUSTED DOLLARS



SOURCE: The World Bank, World DataBank, "Global Economic Monitor (GEM) Commodities," http://databank.worldbank.org/data/databases/commodity-price-data (accessed April 15, 2016).

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other major sectors of the economy have price volatility that is comparable to agriculture, as shown in Chart 6. Using World Bank commodity data from 1960–2014, other commodity markets had comparable risk to agriculture (energy, fertilizers, and metals and minerals). For these specific data, the standard deviation is lowest for agriculture. (See Table 1.)

As with other government intervention, price manipulation only exacerbates problems by distorting risk and discouraging private risk management. The Organization for Economic Co-operation and Development (OECD) notes:

> Governments have often assumed that the answer to farming risk lies in stabilising prices. In fact, by doing this they may actually increase the variability of income and have the opposite effect.... Price interventions will isolate farmers from underlying market fundamentals such as high prices that signal a negative supply shock or low prices that signal over-supply. Governments end up carrying the entire burden of risk management at high cost to consumers and taxpayers because their actions have crowded out the efforts of farmers themselves and the private sector.[36]

Putting Production Risk in Perspective. Agriculture does face risks that can impact production, such as severe weather and pests. However, other industries can also have production negatively impacted by a wide variety of risks, such as shifts in demand and problems with critical inputs, including inputs affected by weather, natural disasters, and "acts of God." Many businesses are more vulnerable to downturns in the economy than agriculture—people are still going to eat, but may even reduce consumption of critical products such as gas. Some businesses are also dependent on weather, such as construction and mining. Many of the natural disasters that can affect agriculture can equally affect other industries, such as hurricanes, tornadoes, or earthquakes.

There are other issues to bear in mind when examining production risk in agriculture. For example:

Crop Failure Needs To Be Put in Context. The myth that farmers are often devastated by the destruction of most of their crops is simply not supported by evidence. The incidence of total crop failures is very small. As defined by the USDA, crop failure "[c]onsists mainly of the acreage on which crops failed because of weather, insects, and diseases, but does include some land not harvested due to lack of

TABLE 1

Annual Commodity Price Variability, 1960–2014

COMMODITY INDICES (2010=100), IN 2005 INFLATION-ADJUSTED DOLLARS

	Mean	Standard Deviation	Coefficient of Variation
Agriculture	92.6	17.7	19.1%
Fertilizers	66.9	32.9	49.2%
Metals and minerals	64.2	18.3	28.4%
Energy	45.6	21.5	47.2%

NOTE: Standard deviation was taken on the data series after accounting for a simple linear trend.
SOURCE: The World Bank, World DataBank, "Global Econominc Monitor (GEM) Commodities," http://databank.worldbank.org/data/databases/commodity-price-data (accessed April 15, 2016).

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labor, low market prices, or other factors."[37] The rate at which crops have failed on acreage planted for harvest has been very low as far back as 1910. (See Chart 7.) From 2004–2013, this crop failure rate averaged 2.78 percent.[38] This does not mean that specific farmers in any given year are not devastated or that yields are as good as expected, but it does indicate that overall, planted acres generally do not fail.

Farmers Are Generally Well-Equipped to Handle the Loss of a Crop. There is a myth that agricultural risk is unique in part because farmers can be devastated due to the loss of a single crop. Farmers typically diversify their operations so that this does not happen. The USDA has developed a typology for various family farms. The four types of family farms identified that on average have positive farm earnings[39] produced an average of three to four commodities in 2011.[40] Even about half (47 percent) of low sales farms (which on average have negative farm earnings) produced at least two commodities.[41] Further, farmers should generally be expected to diversify, or to hedge their market risks, especially if they are dependent on farm earnings.

Certain Production Risks Can Be Effectively Managed Through Risk Management. As will be discussed below, farmers have effective tools to manage risk. Farmers, through actions such as crop diversification, are not merely managing risk in the sense that they are mitigating it, but are mitigating specific and foreseeable problems from ever arising, such as being harmed due to dependence on one commodity.

Private Means to Effectively Manage Agricultural Risk

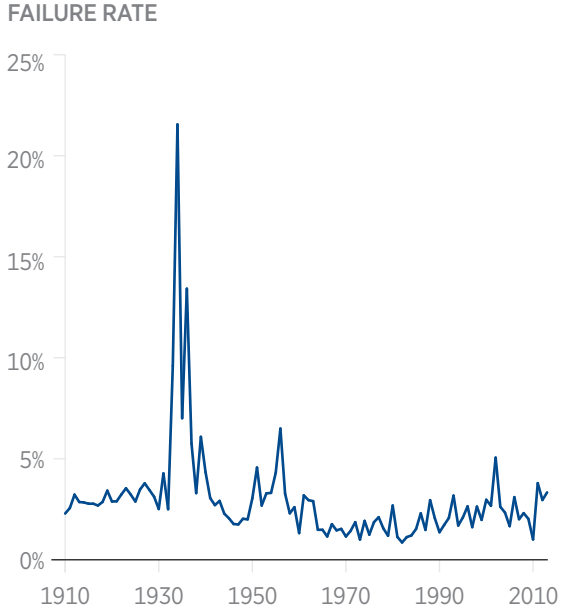
There are many ways that farmers, through private means, can effectively manage risk. Farmers know their operations and the relative risks better than anyone. They can make decisions that will best meet their needs as opposed to government-created cookie-cutter policies that handle risk as if agricultural producers are homogeneous in nature. When discussing risk management in agriculture, crop insurance often dominates the discussion. However, crop insurance is merely one tool to address risk. Further, it is also only one type of insurance; farmers purchase many different types of insurance, from hail insurance to property insurance. The following lists many important risk-management tools (beyond insurance), but it is far from exhaustive. Through sensible practices, agricultural risk can be greatly reduced and many potential problems connected to risk can be eliminated.

Private risk-management strategies include:

- **Off-farm income.** As has been discussed throughout this section, agricultural producers rely heavily on off-farm income to reduce dependence on making money from agricultural operations. In 2012, 78 percent of all farms had off-farm income that constituted at least half of their annual farm household income, and 70 percent of farms had off-farm income that was at least 76 percent or more of their annual farm household income.[42]

CHART 7

Crop Failure Levels Mostly Remain Low and Steady



SOURCE: U.S. Department of Agriculture, Economic Research Service, Major Land Uses Dataset, "Summary Table 3: Cropland Used for Crops: Cropland Harvested, (Including Double Cropped), Crop Failure, and Cultivated Summer Fallow for the United States, Annual, 1910–2015," http://www.ers.usda.gov/data-products/major-land-uses.aspx (accessed March 15, 2016).

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- **Diversification.** Just as investors should generally not put all their eggs in one basket, farmers without significant off-farm income should diversify their crops to minimize the level of harm caused by any problems associated with any one particular crop. As documented in the recent Agricultural Census, agricultural operations in the United States are becoming more diverse as farmers and ranchers look beyond commodity production to find new ways of generating income. Producers are finding that diversification can make their operations more profitable by providing additional income from direct-to-consumer sales and sales of value-added and specialty products, including certified organic products.[43] Some producers diversify their operations beyond commodities and provide other farm-related services, such as agri-tourism (e.g., direct sales of products, hunting, and festivals).[44]

- **Vertical integration.** Farmers can gain control and ownership of more than one level of the production and distribution process. This reduces dependence on third parties and can take advantage of efficiencies. For example, a farmer may grow hay for dairy cows or a vegetable grower can pack and sell the produce.[45]

- **Crop rotation.** As explained by the USDA, "Crop rotations are planned sequences of crops over time on the same field. Rotating crops provides productivity benefits by improving soil nutrient levels and breaking crop pest cycles." The use of crop rotation is already common. According to the USDA, "82 to 94 percent of most crops are grown in some sort of rotation."[46]

- **Hedging.** Just as a bank might hedge their risk by taking an action to counterbalance an investment, farmers can minimize risk by also taking actions to counterbalance or offset their risk. If farmers, for example, believe prices for their crops might decline, they might hedge against this risk by using the commodity market to protect against this possibility. There are two financial instruments, known as derivatives,[47] which are commonly used to hedge risk: futures and options.

  As defined by the Commodities Futures Trading Commission (CFTC), a futures contract is "an agreement to purchase or sell a commodity for delivery in the future: (1) at a price that is determined at initiation of the contract; (2) that obligates each party to the contract to fulfill the contract at the specified price; (3) that is used to assume or shift price risk; and (4) that may be satisfied by delivery or offset."[48] For example, a corn farmer who is concerned that corn prices will decline in the future can make an agreement to deliver corn at a price established by contract to hedge against lower prices.

  According to the CFTC, an option is "a contract that gives the buyer the right, but not the obligation, to buy or sell a specified quantity of a commodity or other instrument at a specific

TABLE 2

How America Has Changed in 80 Years

Issue	1933	2013
Interstate highway infrastructure	Not built	47,856 miles
Farms with electricity	10.5%	98.8%
Households with air conditioning	10%	87%
Number of tractors on farms	920,021	4,178,300
Tractors in U.S. per farm	0.15	1.98
Cars and trucks	23,827,288	255,876,822
Cars and trucks per capita	0.19	0.81
Crops genetically engineered	Not invented	50%
Households with a telephone	21.5%	97.6%
Households with Internet access	Not invented	67%
Expected lifespan at birth	63.3	78.8
Infant mortality rate (per 1,000 births)	47.02	5.93
Air travel passengers	474,000	645,677,544

SOURCE: Heritage Foundation research. For details, see appendix.

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price within a specified period of time, regardless of the market price of that instrument."[49] For example, the same corn farmer above may decide to hedge against lower corn prices by having the option, not obligation, to sell corn at a price established by contract.

- **Contract farming.** As explained by the United Nations Food and Agriculture Organization, "contract farming can be defined as agricultural production carried out according to an agreement between a buyer and farmers, which establishes conditions for the production and marketing of a farm product or products."[50] By using these contracts, farmers gain "a guaranteed market outlet, reduce their uncertainty regarding prices and often are supplied with loans in kind, through the provision of farming inputs such as seeds and fertilizers."[51]

- **Leasing inputs and hiring custom work.** Two effective methods of reducing agricultural costs are leasing inputs and hiring custom work—strategies by which farmers can limit commitments and purchase only what they need. The USDA states that "leasing [inputs] refers to a capital transfer agreement that provides the renter...with control over assets owned by someone else for a given period, usually a mutually agreed-upon rental agreement. Farmers can lease land, machinery, equipment or livestock."[52] Payments under this model are short term and allow the farmer to adjust if market conditions change. A similar approach would be the hiring of custom help. As the USDA says, "Producers may, at times, find that hiring workers full-time for the entire year may be costly when those workers are only essential during harvest or other peak months."[53]

Major Developments in Agriculture Help to Manage Risk

In addition to a variety of effective private risk-management solutions, farmers today have many benefits that their predecessors never did when it comes to mitigating risk and becoming profitable. Current agricultural policy is supported by the same motivations that supported the farm bill that was enacted in 1933. A lot has changed[54] in agriculture since then, as it has for almost every economic sector. Modern farmers do not merely live in a different agricultural environment, but live in a completely different world. Table 2 compares 1933 to 2013 in terms of some of the important (and stark)

differences that make it possible for farmers to operate far more effectively than in the past.

Critical Policy Considerations

There is an underlying assumption that agriculture should receive special treatment because it is more important than other sectors of the economy. This assumption is likely due to the fact that agriculture offers a basic necessity to the public (i.e., food). Therefore, the farmer is seen as more important, for example, than the restaurant owner. The government should not, however, be in the business of picking winners and losers by figuring out what industry or business is more important than others and therefore more worthy of subsidies.

Ironically, even if agriculture were "special," such status would be an argument for free enterprise in agriculture, not central planning and government interventionist policies. Across other industries, in general, free enterprise principles have helped them flourish. Yet, when it comes to agriculture, those important principles are abandoned; government, and particularly massive financial transfers, such as subsidies and other payments, are seen as the solution. Subsidies distort markets and undermine the agricultural sector such as by stifling innovation and distorting planting decisions that make agricultural producers less responsive to the market. Furthermore, subsidies or quotas that may help a narrow agricultural interest, such as the sugar industry, are obtained at the expense of the economy, consumers, and other industries.

Even if one improperly concludes that agricultural risk cannot be effectively managed or farmers are incapable of managing risk, this does automatically mean that government intervention is warranted. As will be discussed in much greater detail in the next section, government intervention in agricultural risk has created serious problems. Subsidies to address risk crowd out private solutions to risk management and create what is known as moral hazard. In this instance, farmers will take risks they otherwise would not take because the cost of the risks is being passed onto taxpayers.

Conclusion

Farmers are more than capable of managing risk, and while the risk they may face can often be significant, not unlike many other businesses, it is by no means a justification for government intervention. In fact, as will be shown in the next section, government intervention, and specifically subsidies, create serious harm. The cure (i.e., subsidies) is much worse than the imaginary disease of farmers being unable to manage risk.

ENDNOTES: SECTION 1

1. There are different types of risks, as explained later in this section. See U.S. Department of Agriculture, Economic Research Service, "Risk in Agriculture," December 2014, http://www.ers.usda.gov/topics/farm-practices-management/risk-management/risk-in-agriculture.aspx (accessed March 16, 2016).
2. U.S. Department of Agriculture, Economic Research Service, "Understanding America's Diverse Family Farms," February 1, 2016, http://www.ers.usda.gov/amber-waves/2016-januaryfebruary/understanding-america%E2%80%99s-diverse-family-farms.aspx#.V4-vIE3JDL8 (accessed August 5, 2016). It should be noted that the total number of farms has also remained flat since the late 1980s, at about 2.1 million farms. U.S. Department of Agriculture, National Agricultural Statistics Service, "Farms and Land in Farms Data, 1850 to 2014," http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1259 (accessed January 11, 2016).
3. U.S. Department of Agriculture, Economic Research Service, "A Safety Net for Farm Households," http://www.ers.usda.gov/media/920236/aer788b_002.pdf (accessed August 5, 2016). See also Susan Offutt and Craig Gundersen, "Farm Poverty Lowest in U.S. History," U.S. Department of Agriculture, Economic Research Service, http://www.ers.usda.gov/amber-waves/2005-september/farm-poverty-lowest-in-us-history.aspx#.V5IqcU3JDL8 (accessed August 5, 2016).
4. U.S. Department of Agriculture, Economic Research Service, "Historic Data on Mean and Median Farm Operator Household Income and Ratio of Farm Household to U.S. Household Income, 1960–2014," http://www.ers.usda.gov/data-products/farm-household-income-and-characteristics.aspx (accessed January 5, 2016). Data adjusted for inflation.
5. For the net worth of farm households in 2013, see U.S. Department of Agriculture, Economic Research Service, "Principal Farm Operator Household Finances, 2009–2015," http://ers.usda.gov/data-products/farm-household-income-and-characteristics.aspx (accessed January 5, 2016). For the net worth of all U.S. households in 2013, see Jesse Bricker, Lisa J. Dettling, Alice Henriques, Joanne W. Hsu, Kevin B.Moore, John Sabelhaus, Jeffrey Thompson, and Richard A. Windle, "Bulletin: Changes in U.S. Family Finances from 2010 to 2013: Evidence from the Survey of Consumer Finances," Federal Reserve *Bulletin*, Vol. 100, No. 4 (September 2014), p. 8, http://www.federalreserve.gov/pubs/bulletin/2014/pdf/scf14.pdf (accessed March 16, 2016). Please note that the Economic Research Service also used data from the Survey of Consumer Finances to determine net worth of all U.S. households. See U.S. Department of Agriculture, "Structure and Finances of U.S. Farms: Family Farm Report, 2014 Edition," December 2014, Table 10, Note 2, http://www.ers.usda.gov/media/1728096/eib-132.pdf (accessed March 16, 2016).

6. Randy Schnepf, "U.S. Farm Income," Congressional Research Service *Report for Congress*, August 30, 2013, http://digitalcommons.ilr.cornell.edu/cgi/viewcontent.cgi?article=2173&context=key_workplace (accessed March 16, 2016). See Table 1 (showing average income for farm households with less than $10,000 in sales) and Table 5 (showing average income for all U.S. households).
7. This measure captures family farm data only. Family farms though accounted for almost all farms (97%) in 2011.
8. U.S. Department of Agriculture, "Structure and Finances of U.S. Farms: Family Farm Report, 2014 Edition." Table 6 for all farms and Table 10 showing income and wealth lists total farm households (captures data only from family farms). Since 1996, the number of family farms has consistently been between 97 and 99 percent of all farms. In 2014, family farms accounted for 99 percent of farms. See U.S. Department of Agriculture, Economic Research Service, "Family and Nonfamily Farms, by Farm Size Class (Gross Sales), 1996-2014," http://ers.usda.gov/data-products/farm-household-income-and-characteristics.aspx (accessed March 31, 2016).
9. Ibid., Table 10 looks at 2011 data. The wealth data add up to 96.6 percent. U.S. Department of Agriculture, Economic Research Service, *America's Diverse Family Farms: 2015 Edition*, December 2015, http://www.ers.usda.gov/media/1955981/eib146.pdf (accessed July 27, 2016). Page 8 says 97 percent (it could be rounded up or down). Therefore, there could be very minor differences in the percentages.
10. U.S. Department of Agriculture, *America's Diverse Family Farms*, p. 8.
11. "Gross cash farm income (GCFI) is the sum of the farm's crop and livestock sales, Government payments, and other farm-related income." USDA, *Structure and Finances of U.S. Farms*, see footnote 2 of the table classifying farms (on the page preceding page 1 of the report).
12. Ibid., Table 10.
13. For commodity payment data, see U.S. Department of Agriculture, "Structure and Finances of U.S. Farms: Family Farm Report, 2014 Edition," Table 6. For crop insurance data, see Figure 11 of the same USDA report.
14. U.S. Department of Agriculture, "Historic Data, 1960–2014." Data adjusted for inflation.
15. U.S. Department of Agriculture, "Risk in Agriculture."
16. U.S. Department of Agriculture, Economic Research Service, "Highlights from the Farm Income Forecast," February 18, 2016, http://www.ers.usda.gov/topics/farm-economy/farm-sector-income-finances/highlights-from-the-farm-income-forecast.aspx (accessed March 16, 2016).
17. U.S. Department of Agriculture, Economic Research Service, "Farm Finances for All Farms: All Survey States," December 1, 2015, http://www.ers.usda.gov/data-products/arms-farm-financial-and-crop-production-practices/tailored-reports-farm-structure-and-finance.aspx#P526f9569272148dfba9d02575c245180_13_66iT0R0T0R0x0 (accessed July 27, 2016). To access the data, please use farm finances (survey), farm operator households (subject), operator household income (report), and be sure to access all survey states and all farms for 2014. This number is likely higher but the data field "Total Household Income Negative," while capturing farms with negative farm income, could also be capturing farms that have positive farm income and negative off-farm income that is greater than the positive farm income.
18. U.S. Department of Agriculture, *America's Diverse Family Farms*, p. 9.
19. U.S. Department of Agriculture, "Structure and Finances of U.S. Farms: Family Farm Report."
20. Ibid., Table 9.
21. U.S. Department of Agriculture, "Historic Data, 1960–2014."
22. Ibid.
23. U.S. Department of Agriculture, "Farms and Land in Farms 2014 Summary," February 2015, http://usda.mannlib.cornell.edu/usda/nass/FarmLandIn//2010s/2015/FarmLandIn-02-19-2015.pdf (accessed March 14, 2016). "Point Farms are farms that did not have the required minimum $1,000 sales for the year to qualify as a farm, but had sufficient crops and livestock to normally have sales of $1,000 or more. Point Farms are assigned a sales class based on the sum of the agricultural point (dollar) values assigned to the quantity of commodities produced, but not sold." "Farms and Land in Farms 2014 Summary," p. 4.
24. U.S. Department of Agriculture, "Farms and Land in Farms 2014 Summary." The 2012 data discussed in Chart 1 that matched economic class of farms to percent of sales show that 54 percent of farms had sales less than $10,000.
25. U.S. Department of Agriculture, "Structure and Finances of U.S. Farms." The University of Minnesota Center for Farm Management, which has a measure for the debt-to-equity ratio discussed in this report, indicates that a "strong" farm debt-to-asset ratio is no more than 30 percent (farms easily meet this measure as well).
26. U.S. Department of Agriculture, "Assets, Debt, and Wealth," http://www.ers.usda.gov/topics/farm-economy/farm-sector-income-finances/assets,-debt,-and-wealth (accessed March 16, 2016).
27. University of Minnesota Center for Farm Management, "Farm Finance Scorecard," 2014, http://www.cffm.umn.edu/Publications/pubs/FarmMgtTopics/FarmFinanceScorecard.pdf (accessed March 16, 2016).
28. U.S. Department of Agriculture, "Assets, Debt, and Wealth."
29. Ibid.
30. U.S. Department of Agriculture, "Understanding U.S. Farm Exits," June 2006, http://www.ers.usda.gov/publications/err-economic-research-report/err21.aspx (accessed March 16, 2016).
31. The time periods did not match. Farm exit rate data were based on 1992–1997 data, whereas the non-farm small business data were based on 1982–1987 data.

32. Small Business Administration, "Small Business Market Update," June 2015, https://www.sba.gov/sites/default/files/Small_business_bulletin_June_2015.pdf (accessed March 19, 2016). According to the Census Bureau, the exit rate in 2005 for small businesses was 10 percent. See U.S. Census Bureau, "What Matters More: Business Exit Rates or Business Survival Rates?" https://www.census.gov/ces/pdf/BDS_StatBrief4_Exit_Survival.pdf (accessed March 19, 2016). The question is whether the SBA document is covering just small businesses and whether the differences may be attributed to the USDA looking at non-farm small businesses, not all small businesses. However, from 1982–1987, the USDA says the rate was 8 percent, but the SBA document shows exit rates for all small businesses at about 11-12 percent.
33. U.S. Department of Agriculture, "Farmer Bankruptcies and Farm Exits in the United States, 1899–2002," March 2004, p. 25, http://www.ers.usda.gov/media/479214/aib788_1_.pdf (accessed March 19, 2016).
34. Ibid.
35. U.S. Department of Agriculture, "2012 Census of Agriculture Highlights: Farmland Ownership and Tenure," September 2015, p. 4, http://www.agcensus.usda.gov/Publications/2012/Online_Resources/Highlights/TOTAL/TOTAL_Highlights.pdf (accessed March 19, 2016).
36. Organization for Economic Co-Operation and Development, "Risk Management in Agriculture: What Role for Governments?" November 2011, http://www.oecd.org/agriculture/agricultural-policies/49003833.pdf (accessed March 16, 2016).
37. For a more detailed definition, see USDA, "Major Land Uses Glossary," February 14, 2014, http://www.ers.usda.gov/data-products/major-land-uses/glossary.aspx (accessed March 16, 2016).
38. U.S. Department of Agriculture, Economic Research Service, "Major Land Uses: Cropland Used for crops, 1945-2007, by State: Cropland Harvested, Crop Failure, and Cultivated Summer Fallow," last updated December 19, 2011, http://www.ers.usda.gov/data-products/major-land-uses/.aspx (accessed August 5, 2016).
39. See U.S. Department of Agriculture, "Structure and Finances of U.S. Farms," Table 9. As explained in footnote 1 of Table 9, "Farm earnings in this table and net farm income in table 7 are not directly comparable. Net farm income includes cash and noncash items and is calculated for the farm business. Farm earnings—in contrast—are based on cash items only, with the exception of a deduction for depreciation. Farm earnings also exclude the share of net income generated by the farm paid to other households, such as those of partners."
40. Ibid., Table 2.
41. Ibid.
42. U.S. Department of Agriculture, "2012 Census of Agriculture: United States Summary and State Data," May 2014, p. 80, http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_1_US/usv1.pdf (accessed March 16, 2016).
43. See, for example, U.S. Department of Agriculture, "Trends in U.S. Local and Regional Food Systems: Report to Congress," January 2015, http://www.ers.usda.gov/media/1763057/ap068.pdf (accessed March 16, 2016).
44. University of Arkansas, Division of Agriculture, "Agricultural Diversification Through Agritourism," http://www.uaex.edu/publications/pdf/fsced301.pdf (accessed March 31, 2016), and U.S. Department of Agriculture, "2007 Census of Agriculture: Agricultural Diversification," http://www.agcensus.usda.gov/Publications/2007/Online_Highlights/Fact_Sheets/Economics/agricultural_diversification.pdf (accessed March 16, 2016).
45. See, e.g., U.S. Department of Agriculture, "Managing Risk in Farming: Concepts, Research, and Analysis," http://www.ers.usda.gov/media/1761672/aer774.pdf (accessed March 16, 2016).
46. Steven Wallander, "While Crop Rotations Are Common, Cover Crops Remain Rare" Amber Waves, U.S. Department of Agriculture, March 4, 2013, http://www.ers.usda.gov/amber-waves/2013-march/while-crop-rotations-are-common,-cover-crops-remain-rare.aspx#.V5-8pU3JDL8 (accessed August 1, 2016).
47. According to the CFTC, a derivative is "a financial instrument, traded on or off an exchange, the price of which is directly dependent upon (i.e. derived from) the value of one or more underlying securities, equity indices, debt instruments, commodities, other derivative instruments, or any agreed upon pricing index or arrangement (e.g., the movement over time of the Consumer Price Index or freight rates). They are used to hedge risk or to exchange a floating rate of return for fixed rate of return. Derivatives include futures, options, and swaps. For example, futures contracts with cash settlement are derivatives of the price of a commodity or the value of an index and options on futures are derivatives of futures contracts." United States Commodity Futures Trading Commission, "CFTC Glossary," http://www.cftc.gov/ConsumerProtection/EducationCenter/CFTCGlossary/index.htm (accessed March 16, 2016).
48. Ibid.
49. Ibid.
50. United Nations Food and Agriculture Organization, "Contract Farming Resource Center: FAQ, 2016," http://www.fao.org/ag/ags/contract-farming/faq/en/ (accessed March 16, 2016). To learn more about contract farming, see Farm Foundation, "Production Contracts," May 2004, http://www.farmfoundation.org/news/articlefiles/105-May2004ProductionContract.pdf (accessed March 16, 2016), and University of Minnesota, "Agricultural Production Contracts," 2005, http://www.agrisk.umn.edu/cache/ARL00782.htm (accessed March 16, 2016).
51. Ibid.
52. U.S. Department of Agriculture, "Managing Risk in Farming: Concepts, Research, and Analysis," March 1999, p. 46, http://ers.usda.gov/media/1761672/aer774.pdf (accessed March 16, 2016).
53. Ibid., p. 48.
54. For a good discussion on the transformation of agriculture, see Economic Research Service, U.S. Department of Agriculture, "The 20th Century Transformation of U.S. Agriculture and Farm Policy," http://www.ers.usda.gov/media/259572/eib3_1_.pdf (accessed August 5, 2016).

SECTION 2:
Subsidies to Address Risk Are Harmful

Josh Sewell

Costly, market-distorting federal subsidies remain entrenched in current agricultural policy. The persistence of such policies is primarily due to the misperception that farmers are incapable of managing farming risk or that farmers face unique risks. This subsidy status quo is untenable because of the wide-ranging and significant harms that result from subsidies. These harms go beyond the cost imposed on federal taxpayers; they also negatively impact the agricultural sector, the environment, and taxpayers. This section first highlights who is receiving subsidies, showing that most farmers do not receive subsidies, and then highlights the many serious problems connected to these subsidies.

Who Is Receiving Agricultural-Risk-Related Subsidies?

The federal government subsidizes agricultural risk management through two primary subsidy programs: commodity price and income support payments under Title I of the 2014 farm bill (discussed in Section 3) and premium subsidies under the crop insurance program authorized under the Federal Crop Insurance Act (discussed in Section 4).

Most Farms Do Not Receive Subsidies. Most farms operate without these government subsidies. According to the USDA's "Structure and Finances of U.S. Farms: Family Farm Report, 2014 Edition,"[1] only 25 percent of all farms received payments from agriculture commodity-related programs, which send payments to producers of certain crops.[2] Of the almost 548,000 farms that did receive payments, total payments are concentrated amongst the largest, most successful farms. Family farms with annual gross cash farm income of $350,000 or more received 62 percent of commodity-related payment dollars, while only constituting 23 percent of all farms that received payments.[3]

Taxpayers also provide billions of dollars of indirect subsidies through federally subsidized crop insurance, which is administered by the Risk Management Agency and currently is the single costliest federal agricultural subsidy program.[4] Based on 2011 data, 85 percent of all farms did not participate in the crop insurance program.[5] Like price and income support payments, subsidies for crop insurance are highly concentrated. An Environmental Working Group study of the 2011 crop insurance year, the most recent year for which the USDA has released detailed numbers, showed that $4 billion of the $7.4 billion in federal crop insurance premium subsidies benefitted just 10 percent of crop insurance policyholders.[6] The top 20 percent of policyholders were the beneficiaries of 73 percent of the total premium subsidies.[7] And because there are no payment limitations on premium subsidies, 26 policyholders each benefitted from more than $1,000,000 in premium subsidies in 2011.[8] Subsidies are costly, and the payments are concentrated on a small percentage of farmers. Because premiums and premium subsidies are tied to production, a large share of the total subsidies flows to these larger producers.

Interestingly, it is not merely the total amount of subsidies that go disproportionately to the large farms. A greater percentage of large family farms receive commodity payments than do small family farms. The percentage of farms operating with or without commodity-related subsidies varies by the size of the farm. Data regarding commodity payments from the USDA "Family Farm Report 2014 Edition"[9] show that 21 percent of small family farms[10] (family farms with less than $350,000 in gross cash farm income[11]) received payments, whereas 77 percent of midsize and large-scale family farms (family farms with $350,000 or more in gross cash farm income) received payments.[12]

Table 3 shows the percentage of farms that receive commodity subsidies by type of farm (there are subcategories in both the small family farm and large-scale farm categories). It also shows the percentage of non-family farms that receive commodity payments. Even among the wealthier farms, a

TABLE 3

Mid-Size and Large-Scale Family Farms Receive Commodity Subsidies at a Much Higher Rate than Small Family Farms

	Type of Farm	Farms	Receiving Commodity Subsidies
SMALL FAMILY FARMS	Retirement farms	353,922	13.4%
	Farming is not primary occupation	909,872	15.5%
	Low sales (less than $150,000)	567,214	24.8%
	Moderate sales ($150,000–$349,999)	118,253	66.3%
MID-SIZE AND LARGE-SCALE FAMILY FARMS	Mid-size ($350,000–$999,999)	123,009	78.5%
	Large ($1,000,000–$4,999,999)	38,541	74.3%
	Very large ($5,000,000 or more)	3,857	58.0%
NON-FAMILY FARM		58,175	23.7%

NOTE: The U.S. Department of Agriculture defines a family farm as any farm where the majority of the business is owned by the operator and individuals related to the operator.
SOURCE: U.S. Department of Agriculture, Economic Research Service, "Structure and Finances of U.S. Farms: Family Farm Report," 2014 Edition, Table 6, December 2014, http://www.ers.usda.gov/media/1728096/eib-132.pdf (accessed April 9, 2016).

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TABLE 4

Government Payments Are a Small Share of Farmer Income

	2011	2012	2013	2014	2015	2016
GROSS CASH INCOME	407,010,766	451,297,357	455,023,850	466,653,111	421,437,329	415,671,953
All commodity receipts	365,849,626	401,437,418	403,034,491	421,505,060	377,018,008	367,460,691
Cash farm-related income	30,740,611	39,224,821	40,985,563	35,381,206	33,845,478	34,312,371
Total direct government payments	10,420,530	10,635,118	11,003,796	9,766,845	10,573,843	13,898,891
Government payments as share of cash income	**2.56%**	**2.36%**	**2.42%**	**2.09%**	**2.51%**	**3.34%**
NET CASH INCOME	123,436,171	135,258,726	135,066,567	128,121,861	93,159,878	90,854,725
Total direct government payments	10,420,530	10,635,118	11,003,796	9,766,845	10,573,843	13,898,891
Government payments as share of cash income	**8.44%**	**7.86%**	**8.15%**	**7.62%**	**11.35%**	**15.30%**

NOTES: Figures for 2015 and 2016 are forecasts. Figures do not include off-farm income. The data also overstate the importance of commodity subsidies because data on direct government payments include conservation program payments.
SOURCE: U.S. Department of Agriculture, Economic Reserach Service, "Farm Income and Wealth Statistics," http://ers.usda.gov/data-products/farm-income-and-wealth-statistics/net-cash-income.aspx (accessed March 15, 2016).

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significant percentage of them do not receive commodity-related subsidies.

Farmers may not receive subsidies for many reasons, such as their production levels or because many farmers of certain commodities are not eligible for certain subsidies. For example, fruit and vegetable growers receive very few subsidies.

Subsidies Are Not a Significant Part of Most Farmers' Incomes. While agricultural subsidies can total in the tens of billions of dollars annually, subsidies are not a significant portion of national farm income. From 2011–2015, government payments averaged 2.4 percent of gross cash income.[13] While the USDA projects government payments will increase to 3.3 percent of gross cash income in 2016, the overwhelming majority of a farmer's income is dependent on the price the farmer receives providing crops and livestock.

Even as a percentage of net cash income, when seed, rent, machinery, and other costs are deducted, federal subsidies averaged only 8 percent of net income from 2011–2014. Subsidies are forecast to rise to 11.4 percent of net cash income in 2015 and 15.3 percent in 2016.[14]

To clarify, these data show whether these subsidies play a significant role in farm cash income. They do not show the importance of subsidies in comparison to all sources of income for farmers, many of whom rely heavily on off-farm income. (See Section 1 for much more detail.) Data also overstate the importance of commodity subsidies because data on "direct government payments" include conservation program payments.

So while federal agricultural subsidies disproportionately accrue to the largest farms, operations big and small gain the overwhelming majority of their gross cash income from sources other than government subsidies.

The effect of current agricultural policy is that agricultural subsidies are concentrated on the largest farms producing the majority of commodities. Subsidies, however, constitute a small percentage of the total income of these large farms.

Why the Status Quo Is Untenable: The Harm Imposed by Subsidies

Moral Hazard. Taxpayer programs designed to shield farmers and ranchers from economic risks present an opportunity for increased moral hazard. Moral hazard occurs when individuals take actions that increase risks because of the protection they are afforded through insurance or other risk-mitigation programs. With farm subsidies, moral hazard often results in taxpayers bearing the cost of those actions. Risk is transferred from the farmer to the taxpayers as a whole. While Section 1 of this report refutes the notion that farmers are unable to effectively manage agricultural risk without government intervention, there are numerous risks that agricultural producers must manage to remain viable.[15] But the problem with government intervention, as exemplified by the dozens of federal programs created to reduce risks for the agricultural sector, is that at times they actually promote riskier business decisions. Excessive debt accumulation, growing crops poorly suited for the climate, planting on land that is likely to flood or erode, or abandoning diversification, crop rotation, and other unsubsidized risk-management tools are but a few of the riskier business decisions agricultural businesses may take when they are able to pass off the majority of the risk of economic loss onto taxpayers.

Subsidies Are Harmful to Taxpayers. Federal agricultural programs to reduce the risk of financial losses in the agricultural sector are expensive. The Congressional Budget Office (CBO) currently projects that federal commodity and supplemental disaster assistance programs, which are numerous income support, price guarantee, or subsidized loan programs targeted toward producers of specific crops or livestock, are projected to cost $36.2 billion over the next five fiscal years, fiscal years 2016–2020.[16] Highly federally subsidized crop insurance, in which agricultural businesses can buy insurance policies guaranteeing as much as 85 percent of their anticipated crop revenue, and have taxpayers pick up on average 62 percent of the premiums, is projected to cost $40.7 billion.[17]

The tax dollars spent on these programs do not cover the true cost of subsidies. Federal agricultural subsidies can, in fact, increase costs for consumers, impose burdens on other federal programs, and present an obstacle to tackling federal deficits and other important public policy priorities. There are massive wealth transfers from taxpayers to favored interests, in this case, agricultural producers. Furthermore, the diversion of these tax dollars takes scarce resources and shifts them away from more productive uses, thereby inhibiting economic growth.

Subsidies Artificially Drive up Land Prices. Programs that aid the incomes of established,

highly capitalized producers have contributed to skyrocketing costs for agricultural land. Nationally, crop land value more than doubled in the last 15 years, from $1,490 an acre in 2000 to $4,100 an acre in 2014.[18] Regional increases have been even greater. Corn Belt farm land prices increased 212 percent, even after dipping slightly since 2013, and Northern Plains cropland has increased more than 350 percent.[19]

This increase in prices was driven primarily by high commodity prices, but income from federal agricultural subsidies are also capitalized into the price of land.[20] As landowners can predict payments from commodity programs, they can incorporate this steady stream of future income into the value of their land. A report conducted by the USDA's chief economist in 2003, a time of relatively low commodity prices, noted, "some studies indicate that total government payments in recent years have increased U.S. farmland values 15–25 percent."[21] And it is not simply government payments, but the government mandates for ethanol consumption that drive up grain prices (and land prices) by diverting a large share of maize and oilseed production from feed and food uses.[22]

These price distortions prop up land prices, and farmers then depend on the subsidies to keep these artificial prices afloat. When subsidies stop as they should, prices will decline to reflect the price that is supported by the market absent the artificial distortions. Subsidies are not justified in order to maintain the problems created by the subsidies. These problems are a key reason to get rid of the subsidies.

Subsidies Increase Obstacles for Beginning Farmers. The aging population of farmers is something over which the agricultural sector, as well as the USDA, expresses concern.[23] The average age of principal farmers has increased, rising from an average of 50.5 years in 1982 to 58.3 years in 2012.[24] Despite the USDA's focus on beginning farmers, including $444 million of authorized spending for numerous programs targeted specifically at beginning or socially disadvantaged farmers over FY 2014–FY 2018, there are fewer principle farm operators under the age of 25 now than in 2007.[25] There has also been a 20 percent reduction in the number of beginning farmers, those who have been farming less than 10 years.[26]

One of the biggest obstacles faced by an entrepreneur looking to get into farming is access to quality land. High prices alone are not the issue; rather, the problem is the government role in driving up prices. Federal agricultural subsidies are making it more difficult for beginning farmers to purchase land. They face two primary hurdles. First, programs that subsidize the incomes of established farmers, such as commodity payments, federal mandates for ethanol, and other government programs increase the cost of farmland (as explained above). Second, federal income support payments tied to agricultural land are incorporated into the cash rents farmers must pay to operate on farm land. Increasing cash rents are beneficial to owners of farm land. In cases where the owner is also the operator, the rapid increase in land values has been an economic boon; owners do not pay rent, thus an operator who owns his or her farmland avoids one of the largest costs of production, while the increased value of their land increases their wealth.

Increased cash rents, however, are a barrier for beginning farmers. Beginning farmers have lower levels of capital and own less if any land, thus they tend to rent higher percentages of land than established producers. Cropland rental rates are bid higher by farmers seeking to capture land-based subsidies, increasing beginning farmers' operating costs and reducing their ability to save money in order to purchase the now more expensive land.

Subsidies Go to Individuals Who Have Little to Nothing to Do with Farming.[27] A *Washington Post* review of government payments between 2000 and 2006 found more than $1.3 billion in commodity subsidies went to landowners who did no farming, including homeowners in subdivisions built on former farmland.[28] In numerous reports the Government Accountability Office (GAO) found a number of deficiencies in the USDA's monitoring of agricultural programs, including "that $22 million in subsidies and allowances may have been provided on behalf of an estimated 3,434 [crop insurance] program policyholders 2 or more years after death."[29]

Subsequent reviews of agricultural programs have repeatedly[30] found tens of millions of dollars in agricultural subsidies annually going to residents of such agriculture powerhouses as New York City and Washington, DC. [31]

Subsidies Can Distort Planting Decisions. Subsidies also present the opportunity for farmers to "farm" the federal programs. In other words, farmers may make planting decisions based on the incentives offered by federal programs, rather than on the market. When the USDA made sweet potato

crop insurance policies available in North Carolina in 1998, the number of producers growing sweet potatoes quadrupled in some areas. Losses on these policies also increased substantially with farmers receiving 16 times the amount of insurance payments as premiums they paid. This was due less to poor yields and more to deliberate actions on the parts of some bad actors: planting in places known to have a low chance of success, failing to tend to the crop. Revised standards for sweet potato crop insurance eliminated these losses.[32] Waste and fraud in the crop insurance program has been documented in many other areas besides North Carolina. [33] Similarly prevented planting provisions in crop insurance, where a farmer receives an insurance payment if conditions prevent planting of a crop, have been exploited in the prairie pothole region of the Northern Plains.[34]

Agricultural Subsidies Hamper Rural Development. The economic health and well-being of rural communities is often cited by proponents of increased federal spending on agricultural programs, despite the fact "assisting rural communities through commodity payments has not shown up as an explicit goal"[35] of any farm bill.[36] Rural development is in fact a separate title in the farm bill, containing dozens of grant, loan, and direct spending programs. The goal of commodity and crop insurance programs has always been to transfer taxpayer dollars to individual farmers or landowners, though proponents often assert this government-directed transfer will bolster rural communities.

In fact, job growth and economic innovation have been shown to lag national trends in rural communities most dependent on federal agricultural subsidies.[37] In 2005, research conducted by the Federal Reserve Bank of Kansas City concluded, "Farm payments are not providing a strong boost to the rural economy in those counties that most depend on them. Job gains are weak and population growth is actually negative in most of the counties where farm payments are the biggest share of income.[38] As a way to measure innovation, the article examined the rate of growth of new businesses, finding, "From 1990 to 2002, the growth in new business establishments was generally the weakest in counties most dependent on farm payments."[39]

Agriculture is not the main source of employment even in most non-urban counties. As discussed earlier, agricultural subsidies are concentrated among a small number of farms and these farm owners are increasingly not members of rural communities. Farm consolidation has also led to consolidation in the businesses providing farm machinery, seed, fertilizer, and other resources as larger farms shift their purchasing away from local businesses. A recent review of the impact both farm and food programs have on rural communities found "farm commodity programs are probably the least efficient policy mechanisms for promoting overall rural community well-being" due to the low number of recipients, concentration of payments, rise of absentee landowners, and diversification in the rural economy.[40]

Agricultural Subsidies Impose Environmental Costs. Federal agricultural subsidies aimed at reducing agricultural risk can have a negative effect on the environment. While high commodity prices are the main driver in decisions to plant crops on wetlands, pasture, or other marginal lands, federal subsidies, most notably highly subsidized crop insurance, contribute by shifting most of the cost of any potential loss to taxpayers while reserving gains for producers.[41] Marginal lands and wetlands often contain lower quality soil, leading to an increased reliance on fertilizer or other inputs, like pesticides and herbicides, to ensure a crop makes it to harvest. In addition, subsidies reducing risk of financial loss have been shown to influence decisions on crop choice and crop rotation; farmers are more likely to plant crops that are subsidized eschewing unsubsidized crops, including rotating in cover crops.[42] Reduced crop rotation and monocrop production (planting the same crop repeatedly) can also lead to an increased reliance on fertilizer, negatively impacting water quality. Fertilizer runoff from corn production, driven by federal ethanol and crop insurance policies, is the primary cause of nutrient pollution in the Mississippi River and Gulf of Mexico.[43]

Subsidies Undermine Free Trade. Federal agricultural commodity programs can be costly barriers to free trade. Agricultural subsidies artificially reduce the cost of production leading to overproduction of crops and below market prices. When these crops are exported—dumped—on foreign markets they can undermine the agricultural industry in these foreign countries. Since the Doha round of the World Trade Organization (WTO) negotiations were launched in 2001, governments have focused on reducing trade distortions caused by agricultural policy.[44] Yet the 2002, 2008, and 2014 farm bills continued trade-distorting subsidies. Subsidies for

U.S. cotton producers were successfully challenged by Brazil in the WTO for having a detrimental effect on global cotton prices. As a result of the WTO decision, federal taxpayers paid $147 million per year to prevent Brazil from taking retaliatory action for a successful WTO challenge to U.S. cotton subsidies.[45] After spending $496 million on these payouts, the U.S. government announced an agreement with Brazil for changes in the cotton programs plus a final payoff of $300 million to drop the case.[46]

Subsidies Are Harmful to Sound Risk Management. Subsidies create a disincentive for private, unsubsidized risk management. Farmers, like all business owners, will utilize the most cost-effective means of reducing their risk of economic loss. Federal agricultural subsidies are often so generous, and come with so few restrictions, that it would be unwise for one farmer not to participate. It would put them at a competitive disadvantage to neighboring farmers who do get subsidies from the programs by reducing the income they have when bidding for the purchase or rental contract on new lands, investing in equipment, hiring farm managers, or covering other farm expenses.

Farms, especially the largest most productive operations, can utilize numerous time-tested tools to tailor their business to their own risk-tolerance level. They include growing more than one crop, raising livestock in addition to crops, keeping higher cash reserves, using markets to lock-in guaranteed prices for inputs or crops, etc. But ignoring subsidized programs would be "leaving money on the table." Subsidies influence farmers' risk-management practices and can reward poor farming decisions. Few farmers would purchase insurance without subsidies.[47] Studies have shown that farmers increase their participation rate and increase their crop insurance coverage in direct response to increases in premium subsidies.[48]

Subsidies Can Create the Need for Subsidies and Work at Cross-Purposes with Existing Programs. Subsidies may be created to address one problem but simultaneously they could be creating another problem. Taxpayers are often required to subsidize a program to address problems created by government intervention in the first place. This unintended consequence may in fact work at cross-purposes with the goal of another subsidy or government program. For example, subsidies can have a negative impact on the environment, yet taxpayers are subsidizing conservation programs in the farm bill to address environmental concerns. Costly federal government efforts exist to attract beginning farmers, yet subsidies undermine these efforts by making it more difficult for them to get into farming.

Subsidies Give Government an Excuse to Dictate Farming Decisions. As the federal government continues to subsidize farmers, especially at such significant cost, policymakers will use that as justification to influence or control farming activities. For example, the 2014 farm bill required farmers who participate in crop insurance to meet certain conservation requirements that are part of a program called conservation compliance. These requirements also exist for receipt of other subsidies.[49]

In many respects, accountability is a reasonable expectation of policymakers seeking to ensure proper use of taxpayer dollars. However, this accountability could become a pretext for government interference in farming. Agricultural producers should know all too well that there is increasing pressure for policymakers to heavily regulate genetic engineering, industrial farming, and animal practices that may be humane, but draw criticism from some activists.

Quite simply, there are many organizations that do not like modern-day farming practices and would like to see their preferred methods of agriculture be adopted. Federal funding makes the case to interfere in farming much easier. This interference may accumulate gradually; like the frog slowly boiling in the pot, farmers may wake up and realize they gave up too much of their freedoms to secure money that was unnecessary for their success.

Conclusion

Federal agricultural subsidies to reduce economic risks harm taxpayers, rural communities, and the agricultural sector itself. By selecting winners and losers, federal subsidies addressing agricultural risk distort the market, thereby leading to numerous negative unintended consequences. Lawmakers need to fundamentally rethink the agricultural safety net.

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SECTION 3: *Commodity Programs*

Josh Sewell

Agricultural commodity programs are a legacy of the government's attempts to raise farm income during the Great Depression—programs that continue today despite the fact that farm household income greatly exceed that of non-farm households.[1] These programs, which at the time of farm bill passage were projected to cost $44 billion from 2014–2023,[2] include subsidies such as price supports and quotas that are supposed to help farmers, but do so at the expense of taxpayers and consumers. The agricultural sector is well equipped to handle risk and does not need special handouts. This section provides some background on commodity programs in general, and then highlights the problems with major commodity programs.

Commodity Programs: In General

Federal taxpayers are forced to subsidize a number of programs targeted at producers of certain agricultural products, many of whom make more than the average taxpayer. Managed primarily by the USDA's Farm Service Agency (FSA) and financed by the government-owned Commodity Credit Corporation (CCC), these agricultural commodity programs are intended to support farm incomes primarily by making payments when income or prices fall short of government-set targets, by reducing the supply of commodities in the market, and subsidizing loans. The crops that are covered by each program are specified in legislation but consist primarily of row crops that are easily stored and traded, such as corn, soybeans, wheat, cotton, and rice.[3] In addition, there are unique income-protection programs for dairy and high price supports to prop up the sugar industry. All of the commodity programs make costly intrusions into the market. A list of current commodity programs and a brief description of how they work is provided on the next page.

Commodity Programs Are Unjustified. As shown in great detail in Section 1, farmers are not in need of special handouts and do not need to be treated any differently than other business leaders. Farm households have higher incomes and greater levels of wealth when compared to all American households. Over the past 80 years, the agricultural sector has developed new technologies and innovations and opened new markets that have led to more stable incomes and increased profitability.

Yet, public misperception of the American farmer as technologically backward and defenseless against the whims of the weather and markets leads to misunderstanding of the condition, needs, and capabilities of agriculture to manage its affairs without costly federal commodity programs. In addition, consolidation into a smaller number of farmers operating ever larger operations has concentrated benefits on a small number of actors that fiercely defend their subsidies, making it difficult to reform outdated policies.

Commodity programs are a classic case of concentrated benefits and dispersed costs. The benefits of the program go to a small number of people, while the costs are paid by all taxpayers. Ending commodity programs would eliminate generous income subsidies for a small number of beneficiaries, generally large agricultural producers, and eliminate the serious harm imposed by subsidies. Agriculture of today is a far cry from agriculture of the 1930s, but that difference is not reflected in federal policy.

Who Is Receiving Commodity Subsidies? Commodity subsidies benefit a small number of farmers, and only farmers growing certain crops. According to the USDA's "Structure and Finances of U.S. Farms: Family Farm Report, 2014 Edition,"[4] only 25 percent of all farms received payments from agriculture commodity-related programs.[5]

From FY 2005 to FY 2014 just five crops (corn, cotton, wheat, rice, and soybeans) accounted for approximately 90 percent of commodity payments administered by the USDA's Farm Service Agency.[6] While these are some of the most widely grown crops, payments from the USDA are also

Current Commodity Programs

Agricultural Risk Program (ARC)	A program that makes payments to farmers when revenue from commodities falls slightly short of levels experienced in recent years. The revenue target is based on averages calculated at the county level (ARC-County) or individual farm basis (ARC-Individual).
Price Loss Coverage (PLC)	A target price program that makes payments to farm operators when the national average price for a commodity falls below a price set in the 2014 farm bill. Applies to 21 specific commodities.
Marketing Assistance Loans (MAL) and Loan Deficiency Payments (LDP)	MALs are low interest government loans, in which the commodity is collateral, utilized for short-term financing at harvest, allowing producers to store their crops until prices are likely to be higher. At loan maturity MALs are repaid in cash or, if prices are lower than rates specified in the loan, the commodity can be forfeited. In order to discourage forfeitures, MALs can often be repaid at levels less than the original principal amount, creating a "marketing loan gain" for the level of debt forgiven. Loan Deficiency Payments occur when producers that are eligible for MALs instead choose to receive a payment equivalent to the "marketing loan gain."
Permanent Disaster Assistance Programs	*Livestock Forage Disaster Program (LFP)* makes payments when drought or fire impact federal grazing lands *Livestock Indemnity Program (LIP)* pays producers for livestock deaths due to weather or attacks by wild animals either reintroduced by or subject to protection by the federal government (i.e. wolves). *Emergency Assistance for Livestock, Honeybees and Farm-Raised Fish Program (ELAP)* makes payments for lossed due to disease, weather, and wildfires. *Tree Assistance Program (TAP)* pays for orchards and nurseries to replant or rehabilitate trees and bushes;
Noninsured Crop Disaster Assistance Program (NAP)	Provides payments for noninsurable crop losses due to drought, flooding, hurricanes, or other natural disasters
USDA Loans	Low rate loans are available for construction of farm storage or handling facilities, farm purchases, operations and expenses, and to cover costs in federally declared disaster areas.
Dairy Program	*Federal Milk Marketing Orders* require companies that package milk or make products from milk purchase the milk from dairies at specific minimum prices determined by the end-use of the milk. The *Margin Protection Program (MPP-D)* makes payments to dairy producers depending on the difference between the national price of milk and average price of feed. "Catastrophic" coverage is free with producers able to pay premiums to elect higher levels of guaranteed margins *Dairy Product Donation Program (DPDP)* requires USDA to purchase dairy products, which are then donated to public and private nonprofit organizations, during times of low dairy prices.
Sugar Program	*Tariff Rate Quotas (TRQs)* specify the amount of low-tariff sugar that can be imported on a per-country basis. Imports of sugar beyond these quotas result in prohibitively high tariffs. The USDA provides *short-term, non-recourse loans* to sugar processors at specified rates on the condition the processors make payments to sugar producers roughly equivalent to the rates provided by USDA. Instead of repaying the loans, refiners can forfeit sugar in times of surplus. *Marketing Allotments* specify the amount of sugar each sugar refinery is allowed to refine with the intent of keeping sugar prices high and avoiding loan forfeitures. *Feedstock Flexibility Program* requires the USDA to buy sugar and re-sell it at a loss to ethanol plants when "excess" sugar is on the market.

highly concentrated with a small number of farmers of commodities receiving large payments. From 1995 to 2012 the top 10 percent of commodity payment recipients received 77 percent of commodity payments.[7]

Payments are geographically concentrated as well. Just 10 congressional districts received nearly one-third of payments in 2012, with 22 districts accounting for more than 50 percent of payments and 41 districts accounting for two-thirds of the more than $5.3 billion in commodity payments in 2012.[8] States in the Great Plains, Corn Belt, and Texas routinely receive the most commodity payments. The concentration of benefits to a small number of producers in a small number of congressional districts provides commodity groups an outsized advantage when it comes to securing and maintaining special treatment from Washington.

The Flaws of the Major Commodity Programs

For the most part, agricultural support has shifted from supply controls (planting quotas, tariffs, and payments to take land out of production) to programs subsiding income which are less tied to planting decisions. The nexus for this move toward less centralized and bureaucratic, but still government-directed farm programs was the 1996 farm bill. This bill eliminated counter-cyclical programs, those that made payments when prices were below government-set target prices, and most planting limitations or other controls on production, replacing them with fixed annual direct payments. These direct payments went to producers based on acres that had historically been planted with a program commodity (referred to as "base acres"), were set to be temporary, and were promoted as a means of weaning farmers off federal supports. Yet, when prices declined in the late 1990s, lawmakers revived the counter-cyclical payments, providing more than $20 billion in ad-hoc Market Loss Assistance (MLA) payments and permanently reviving the counter-cyclical payments in the 2002 farm bill. Despite the revival of the counter-cyclical program, direct payments were continued as well in both the 2002 and 2008 farm bills.

The attempt to move commodity programs toward less centralized and bureaucratic but still government-directed commodity programs, occurred as the farm safety net was transitioning away from one centered on direct government control and toward managing the risks of production. The centerpiece of the "risk management" regime is the federally subsidized crop insurance program. Covering more than 120 crops, federally subsidized crop insurance is now the single largest support program for production agriculture at more than $8 billion a year.[9] (Crop insurance is discussed in Section 4.) Despite the emergence of crop insurance as a cornerstone of federal agricultural policy, lawmakers continue to create new commodity programs to guarantee income for certain producers.

Commodity Programs Are Tantamount to Central Planning. A fundamental problem with all commodity programs is that they attempt to supplant the natural workings of the marketplace with the wisdom of Washington. The New Deal era commodity programs attempted to raise the income of farmers by increasing prices through policies that restricted supply. Supply controls and quotas are still used, most notably in the sugar program, but federal policy undertakes different approaches for other commodities. Biofuels mandates attempt to increase prices for feedstock producers, mainly corn, and create markets for other biofuels by manufacturing demand. The bulk of federal policy now attempts to supplement incomes of commodity producers by shifting tax dollars directly to producers through commodity payments and highly subsidized revenue insurance. Whatever the mechanism, federal commodity programs are an attempt to control the workings of the agricultural markets.

Programs sending tax dollars to farmers do so either because of the production decisions made on those farms or simply because those farms exist. Payments, whether "coupled" or "decoupled" to a farmer's decisions, are inherently problematic. Decoupled payments, by their design, go to farmers regardless of the growing conditions they face or market conditions. Direct payments were a prime example of the problem. Thus they can go to farmers who do not need them, simply pad income when farmers experience good years, and even cover land that is not in crop production. All of these issues were common in the direct payment program that directed approximately $5 billion a year toward farm land with base acres. Coupled payments, however, influence a farmer's farm management decisions. If the only way to get subsidies is to plant certain crops, it is inevitable some farmers will grow those crops. These decisions impact the availability

TABLE 5

Farm Bill Reference Prices Compared to Commodity Price Projections

FARM BILL REFERENCE PRICE		COMMODITY PRICE PROJECTIONS 2014–2015	2015–2016	2016–2017	2017–2018	2018–2019
Corn: $3.70 per bushel	May 2013	$4.45	$4.52	$4.54	$4.56	$4.58
	April 2014	$3.90	$4.00	$4.19	$4.35	$4.45
	March 2016	$3.70	$3.60	$3.52	$3.59	$3.71
Wheat: $5.50 per bushel	May 2013	$5.81	$5.75	$5.86	$5.95	$6.01
	April 2014	$5.40	$5.60	$5.65	$5.65	$5.78
	March 2016	$5.99	$5.00	$4.50	$4.58	$4.75
Soybeans: $8.40 per bushel	May 2013	$10.12	$10.16	$10.21	$10.50	$10.53
	April 2014	$11.06	$10.02	$10.06	$10.87	$11.11
	March 2016	$10.10	$8.75	$8.55	$8.77	$8.85
Rice: $14.00 per cwt.	May 2013	$14.47	$14.37	$14.22	$14.12	$14.19
	April 2014	$15.25	$14.97	$14.84	$15.06	$15.11
	March 2016	$13.56	$12.92	$13.44	$13.48	$13.36

SOURCE: Congressional Budget Office, "USDA Mandatory Farm Programs–Baseline Projections," May 2013, April 2014, and March 2016, https://www.cbo.gov/publication/51317 (accessed August 5, 2016).

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of commodities for consumers, manufacturers, and have major implications for trade agreements.[10]

Title I Commodity Programs in the 2014 Farm Bill

The 2014 farm bill made significant changes to federal commodity programs. While the bill eliminated a number of commodity programs, including direct payments, a number of new potentially costly income guarantee programs were created.

Instead of just getting rid of direct payments, the Average Crop Revenue Election (ACRE) program, and counter-cyclical payments, Congress created two new major programs: Agricultural Risk Coverage and Price Loss Coverage. For commodity supports, the 2014 farm bill created a scenario where producers on farms with base acres can elect to participate in one of two primary FSA-operated income support programs, Price Loss Coverage (PLC) or Agricultural Risk Coverage (ARC).[11] The election a farm owner or operator makes is made on a per-farm basis[12] and is irrevocable; applying to each year the current farm bill is in effect (currently 2014 through the 2018 crop year). There is no enrollment fee or deductible charged to participate.

Price Loss Coverage. The PLC program makes payments to farmers when the national average farm price for a commodity falls below a price set in the farm bill. If the national average price for a covered commodity falls short of this "reference price," producers enrolled in PLC will get a payment. The actual price a farmer receives for their crop does not matter. Payments are based on national averages.

One problem with dictating prices from Washington is that target prices can be much higher than market prices. The reference price for certain commodities is set so high as to make payments likely, especially given current price projections, making PLC look less like a safety net program and more like one designed to transfer income to certain producers.

Table 5 shows the reference prices for corn, wheat, soybeans, and rice[13] and compares them to

the outdated prices[14] that the CBO used (prices in the May 2013 baseline) in estimating the cost of the enacted farm bill. Before passage of the farm bill, wheat and corn prices had already dropped significantly, so lower prices should not have come as surprise.[15] Table 5 also shows that the March 2016 CBO commodity prices are often below the reference prices.

There is also no requirement that farmers plant base acres with the "base" crop. While this enables producers to make planting decisions based on what they determine is in their economic interest rather than simply what happened to be planted on their base acres in previous years, the calculation of "loss" due to prices falling below the government set reference price may not be directly tied to the farmers' actual experience. Thus it is possible for farmers to get a payment for "losses" on base acres even if they were not growing that crop. For example, corn base acres could receive a payment if corn prices fell even if the acres had been planted to soybeans. In fact, base acres planted to a cover crop, one designed to protect or increase soil health but not intended as a marketable commodity, remain eligible for commodity payments.

Agricultural Risk Coverage. The ARC program is often referred to as a shallow loss program. Any myth that commodity programs are supposed to act as a safety net as opposed to an income guarantee is quickly dispelled by this program. Under ARC, payments are based on calculated revenue rather than simply a commodity's price. The benchmark is set at 86 percent of the five-year Olympic average (highest and lowest years removed from the calculation).[16]

The ARC program is problematic for a number of reasons. First, it suffers from the same base versus actual plantings issue, where producers may get payments for base acres that are in fact planted to a different, even successful, crop.[17] In addition, using national prices and county-level average yields could result in a producer whose individual farm outperforms the county average receiving a payment when he actually "suffers" a better than average yield. As long as the calculated revenue for a commodity falls below the benchmark revenue, all producers with base acres for that commodity will receive payments, regardless of the actual yield or prices they received for growing their crops. And the reverse could happen: A producer operating on land that routinely underperforms his neighbors' average may not receive a payment if the county average is sufficiently high enough, even if his individual farm falls short of revenue levels it generated in recent years.

The very notion of a shallow loss program guaranteeing revenue is itself problematic. Taxpayers spend more than $8 billion a year running the federally subsidized crop insurance program.[18] This program enables producers of commodities to lock in revenue guarantees of as much as 85 percent of their anticipated revenue, with the average insurance contract 70 percent–75 percent depending on location and commodity. By setting the payment formula to 86 percent of the benchmark revenue, ARC is intended to cover dips in revenue that are too "shallow" to trigger crop insurance payments. No other industry has an explicit government guarantee designed to compensate individual businesses that "suffer" from small dips in revenue. For example, restaurant owners do not receive payments when their sales fall relative to previous years. Likewise, shoe store owners whose sales are hurt during a recession do not receive help from the federal government. The program is not about helping to manage risk as much as helping to guarantee that farmers prosper at the expense of taxpayers, who on average have less income and less wealth than the vast majority of farmers.

Even the American Farm Bureau Federation (AFBF) was concerned about shallow loss programs when the program was debated in Congress. As the AFBF wrote in an October 17, 2011, letter to the House and Senate Agriculture Committees:

> Our biggest concern is that by reducing the risk of shallow losses, farmers may be encouraged to take on more risk than they would in response to market signals alone. This is basically analogous to the classic moral hazard problem of insurance. Insured individuals may engage in riskier behavior than they would if they weren't insured.[19]

In the same letter, the AFBF also explained why such programs are questionable in value, and effectively acknowledged that a shallow loss program is not a safety net for farmers:

> A shallow loss program is a drastic departure from any previous farm policy design. Federal farm programs have traditionally existed to help farmers survive large, systemic losses. Shallow losses, however, can arise from a variety of systemic or individual sources and do not typically jeopardize the survival of a farm operation.

Shallow loss programs are not disaster programs. Producers of commodities already have numerous unsubsidized means of managing cash flow and reducing their vulnerability to revenue swings, such as hedging, contracting, diversification, and asset leveraging—not to mention off-farm income. Providing shallow loss programs is simply adding a platinum layer to an already gold-plated crop insurance subsidy scheme.

ARC and PLC Are More Costly Than Promised. Both programs may prove to be more costly than the programs they replaced. For example, the 2014 farm bill was notable because proponents claimed its expansion into new shallow loss and target price programs would reduce federal deficits. Elimination of commodity programs—such as direct payments, ACRE, and the Counter-Cyclical Program, and replacing them with ARC and PLC—were projected to reduce commodity program spending by $14.3 billion over FY 2014–2023 in CBO's cost projections for the 2014 farm bill.[20] But cost estimates released in March 2016 cast doubts on taxpayers realizing these savings. The total projected tab for ARC and PLC for 2014–2023 increased by 57 percent to $42.6 billion and by 71 percent to $30.6 billion for the first five years of payments under the program.[21]

Farm bill proponents tout the projected cost savings generated by the legislation and point to farmers' willingness to forgo direct payments as hallmarks of good policy and an example of agriculture sacrificing in the service of deficit reduction. Yet, it is highly unlikely replacing direct payments with ARC and PLC will in fact generate promised budget savings. Prior to farm bill passage, the CBO baseline projected the direct payment program would have cost $22.7 billion if they had not been eliminated (covering the five-year period of the farm bill). For the five-year farm bill, ARC and PLC were projected to cost $17.9 billion, resulting in net deficit reduction of $4.8 billion.[22] But the CBO's updated cost estimates now say five-year costs for ARC and PLC will be 30.6 billion, meaning ARC and PLC are projected to cost $7.9 billion more than direct payments were expected to cost.[23]

The Dairy Program. Federal dairy policy has failed to adjust to modern markets and technologies. Federal dairy policy is predicated on the notion that fluid milk is a highly unstable commodity that must be consumed quickly and near its source. But it is no longer 1937. Improvements in transportation infrastructure, expansion of global markets and modern technology, everything from refrigeration to improved packaging that can even make un-refrigerated boxed milk shelf stable for months, have eliminated this justification. (See Section 1 on management of agricultural risk that highlights the differences between the 1930s and today.)

Like other commodities, federal intervention in the dairy market increased during the Great Depression and has evolved, though remained unabated to this day. Taxpayers guarantee the incomes of dairy producers mainly through price guarantees and a subsidized insurance-like program that covers income. While different in their details, both programs require intense governmental intrusion in the dairy market.

Federal Milk Marketing Orders (FMMOs) are the primary tool the government guarantees minimum prices for dairy producers. Under FMMOs, companies that package milk or make products from milk are required to purchase milk from dairies at minimum prices. The price depends on the end-use, with "fluid milk" (the gallon purchased at the grocery store) guaranteed the highest price while milk turned into cheese, yogurt, and other products is set to a lower minimum price. This requirement raises the price of milk for drinking while lowering the price that would be paid for milk used to produce milk-based products.

The 2014 farm bill created an insurance-like program to put taxpayers on the hook for guaranteeing income of dairy producers. The Margin Protection Program (MPP) is a voluntary program where dairy producers receive payments designed to compensate them when the margin between fluid milk prices and feed costs fall below guaranteed levels. The cost to participate is a $100 annual fee and a subsidized premium if they elect higher than minimum coverage.[24]

Ultimately, both programs manipulate the workings of the dairy sector influencing the prices consumers pay for both milk and milk-based products, impact the costs of other federal safety net programs, and make taxpayers subsidize dairy producers instead of requiring them to improve the efficiency of their operations or otherwise manage their operating risks.

The Sugar Program. While federal commodity, and even specialty crop, policies are moving away from command and control mechanisms and toward subsidization of risk-management tools, federal

sugar policy is an outlier. The web of federally funded price supports and supply restrictions that prop up the domestic sugarcane and sugar beet industry were unchanged by the 2014 farm bill. Federal sugar policy is the poster child for central planning even compared to the other commodity programs, to the detriment of taxpayers and consumers.

The sugar program artificially inflates the price of sugar, and therefore the income of sugar producers, by providing both a price floor and numerous programs that decrease the supply of sugar. Sugar refiners can use the sugar they refine as collateral for securing below-market rate nonrecourse marketing loans. Under these short-term loans (typically nine months), refiners receive cash to finance their operations, allowing them to store sugar for sale later. When these loans mature they must be paid back with interest or, if the price of sugar is below the rate set in the loan, refiners can forfeit the sugar to the government.

In order to avoid forfeitures by keeping prices high, the government institutes a number of controls that restrict supply. Annual marketing allotments limit the amount of sugar each domestic processor is allowed to sell; it is hard to imagine that in the United States, the land of the free, the federal government dictates how much of a particular good someone can sell. That is not all. Countries that export sugar to the United States face an annual cap to the amount that can be imported, with any beyond this amount subject to confiscatory tariffs. Finally, the 2008 farm bill created a program that requires USDA to purchase excess sugar and sell it at a loss to biofuels companies to turn into ethanol. All of these efforts result in U.S. sugar costing as much as twice what it costs in the world market.

Federal sugar policy is flawed and costly to consumers and taxpayers. Government intervention increases both the wholesale cost of sugar and the price of products made with sugar in essence creating a hidden tax estimated to cost on average $3.7 billion a year.[25] The Department of Commerce found unnecessarily high prices are a determining factor in food manufacturers deciding to relocate to foreign countries, and the high prices result in three confectionary industry job losses for every one sugar growing or harvesting job saved.[26]

The federal sugar program also imposes costs on the federal government. The CBO estimates the sugar program will cost $83 million through 2024.[27] In FY 2013 the USDA implemented the provisions for purchasing sugar and selling at a loss to biofuels manufacturers, resulting in a loss of $173 million.[28]

Trade Problems of the Commodity Programs. Subsidies can be very harmful, including when it comes to trade. For years federal taxpayers paid $147 million per year to prevent Brazil from taking retaliatory action for a successful WTO challenge to U.S. cotton subsidies.[29] After spending $496 million on these payouts, the USDA announced an agreement with Brazil for payment of a final payoff of $300 million in addition to changes to cotton farm programs to drop the case.[30] The new commodity programs passed in 2014, however, created new vulnerabilities in the WTO. Now, large payments can influence farmers' planting decisions, thus causing increased production and lower world prices. Large program outlays potentially leave a commodity vulnerable to challenge under the WTO similar to the cotton case.[31]

Conclusion

Agricultural commodity programs are an outdated legacy of centralized and bureaucratic governmental meddling in the market. These programs continue even as much of the taxpayer-funded agricultural safety net has shifted from direct income support or supply controls toward managing the financial risks of production—most notably through the highly subsidized federal crop insurance program (discussed in the following section). Lawmakers need to fundamentally rethink the role of commodity programs in a 21st-century economy.

ENDNOTES: SECTION 3

1. See Section 1 for much greater detail.
2. Following standard budget scoring rules, the Congressional Budget Office (CBO) calculated costs for the Agricultural Act of 2014 over 10 fiscal years (FY 2014–FY 2023). The bill itself, however, provides a five-year authorization (FY 2014–FY 2018) for most programs. The number cited here is the estimated outlays for "Title 1 – Commodities" resulting from H.R. 2642 as identified by the CBO. H.R. 2642, The Agricultural Act of 2014, January 28, 2014, https://www.cbo.gov/publication/45049 (accessed March 21, 2016).

3. Under the 2014 farm bill, "covered commodities" include wheat, oats, and barley (including wheat, oats, and barley used for haying and grazing), corn, grain sorghum, long grain rice, medium grain rice, dry peas, pulse crops (lentils, small chickpeas, large chickpeas), soybeans, other oilseeds (sunflower seed, rapeseed, canola, safflower, flaxseed, mustard seed, crambe, sesame seed), and peanuts. Upland cotton is not a covered commodity, but is subsidized through a separate Risk Management Agency (RMA) "shallow loss" program the Stacked Income Protection Plan (STAX). In addition to the covered commodities, a number of other crops can benefit from subsidized FSA loans including upland cotton, extra-long staple cotton, wool, mohair, and honey.
4. U.S. Department of Agriculture, "Structure and Finances of U.S. Farms: Family Farm Report, 2014 Edition." Please note that government payments appear to be defined differently than in the 2012 Census of Agriculture.
5. Ibid. In this report, the USDA defines commodity-related payments as "payments from the Direct Counter-cyclical Payment (DCP) and Average Crop Revenue Election (ACRE) programs, loan deficiency payments, marketing loan gains, net value of commodity certificates, milk income loss contract payments, agricultural disaster payments, and any other miscellaneous State, Federal, and local payments." For more details on federal commodity programs, see Section 3: Commodity Programs.
6. Dennis Shields, "Farm Commodity Provision in the 2014 Farm Bill (P.L. 113–79)," Congressional Research Service *Report for Congress*, March 28, 2014, http://nationalaglawcenter.org/wp-content/uploads/assets/crs/R43448.pdf (accessed March 21, 2016).
7. Environmental Working Group, "Commodity Subsidies in the United States Totaled $183.7 Billion from 1995–2014," http://farm.ewg.org/progdetail.php?fips=00000&progcode=totalfarm&page=conc&regionname=theUnitedStates (accessed March, 21, 2016).
8. Ibid.
9. U.S. Government Accountability Office, *Reducing Subsidies for Highest Income Participants Could Save Federal Dollars with Minimal Effect on the Program*, GAO–15–356, March 2015, http://www.gao.gov/assets/670/669062.pdf (accessed March 21, 2016), and Congressional Budget Office, "CBO's March 2016 Baseline for Farm Programs," March 24, 2016, https://www.cbo.gov/publication/44202 (accessed July 26, 2016).
10. The 2014 farm bill eliminated cotton as a covered commodity for ARC and PLC, creating instead a separate shallow loss program, Stacked Income Protection (STAX), available only for producers of cotton and run as part of the crop insurance program. This was done in an effort to resolve a long-standing trade dispute namely with Brazil. For a more comprehensive discussion on free trade, see Section 7 of this report.
11. For more on free trade, see Section 7 of this report.
12. A "farm" under FSA regulations is essentially a tract of land, not necessarily contiguous, that is owned by one person or entity. A farmer may operate on more than one FSA farm. Program elections may be different on each farm. For example, one tract may be enrolled in PLC while another tract is in ARC.
13. The four commodities that are used in this analysis were selected because of their significant acreage, and both the CBO and the USDA have 5-year projections for each of them.
14. Congressional Budget Office, "CBO's May 2013 Baseline for Farm Programs," May 14, 2013, http://cbo.gov/sites/default/files/cbofiles/attachments/44202_USDAMandator%20FarmPrograms.pdf (accessed March 21, 2016).
15. See, e.g., YCHARTS, "U.S. Corn Price Farm Received," https://ycharts.com/indicators/corn_price (accessed March 21, 2016); YCHARTS, "U.S. Wheat Price Farm Received," https://ycharts.com/indicators/wheat_price (accessed March 21, 2016); and Whitney McFerron and Phoebe Sedgman, "Corn Caps Biggest Drop Since 1960 as Harvest Rises to Record," Bloomberg, December 31, 2013, http://www.bloomberg.com/news/articles/2013-12-31/corn-set-for-worst-drop-since-60-as-crop-prices-slump-on-output (accessed March 21, 2016).
16. In ARC, price is calculated using the national average for a commodity while yield is based on the average yield calculated at the county level in which the FSA farm resides. There is an individual farm-based ARC, where the revenue guarantee is determined by adding all covered commodities on one farm together, rather than treating each commodity separately, and losses are calculated on a per farm basis, but almost no producers elected this option and it is likely to be eliminated in the next farm bill. (If farmers valued the coverage as protection for income risk, they should value a per farm program. But they prefer alternatives that have more upside variation on a per crop basis.)
17. Payments are inherently flawed because any way they are developed (coupled or decoupled), there is an issue. If coupled they distort planting decisions; if decoupled, they are welfare payments unrelated to whether incomes are high or low.
18. Government Accountability Office, *Reducing Subsidies for Highest Income Participants Could Save Federal Dollars with Minimal Effect on the Program*, and see latest CBO baseline, March 2016, https://www.cbo.gov/publication/44202 (accessed July 26 , 2016).
19. The American Farm Bureau Federation, letter to the House and Senate Agriculture Committees, October 17, 2011, http://farmpolicy.com/wp-content/uploads/2011/10/101711_FarmBureau_FarmBillShallowLoss.pdf (accessed March 21, 2016). This letter was written when the discussion regarding shallow loss revenue coverage was at 90 percent. While the numbers have been reduced slightly, the same general concerns about shallow loss highlighted in this paper would still apply. See also Jim Wiesemeyer, "Farm Bureau Sends Letter to Ag Panel Members Re: 'Shallow Losses,'" AgWeb, October 18, 2011, http://www.agweb.com/article/farm_bureau_sends_letter_to_ag_panel_members_re_shallow_losses_/ (accessed March 21, 2016).
20. Congressional Budget Office, "CBO Score of HR2642, The Agricultural Act of 2014," January 28, 2014, https://www.cbo.gov/publication/45049 (accessed March 31, 2016).
21. Congressional Budget Office, "CBO USDA Mandatory Farm Programs – Baseline Projections," March 2016, https://www.cbo.gov/about/products/baseline-projections-selected-programs#25 (accessed July 26, 2016).
22. Congressional Budget Office, "CBO Score of HR2642, The Agricultural Act of 2014," January 28, 2014, https://www.cbo.gov/publication/45049 (accessed March 31, 2016). Spending outlays 2016-2020 for ARC and PLC (accessed March 31, 2016).

23. Even if comparing direct payments, ACRE, and CCP combined ($26.9 billion) to ARC and PLC ($30.6 billion), the ARC and PLC programs would cost $3.7 billion more.
24. The MPP makes payments when the national operating margin—which is national average milk price minus national average feed cost—drops below $4.00 per cwt. Producers can insure at higher guaranteed margins in $0.50 increments up to $8.00 per cwt and pay. The guarantee can cover up to 90 percent of historic production. The cost to participate is a $100 annual fee and a subsidized premium based on the level of coverage; free for a margin guarantee of $4.00 per cwt with progressively less subsidy the higher the guaranteed margin.
25. Agralytica, "Economic Effects of the Sugar Program Since the 2008 Farm Bill & Policy Implications for the 2013 Farm Bill," http://sugarreform.org/wp-content/uploads/2013/06/AgralyticaEconomicEffectsPaperJune2013.pdf (accessed August 4, 2016).
26. U.S. Department of Commerce, "Employment Changes in U.S. Food Manufacturing: The Impact of Sugar Prices," http://trade.gov/media/Publications/pdf/sugar06.pdf (accessed March 21, 2016).
27. Congressional Budget Office, "CBO's March 2016 Baseline for Farm Programs," March 24, 2016, https://www.cbo.gov/publication/44202 (accessed July 26, 2016).
28. Mark A. McMinimy, "Sugar Program: The Basics," Congressional Research Service *Report for Congress*, R42535, April 1, 2014, http://nationalaglawcenter.org/wp-content/uploads/assets/crs/R42535.pdf (accessed March 21, 2016).
29. Bakst, "Why Are We Paying $300 Million to Help the Brazilian Cotton Industry?"
30. Pelc, "Why the Deal to Pay Brazil $300 Million Just to Keep U.S. Cotton Subsidies Is Bad."
31. Randy Schnepf, "2014 Farm Bill Provisions and WTO Compliance," Congressional Research Service *Report for Congress*, https://www.fas.org/sgp/crs/misc/R43817.pdf (accessed March 21, 2016).

SECTION 4:
Crop Insurance

Brian Wright

The federal crop insurance program was greatly expanded in 1980 to replace a standing disaster payment program. At that time, disaster assistance was thought to be too costly and there were also concerns that farmers were being encouraged to plant crops in marginal lands,[1] described by the USDA as being "characterized by lower yields and a higher probability of losses."[2]

The expansion of the federal crop insurance program was seen as an alternative way to provide disaster protection for farmers that would reduce costs and address moral hazard (parties taking on risky practices because they do not incur the risks).

The program has been a failure, particularly when measured against the major objective, to reduce costs. The disaster assistance that Congress deemed to be too costly in 1980 was replaced with a crop insurance program that is six times greater in cost, adjusted for inflation.[3]

The federal crop insurance program is the most expensive agricultural program and the costs have increased substantially in recent years. Costs for the federal crop insurance program averaged $3.8 billion annually for fiscal years 2004 through 2008 and skyrocketed to $8.5 billion annually for fiscal years 2009 through 2014. Using the March, 2016 Congressional Budget Office baseline, those costs are expected to average $8.4 billion per year for fiscal years 2015 through 2024.[4]

Of particular importance is recognizing what was not a reason for creating the program. There was no desire to create a bigger taxpayer-funded "safety net" for farmers or a belief that farmers were struggling and therefore needed a crop insurance program to help them out; the program was the policy option Congress chose to address disaster protection in a less costly manner.[5]

Moral hazard problems still exist because premium subsidies can encourage agricultural practices that farmers may not choose to engage in absent the subsidies. The program discourages private risk management because much of the risk is borne by taxpayers.

This section provides some background on the crop insurance program, highlighting several critical points that demonstrate that the program has been a failure, and also how the program has completely veered off course from its mission of protecting farmers from disasters.

Brief History of Crop Insurance

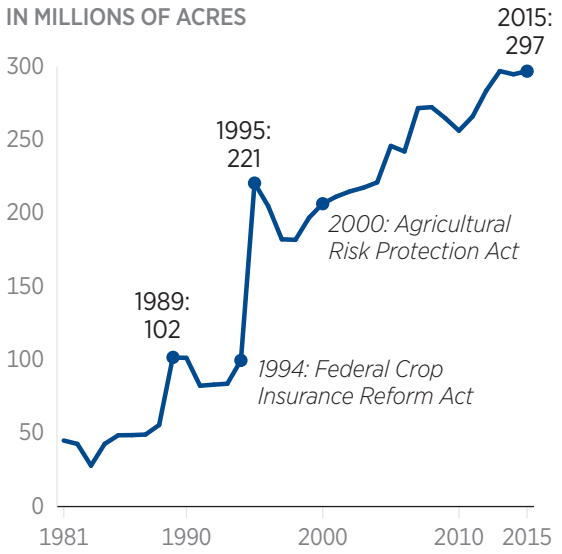
In the 1970s, the Agriculture and Consumer Protection Act of 1973 and the Rice Production Act of 1975 authorized the disaster payments program. The costs for these programs were soon deemed to be extremely high and therefore an alternative was sought. Moreover, these programs were thought to have moral hazard problems. From FY 1975 to FY 1981, the average annual costs of disaster payments were $510 million.[6] To put this in perspective, the cost of the federal crop insurance program was $8.5 billion a year from 2009–2014,[7] which is six times greater when adjusted for inflation.[8]

In response to these concerns, Congress passed the Federal Crop Insurance Act of 1980, which expanded the modest experimental crop insurance program that had been authorized in 1938. The expansion of the crop insurance program was promoted as a way to eliminate the disaster payment program, and it subsidized premiums paid by farmers for crop insurance. Private crop insurance companies, which had to be approved by the government to participate in the program, would now deliver crop insurance to farmers. It should be noted that the crop insurance program focuses on a specific type of crop insurance referred to as multiple peril insurance (i.e., covering multiple perils), as opposed to named peril insurance, such as crop-hail insurance (covers perils such as hail, wind, and fire),[9] which is offered independent of the crop insurance program.

The program had very low participation. Even with a subsidy as high as 30 percent for premiums

CHART 8

Land Enrolled in the Federal Crop Insurance Program



SOURCES: Joseph Glauber, "Crop Insurance Reconsidered," *American Journal of Agricultural Economics*, Vol. 86, No. 5 (February 2004), pp. 1179-1195, https://www.researchgate.net/publication/4739539_Crop_Insurance_Reconsidered (accessed April 14, 2016), and Risk Management Agency, "Summary of Business Reports and Data,"http://www.rma.usda.gov/data/sob.html (accessed August 1, 2016).

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(the average rate was 25 percent[10]) national participation was only 25 percent of eligible area in 1988. Ad hoc disaster assistance enacted by Congress following droughts in 1988 and 1989 required disaster recipients to purchase crop insurance, but even with this boost, crop insurance participation was about 40 percent by 1990.[11] Most farmers simply did not deem it necessary to participate in the program.

In 1990, the Bush Administration proposed eliminating the crop insurance program. By then, it was clear the program had been a failure. As explained in its 1990 farm bill proposal, "The [crop insurance] program has suffered from poor financial performance and has failed to prevent passage of costly ad hoc disaster assistance when crop losses are widespread."[12] From 1981–1988, the average annual cost for both crop insurance and ad hoc disaster assistance combined was $1.1 billion. Just crop insurance alone (based on 2009–2014 average annual costs)[13] is about four times greater than both crop insurance and ad hoc disaster assistance during that time period (adjusted for inflation).[14]

The Administration argued that a "standing disaster assistance program that provides protection against catastrophic losses would allow private insurers to develop multiple peril crop insurance coverage for individual farmers." This proposal to eliminate the crop insurance program was not adopted, but the concerns expressed 25 years ago are even more relevant today.

In 1994 Congress passed the Federal Crop Insurance Reform Act. This legislation did several things, including making participation in a program called catastrophic (CAT) coverage mandatory for farmers participating in certain farm programs, and increased premium subsidies, making it more appealing for farmers to buy higher levels of coverage.

As explained by the USDA, "CAT coverage compensated farmers for losses exceeding 50 percent of an average yield paid at 60 percent of the price established for the crop for that year."[15] The premiums were fully subsidized by taxpayers. Participants only had to pay $50 per crop within each county. The mandatory provision was removed in 1996 and area enrolled in CAT coverage fell almost 24 percent (from 115 million acres in 1995 to 88 million acres in 1996).[16] For 27 million acres, CAT coverage was not worth even $50 per farm. These deep losses were apparently a negligible problem for these farms. Even with such a generous program, many farmers did not deem this coverage necessary to purchase.

The 1994 law did help to increase participation. To further increase participation, Congress passed the Agricultural Risk Protection Act of 2000. The average premium subsidy is now at 62 percent, meaning farmers pay only 38 percent of the premium for their crop insurance while taxpayers bear the remaining 62 percent. Not surprisingly, participation has continued to increase. (See Chart 8.)

There has been so much attention to driving up participation rates that success with participation has somehow become the narrative that crop insurance is a success (e.g. farmers are widely participating and therefore must find the program valuable, therefore it is a success). Forcing taxpayers to pay an increasing amount of subsidies to get farmers to participate in a program that they would not pay for if they were charged the full costs does not constitute success. However, it does show that enough financial incentive, not surprisingly, will convince farmers to

TABLE 6

Premium Subsidy Rates for Yield Protection Insurance

	COVERAGE LEVEL			
	55%	65%	75%	85%
Federal Crop Insurance Act of 1980	30%	30%	16.9%	n/a
Federal Crop Insurance Reform Act of 1994	46.1%	41.7%	23.5%	13%
Agricultural Risk Protection Act of 2000	64%	59%	55%	38%

NOTES: The premium subsidy rates for revenue protection are the same as that listed under the Agricultural Risk Protection Act of 2000. Revenue-based insurance was not an option for farmers until 1997.
SOURCES: Joseph Glauber, "Crop Insurance Reconsidered," *American Journal of Agricultural Economics*, Vol. 86, No. 5 (February 2004), Table 2, "Premium Subsidy Rates for APH (Crop Yield) Insurance," https://www.researchgate.net/publication/4739539_Crop_Insurance_Reconsidered (accessed April 18, 2016), and National Crop Insurance Services, "Crop Insurance Plan Comparison," October 2014, https://www.ag-risk.org/NCISPUBS/Training/insplancomp.pdf (accessed March 15, 2016).

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enroll in something they otherwise would not buy on their own.

When measured against the major objective of reducing costs, crop insurance is a failure. The program was supposed to be a more cost-effective way to provide disaster protection. It has not only failed in this regard, but has made the cost problems far worse.

Important Background About Crop Insurance

The federal crop insurance program was just one approach to providing disaster protection for farmers. Given its cost, policymakers should be examining what, if anything, really needs to be done to assist farmers with disasters. They should not just assume the crop insurance program is required without evaluating it, and should take the time to recognize its flaws.

"Crop Insurance" Is Less About Insurance and More About Providing Subsidies to Farmers. "Crop insurance" in the agricultural policy context refers to taxpayer-funded multiple peril crop insurance. Critics of the crop insurance program are not opposed to private crop insurance; they are concerned about this taxpayer-funded program. The program is also completely unrelated to private insurance that farmers can and do buy just like anyone else, such as life insurance, insurance for buildings and equipment, and even certain types of private crop insurance such as crop-hail insurance. The federal crop insurance program provides subsidies for multiple peril insurance that protects farmers from numerous causes of risk, including natural disasters and other risks that have nothing to do with disasters.

Crop Insurance Provides Coverage Even When There Is Not a Disaster. The federal crop insurance program does not require a disaster or even yield losses to have occurred for farmers to receive indemnities. Crop insurance, promoted as an alternative to the costly disaster payment program, has instead morphed into a price support program that addresses very modest losses and indeed can reward farmers whose income is higher than usual.

There are generally two types of policies: yield-based and revenue-based. A yield-based policy protects farmers from yields that are lower than expected due to events beyond the control of farmers, such as weather and disease. In 1997, revenue-based insurance became an option for farmers and now accounts for 77 percent of all policies earning premiums in 2014.[17] As explained in a Congressional Research Service report, "By 2003, acreage under revenue-based insurance exceeded acreage covered by yield-based policies."[18] It is only recently that revenue-based insurance has been available to farmers and that more acreage was covered by these policies than yield-based policies.

These revenue-based policies are more popular than yield-based policies because they do not require yield losses. Farmers can even have greater

Harvest Price Option Hypothetical

This hypothetical uses numbers and examples from an Environmental Working Group report, "Taxpayers, Crop Insurance, and the Drought of 2012," April 2013.[1]

Assume an Illinois corn producer in 2012 with an Actual Production History (APH) yield of 200 bushels per acre. (APH is a measure of a farmer's actual crop yields based on past experience.) The planting time price for corn revenue policies in Illinois was $5.68 per bushel. His expected revenue in a "normal" year (where the yield is equal to the APH yield) would be $1,136 per acre (5.68 x 200). Assume that he signs up for 85 percent coverage (not uncommon in Illinois where premium rates are lower than in other parts of the corn belt).

The implicit revenue guarantee is $965.60/acre (.85 x 200 x 5.68). Because of the drought, his yield is only 150 bushels. But because of the drought, the price at harvest is $7.50 per bushel. The value of his harvested crop is thus $1,125 (150 x 7.50). Under the revenue contract, he is eligible for a payment because his yield was 20 bushels below 85 percent of the APH. He thus receives an indemnity payment of $150/acre (20 x $7.50). Note that total revenue is $1,275 ($1125 + $150)—compared to his expected revenue at planting of only $1,136. This is one reason why farmers did so well in the Midwest during the drought. In 2012, corn producers who insured at 75 percent or higher made more than they would have in a normal year with prices at harvest equal to the planting price.[2]

1. Environmental Working Group, "Taxpayers, Crop Insurance, and the Drought of 2012," April 2013, static.ewg.org/pdf/2013babcock_cropInsurance_drought.pdf?_ga=1.193312493.1396854743.1447772804 (accessed March 31, 2016).
2. Ibid.

yields than expected and still could get indemnity payments if commodity prices are lower than expected. A revenue-based policy protects against dips in expected revenue due to low prices, low yields, or both. The federal government should not be in the business of insuring price or revenue; agricultural producers, like other businesses, should not be insulated from market forces and assured of financial success.

Crop Insurance Subsidizes Very Minimal Losses. The crop insurance program is not just focused on catastrophic losses. Taxpayers subsidize up to an 85 percent coverage level for some crops, which means that if a producer's yield or revenue loss is more than 15 percent of normal, indemnities can kick in (85 percent of losses can be covered). While subsidy rates decline as the coverage level increases, at the 85 percent level, taxpayers still subsidize 38 percent of the premium cost. The subsidy is 55 percent at the 75 percent coverage level.

In comparison, under the 1980 Act producers could receive a 30 percent premium subsidy for coverage levels up to 65 percent. The highest coverage level offered was 75 percent, and it was subsidized at "only" 16.9 percent. (See Table 6.) The current protection for minimal losses helps to effectively eliminate most downside risk for farmers and possibly cover losses that most businesses would consider normal business risk.

Crop Insurance Can Lead to Windfalls. Through the harvest price option, farmers can guarantee more revenue than they even expected at the time of planting. This option—available under revenue-based policies—allows farmers to be indemnified for yield losses at the higher of the price at planting or at harvest. As a result, farmers are discouraged from using the commodities markets to hedge against prices, which they should be doing as opposed to relying on government intervention.

The harvest price option can lead to absurd results. Agricultural producers can sometimes be eligible to receive a payment that makes them "more than whole" (a windfall)—i.e., where the indemnity payment is so large that they made more money because of a yield loss than they would have had they harvested an average crop. (See the Harvest Price Option Hypothetical for an example.)

Crop Insurance's Bottomless Well of Subsidies. Taxpayers are forced to subsidize the federal crop insurance program with no limits in place on the total benefits that can be received by participating farmers. For example:

There are no limits on the amount of premium subsidies that benefit farmers (for example, the direct payment program had a $40,000 limit); and

There is no limit on total indemnities that farmers can receive.

Who Participates in the Crop Insurance Program?

Measured by total acreage, the program does have wide participation as shown in Chart 8. According to the Congressional Research Service:

> [A]pproximately 83% of U.S. crop acreage is insured under the federal crop insurance program. Four crops—corn, cotton, soybeans, and wheat—typically account for more than 70% of total enrolled acres. For these major crops, a large share of plantings is covered by crop insurance. In 2014, the portion of total corn acreage covered by federal crop insurance was 87%; cotton, 96%; soybeans, 88%; and wheat, 84%.[19]

However, based on 2011 data, only about 15 percent of all farms participated in the crop insurance program.[20] This may seem very low, but as shown earlier, most farms are extremely small and provide little agricultural production, and some other farms may not be eligible for the program.

Over 120 crops are eligible for the crop insurance program,[21] up from 28 crops in 1980.[22] According to Environmental Working Group data, the top 20 percent of policyholders "received" 73 percent of the total premium subsidies.[23] Given that only a small percentage of farms participate in the crop insurance program, this high concentration of subsidy beneficiaries makes it even more compelling that a small minority of farmers with the largest farms reap the lion's share of the benefits from the crop insurance program.

Government Failure: The Federal Multiple Peril Crop Insurance Program

The crop insurance program has only increased the cost problem that it was supposed to solve, and the problem of moral hazard still exists. As if that is not enough, the program causes serious economic damage and other harms as most subsidies do. (See Section 2 on why subsidies to address risk are harmful.) Three specific harms are of particular concern:

Squashes Innovation and Competition. The current system is the equivalent of a government run cartel. The federal government has stepped in and controls the private crop insurance market in collaboration with its approved companies. The 17 crop insurance companies (for 2016) that participate in the federal program receive reimbursements to cover administrative and operating expenses[24] and also share in the underwriting gains and losses of the program. There are specific limits on competition between insurers. For example, companies are unable to compete on premium rates. If a company has a great idea for a new product, it must first get the approval of the government to be part of this subsidized program. If they seek to develop an unsubsidized product, they must report this to the USDA's Risk Management Agency for them to determine whether it undermines the subsidized products.[25]

Farmers who participate in the crop insurance program are beneficiaries from the program, but they are also hurt as well. Federal intervention into the crop insurance market crowds out competition. The result is less innovation and fewer choices for agricultural producers to mitigate their risk. Specifically, this means that farmers are denied access to insurance products, which would have existed absent government intervention, that would have helped them to effectively meet the unique risk profile they specifically face. The very threat of competition has been met with a swift response. For example, as reported by the *Washington Post*:

> In 2002, a small upstart insurance company approached the federal government with an idea. The company, Crop 1, was one of 16 firms that sold federally subsidized crop insurance policies to farmers under rates set by the government.
>
> Crop 1's plan was modest. It wanted to introduce a slight amount of competition by offering farmers discounts of up to 10 percent on their premiums.
>
> An eruption ensued. The other companies quickly turned to Congress to quash the idea. In congressional testimony and letters to lawmakers and regulators, they complained that competing on price threatened the "unique public-private partnership" that the companies had with the government.
>
> With the help of several powerful Members of Congress, the program was eventually derailed.[26]

Discourages Sound Risk Management. The crop insurance program provides a disincentive for farmers to manage farm risks and avoid environmental problems. In the crop insurance program, taxpayers pay 62 percent, on average, of the premium subsidies, with farmers paying only 38 percent. The coverage levels can be as high as 85 percent of expected yields or revenues. As a result, a major part of the risk is being borne by taxpayers, not farmers. This can lead to a situation where farmers are discouraged from managing risk properly because they do not bear the necessary risk.

This subsidized insurance program may cause producers to eschew risk-management strategies such as crop diversification, hedging, or the use of hardy varieties. Because taxpayers bear the risk, farmers and input providers have less reason to innovate and identify new solutions to existing problems. Even worse, they may engage in agricultural practices that they otherwise would not choose, such as planting on marginal lands, which can exacerbate the costs that taxpayers have to cover.

The moral hazard problem is the same problem that played a significant role in getting rid of the disaster payment program and expanding the federal crop insurance program in the first place. In addition, the program has even become a competitor to private risk-management solutions. For example, the harvest price option is in effect a competitor to the use of hedging in the commodities market.

Wealth Transfer. Billions of dollars every year are being taken from taxpayers and provided directly or indirectly to wealthy agricultural producers and to private crop insurance companies. It is a massive wealth transfer, taking in part from those who can least afford it and giving money to those who can best afford it.

Crop insurance is a classic example of concentrated benefits and dispersed costs, a problem that runs throughout agricultural programs. Even with costs of about $8.5 billion a year,[27] the costs are spread across all taxpayers, making the impact seem trivial. Those benefitting from the program, though, have a real incentive to protect this costly program and therefore are the most vocal.

The Market Failure Myth

Some crop insurance and status quo proponents assert that, absent government intervention, there would be no crop insurance. This scenario is somehow considered a market failure, and obfuscates the real issue of the failure of crop insurance.

As has been stated, federally subsidized crop insurance was a means to provide disaster protection for farmers; it was the policy option that Congress chose in 1980. That choice has been a disaster. The crop insurance program was supposed to be an improvement upon the failed disaster payment programs, but has been even worse than these already faulty programs.

Farmers may or may not have a need for some government intervention when it comes to real disasters. That is the preliminary question that must be answered, and then *if* answered in the affirmative, the best solution would need to be identified. The specific policy recommendations on agricultural risk, including disasters, are discussed in Section 5.

As for the alleged market failure, farmers can already buy private crop insurance covering hail, crop fires, and strong wind. The "market failure" is really about whether a specific type of insurance, multiple peril insurance, will be made available without government intervention.[28]

The market is not failing when people do not buy this specific type of insurance, just like the market is not failing when people do not buy a Rolls Royce. It is simply a choice that is left to the demands of consumers. The product may not meet their needs or may simply not be worth the price. Systemic risk is also used to make the market failure argument. This risk is alleged to be an issue because major crop losses, such as losses from droughts, can affect the same large geographic areas, making it difficult to diversify the risk. However, such systemic risk can be effectively diversified. There is a significant global reinsurance market that dwarfs crop insurance liability (reinsurance refers to insurance for insurance providers). As explained by agricultural economists Barry Goodwin and Vince Smith, "Specifically, we do not accept the argument that national and global private reinsurance markets lack the capacity to handle U.S. agricultural systemic risk, which involves a maximum of about $20 billion in total indemnity payments in any given year."[29] According to a 2014 U.S. Department of Treasury report citing Aon Benfield (a major reinsurance firm), total global reinsurance capital amounted to $570 billion in the middle of 2014.[30] This does not even take into account other means to diversify risk, such as through derivatives.[31]

Determining whether such insurance, which is just one of many risk management tools available to farmers, would be made available in this country

absent government intervention is impossible. Even without the current modern-day crop insurance program, other farm subsidies have potentially crowded out such a product and sound private risk management that farmers already employ has likely reduced the need for such a product. It is conceivable that improvements in communications and monitoring technology could in the future enable the marketing of similar insurance at lower cost, possibly making it desirable. Regardless, before 1980, farmers somehow managed to flourish with a very small multiple peril crop insurance program with limited crop coverage. Modern-day farmers are no less capable than farmers in the 1970s.

Good Money After Bad

Ironically, as agriculture becomes more sophisticated and technology has increased, the amount of risk that is being borne by agricultural producers in the crop insurance program has decreased. This development is the result of government intervention that is protecting farmers from almost any type of risk as opposed to providing protection from disasters.

By not eliminating the crop insurance program as it should have decades ago, Congress "doubled down," and tried to address low participation by providing more subsidies for farmers to participate in the program, among other things. This "fix" ignored the real problems, including high costs. Participation, not cost reduction for disaster protection, has become the goal. This is the tail wagging the dog.

If farmers did not want to participate in the program at a level that made sense from a fiscal perspective, then that should have been the end of the program. After all, as has been stated, the main reason the crop insurance program even existed was to help reduce costs, not to increase costs. This misguided approach has meant far more generous subsidies with farmers taking on far too little risk. Table 6 shows the remarkable and unwarranted increase in generosity to agricultural producers at the expense to taxpayers since the 1980s, when expanded insurance was adopted as a less costly way of managing disaster payments.

Conclusion

The federal crop insurance program is a failure, but maybe more than any other agricultural program, it has become the most sacred cow among status quo proponents. While government intervention is unnecessary, even on its own terms, as a way to address disasters, this program is way off mission. It is not really about protecting producers from disasters, and as the alternative to the costly disaster payment program, federal crop insurance has made that program seem like a bargain in comparison. The crop insurance program was widely recognized as a failure decades ago, and time has only made its problems worse.

ENDNOTES: SECTION 4

1. See, e.g., U.S. Department of Agriculture, "1990 Farm Bill: Proposal of the Administration," February 1990, http://babel.hathitrust.org/cgi/pt?id=umn.31951d00271337v;view=1up;seq=76 (accessed March 31, 2016); Barry Goodwin and Vincent Smith, *The Economics of Crop Insurance and Disaster Aid* (Washington: American Enterprise Institute, 1995); and General Accounting Office, *Disaster Assistance: Crop Insurance Can Provide Assistance More Effectively Than Other Programs*, GAO/RCED 89–211, September 20, 1989, p. 3, http://gao.gov/assets/220/211636.pdf (accessed March 21, 2016).
2. U.S. Department of Agriculture, "The Importance of Federal Crop Insurance Premium Subsidies," October 20, 2014, http://www.ers.usda.gov/amber-waves/2014-october/the-importance-of-federal-crop-insurance-premium-subsidies.aspx (accessed March 21, 2016).
3. Numbers were adjusted to 2014 dollars using median years since amounts were based on averages of multiple years: 1978 was used for the disaster payment program and 2011 was used for crop insurance. For example, the average annual cost of disaster payments was $510 million from 1975–1981. Adjusting for inflation from 1978 to 2014 dollars converts to $1.488 billion. Crop insurance converted to $8.933 billion in 2014 dollars.
4. Government Accountability Office, *Reducing Subsidies for Highest Income Participants Could Save Federal Dollars with Minimal Effect on the Program*, and Congressional Budget Office, "CBO's March 2016 Baseline for Farm Programs."
5. American Association of Crop Insurers, "The Importance of Crop Insurance in the United States," March 9, 2012, https://www.cropinsurers.com/images/pdf/focus-on-congress/Importance_of_Crop_Insurance_in_the_US.pdf (accessed March 31, 2016).

6. Commodity Credit Corporation, "History of Budget Expenditures, Fiscal Years 1961-1979 Actual," December 28, 1979, Book 1, p. 5, and U.S. Department of Agriculture, "History of Budget Expenditures of the Commodity Credit Corporation, Fiscal Year 1980-1989 Actual," January 29, 1990, Book 2, p. 3. Also see Joseph W. Glauber, "Double Indemnity: Crop Insurance and the Failure of U.S. Agricultural Disaster," paper prepared for American Enterprise Institute project, *Agricultural Policy for the 2007 Farm Bill and Beyond,* citing R.M. Chite, *Federal Crop Insurance: Background and Current Issues*, Congressional Research Service *Report* No. 88-739 ENR, 1988. Between 1974 and 1980, the average cost of the disaster payment program was $436 million. U.S. Department of Agriculture, "1990 Farm Bill: Proposal of the Administration," p. 64. The average annual cost of the disaster payment program was $510 million from 1974-1980.
7. Government Accountability Office, *Reducing Subsidies for Highest Income Participants Could Save Federal Dollars with Minimal Effect on the Program*.
8. Numbers were adjusted to 2014 dollars using median years since amounts were based on averages of multiple years: 1978 was used for the disaster payment program and 2011 was used for crop insurance. For example, the average annual cost of disaster payments was $510 million from 1975–1981. Adjusting for inflation from 1978 to 2014 dollars converts to $1.488 billion. Crop insurance converted to $8.933 billion in 2014 dollars.
9. See, e.g., Farm Credit Mid-America, "Crop Hail Insurance," 2015, https://e-farmcredit.com/crop-insurance/crop-hail-insurance (accessed March 31, 2016).
10. General Accounting Office, *Disaster Assistance*, p. 19.
11. Joseph Glauber, "Crop Insurance Reconsidered," *American Journal of Agricultural Economics*, Vol. 86 (2004), pp. 1179–1195.
12. U.S. Department of Agriculture, "1990 Farm Bill: Proposal of the Administration," p. 64.
13. Government Accountability Office, *Reducing Subsidies for Highest Income Participants Could Save Federal Dollars with Minimal Effect on the Program*.
14. Numbers were adjusted to 2014 dollars using median years since amounts were based on averages of multiple years: 1984 was used for crop insurance and ad-hoc disaster assistance from 1981–1988, and 2011 was used for crop insurance from 2009–2014. For example, the average annual cost of crop insurance and ad hoc disaster assistance was $1.1 billion from 1981–1988. Adjusting for inflation from 1984 to 2014 dollars converts to $2.155 billion. Crop insurance converted to $8.933 billion in 2014 dollars.
15. U.S. Department of Agriculture, Risk Management Agency, "History of the Crop Insurance Program," http://www.rma.usda.gov/aboutrma/what/history.html (accessed March 22, 2016).
16. Glauber, "Crop Insurance Reconsidered," pp. 1179–1195. For the acres covered in 1995 and 1996, see Glauber and Collins, "Crop Insurance, Disaster Assistance, and the Role of the Federal Government in Providing Catastrophic Risk Protection," Agricultural Finance Review, Vol. 62 Iss. 2, pp. 81 – 101.
17. Dennis A. Shields, "Federal Crop Insurance: Background," Congressional Research *Report to Congress*, August 13, 2015.
18. Ibid., p. 10.
19. Shields, "Federal Crop Insurance: Background," p. 2.
20. U.S. Department of Agriculture, "Structure and Finances of U.S. Farms."
21. U.S. Department of Agriculture, "County Crop Programs," http://www.rma.usda.gov/data/cropprograms.html (accessed March 22, 2016).
22. J. Glauber and K. Collins. "Crop Insurance, Disaster Assistance, and the Role of the Federal Government in Providing Catastrophic Risk Protection," *Agricultural Finance Review*, Vol. 62 (2002), pp. 81–102.
23. Environmental Working Group, "Concentration of Premiums Subsidies in the United States, 2011," http://farm.ewg.org/cropinsurance.php?fips=00000&summpage=CONC2011&statename= (accessed March 22, 2016).
24. U.S. Department of Agriculture, "Crop Insurance Providers List for 2016," March 2016, https://www3.rma.usda.gov/tools/agents/companies/indexCI.cfm (accessed March 22, 2016).
25. 7 CFR § 400.700 *et. seq*.
26. Gilbert M. Gaul, Dan Morgan, and Sarah Cohen, "Crop Insurers Piling Up Record Profits," *The Washington Post*, October 16, 2006, http://www.washingtonpost.com/wp-dyn/content/article/2006/10/15/AR2006101500585.html (accessed March 22, 2016).
27. U.S. Government Accountability Office, *Reducing Subsidies for Highest Income Participants Could Save Federal Dollars with Minimal Effect on the Program*.
28. There may be certain challenges in providing such a product. Insurers have to address the problem of adverse selection where they have less information than the insured regarding the level of risk; this becomes a problem when the insurer charges as much to the less risky farmer (an amount not appropriate for the level of risk) as for the higher risk farmer. The lower risk farmers will simply drop out of the program. Moral hazard exists when a farmer takes risky actions after purchasing crop insurance that can lead to greater indemnities. The insurer will want to monitor production activities, which could be costly. Risk can also be positively correlated because the insured suffer the same harm, making it more difficult to diversify. However, as explained by Joseph Glauber and Keith Collins, "The problems of adverse selection, moral hazard, and correlated risks are certainly not unique to crop insurance." Glauber and Collins, "Crop Insurance, Disaster Assistance, and the Role of the Federal Government."
29. Jeffrey R. Brown, *Public Insurance and Private Markets,* p. 203 (Washington: AEI Press, 2010)
30. U.S. Department of the Treasury, Federal Insurance Office, *The Breadth and Scope of the Global Reinsurance Market and the Critical Role Such Market Plays in Supporting Insurance in the United States*, December 2014, p. 6, https://www.treasury.gov/initiatives/fio/reports-and-notices/Documents/FIO%20-%20Reinsurance%20Report.pdf (accessed March 31, 2016).

31. For more discussion regarding the myth of market failure with crop insurance, see, e.g., Barry Goodwin and Vincent Smith, *The Economics of Crop insurance and Disaster Aid* (Washington: AEI Press 1995), http://www.aei.org/wp-content/uploads/2014/07/-the-economics-of-crop-insurance-and-disaster-aid_10212473810.pdf (accessed March 31, 2016). This report also addresses the question of whether private markets can handle the size of the losses incurred. See also Glauber and Collins, "Crop Insurance, Disaster Assistance, and the Role of the Federal Government," and Jeffrey R. Brown, *Public Insurance and Private Markets* (Washington: AEI Press, 2010).

SECTION 5:
Policy Recommendations Regarding Agricultural Risk

Daren Bakst, Josh Sewell, and Brian Wright

The U.S. economy is based on free-enterprise principles—except those principles do not apply when it comes to agriculture. Even for those who believe agriculture is somehow "special" compared to other industries, this status quo of subsidies, quotas, and other government interventions should be an outrage. If agricultural policy were being created for the first time, the very notion that government should construct a vast array of public programs to prop up farmers' and ranchers' financial well-being would be laughable.

The starting point for policy reform regarding agricultural risk should not be to look at existing policy, but to take a step back, assume no policy exists, and ask what kind of policies are needed, if any?[1] This section identifies some factors that policymakers should consider and provides some concrete policy recommendations.

Important Considerations for Policymakers and the Public

Farmers have a reputation for wanting to be independent and free from government intervention. Yet, wealthy agricultural producers are among the biggest beneficiaries of corporate welfare and crony capitalism. Many agricultural producers who in principle oppose government intervention may feel caught in a difficult position. Private solutions that would appeal to farmers are crowded out because of big government programs. Indeed, good farmers' ability to handle risks is being undermined. Farmers may feel that they need to take subsidies because their competitors are taking subsidies. In other words, even if they wanted to be free from government intervention, for many farmers this is not a real possibility.

Of course, there are certainly many farmers who want subsidies. There is intense pressure by farming interests to preserve and even expand the scope of those subsidies. By having a sound framework to develop agricultural policy, policymakers can make better decisions.

Start and End with Sound Principles. By looking to principles when developing policy, legislators can have a better plan in developing proper policy. There are many agricultural interests and they are going to ask for government intervention to help them. Making this an even greater challenge for policymakers is the fact that farmers are a sympathetic special interest. Agricultural policy should focus on the interests of the country generally, from taxpayers and consumers to farmers. It is not solely about figuring out how best to serve the interests of farmers.

Risk Is Not Going To Be Eliminated. As policymakers consider agricultural risk, there are many critical points to consider. First and foremost, there is going to be risk and failure in agriculture, as there is in any other type of business. Although farms are generally financially healthy, as noted in Section 1, some farmers are going to lose their farms, just as restaurant owners will lose their restaurants and pastors will lose their churches. The federal government should not be guaranteeing that all operations will survive, and even worse, guaranteeing that all operations will flourish. Taxpayers should not be forced to subsidize and if necessary save everybody who wants to farm. When a farm does fail, this does not necessarily mean that there is one less farm in the country or that their land goes out of production. Agricultural production is also diverse; there are significant differences across crops and geographic regions. Just because a challenge exists for one farmer or even an entire type of crop does not mean that agriculture, as a whole, is somehow in peril.

Prices and Yields Are Going to Fluctuate. Agricultural commodity prices and yields are going to fluctuate. A dip in either or both does not necessitate government intervention. Farmers should know that these fluctuations will occur and plan accordingly. During these dips, farmers will often come to policymakers for help, even if overly generous programs already exist. Policymakers, as would be expected, do not hear from them when prices are

New Zealand: A Case Study in Eliminating Agricultural Subsidies

BACKGROUND

New Zealand's experience with eliminating agricultural subsidies is very instructive for the U.S. In 1984, New Zealand's ruling Labour Party was forced to confront a large central government fiscal deficit and it did so in part by cutting agricultural subsidies.[1] The result was a rapid withdrawal of government support to agriculture. According to the Federated Farmers of New Zealand, "almost 30 different production subsidies and export incentives were abolished" in 1984.[2]

The Organization for Economic Co-operation and Development's Producer Support Estimate, which measures government subsidies as a percentage of gross farm receipts, indicates that in 1983 subsidy levels were at a level of approximately 35 percent of gross farm receipts.[3] By 1987, New Zealand's Producer Support Estimate had declined to just 9 percent, and then to 2 percent by 1992.[4] In 2014, New Zealand's subsidy level has declined to just 1 percent of gross farm receipts.[5] For comparison, the United States had a subsidy level of almost 10 percent that same year.[6]

INITIAL CONCERNS

The first few years after the government removed the subsidies were dominated by uncertainty about the ability of farmers to survive such a sudden change. Initially, farmers did experience decreasing incomes and higher debt resulting from falling commodity prices, increasing production costs, and much lower land prices.[7] The removal of subsidies was met with dire predictions, including official estimates that 8,000 farms, or about 10 percent of all farms, would fail.[8]

THE EXPERIENCE OF ELIMINATING AGRICULTURAL SUBSIDIES

Such projections, however, did not recognize the adaptability of the market. Eight hundred farms (1 percent of the total number) were forced into sales; not an insignificant number, but far less than what was projected.[9]

New Zealand's agricultural industry emerged from the reform period stronger than ever. As explained in a 2008 OECD paper examining New Zealand's reforms, "In general terms, the economic indicators for the agriculture sector improved across the board following subsidy elimination."[10] The elimination of subsidies may not be the sole cause of all of the economic improvements in agriculture. However, as explained in the OECD paper, "it is clear that the removal of subsidies was an important contributing factor to the changed and improved circumstances of the sector following the reforms of the mid 1980s."[11]

The New Zealand experience is captured well by the farmers themselves. According to the Federated Farmers of New Zealand:

> The removal of farm subsidies in New Zealand has given birth to a vibrant, diversified and growing rural economy. New Zealand's experience over the last twenty years of reform has thoroughly debunked the myth that the farming sector and the environment cannot remain healthy and prosper without government subsides....
>
> Farmers are now farming better than ever; they are much more conscious that their activities must make good business sense. No longer are they chasing subsidies, pursuing maximum production at any cost. Farmers maintain cost structures that reflect the real earning capacity of their farms....
>
> New Zealand has gained environmental benefits as well. Water quality has improved as wasteful practices fueled by subsidies have stopped. Farmers have adopted more efficient, targeted use of farm inputs such as fertiliser. Farming of marginal land unable to sustain agricultural activity has declined and truly marginal, unstable, or infertile land went out of production and is now reverting to native bush. Subsidy-driven land management problems ended.[12]

CURRENT POLICY

Currently, agricultural subsidies in New Zealand remain at a nominal level. Some protection against "adverse events" for farmers does exist, but it is part of a larger program which is available to rural communities in general.[13] Far from being upset with existing policy, the Federated Farmers of New Zealand declare that they "are proud of their independence and are determined never again to be dependent upon government subsidies."[14]

1. Allen Rae, Chris Nixon, and Ralph Lattimore, "Adjustment to Agricultural Policy Reform—Issues and Lessons from the New Zealand Experience," Workshop on Agricultural Policy Reform and Adjustment Imperial College, Wye, October 23–25, 2003, p. 1, http://ageconsearch.umn.edu/bitstream/15741/1/cp03ra01.pdf (accessed March 29, 2016).
2. Federated Farmers of New Zealand, "Life After Subsidies: The New Zealand Farming Experience 20 Years Later," November 2005, p. 2, http://www.fedfarm.org.nz/files/2005---Life-after-subsidies---the-NZ-experience.pdf (accessed March 29, 2016).
3. Rae et al., "Adjustment to Agricultural Policy Reform," p. 2.
4. Ibid.
5. Organization for Economic Co-operation and Development, "Agricultural Policy Monitoring and Evaluation 2015," June 2015, p. 16, http://www.oecd.org/tad/agricultural-policies/monitoring-evaluation-2015-highlights-july-2015.pdf (accessed March 29, 2016).
6. Relative to other countries, the United States does have a fairly moderate level of agricultural subsidies. Many countries subsidize agriculture at significantly higher levels than the United States. Ibid.
7. Federated Farmers of New Zealand, "Life after Subsidies," p. 3.
8. Ibid.
9. Ibid.
10. Vitalis, "Case Study 2: Domestic Reform, Trade, Innovation and Growth in New Zealand's Agricultural Sector," OECD Trade Policy Working Paper No. 74, http://www.oecd.org/newzealand/41077830.pdf at p. 17 citing New Zealand Ministry of Agriculture and Fisheries (1996a) Situation and Outlook for New Zealand Agriculture (Wellington, New Zealand Ministry of Agriculture and Fisheries).
11. Vitalis, "Case Study 2: Domestic Reform, Trade, Innovation and Growth in New Zealand's Agricultural Sector," OECD Trade Policy Working Paper No. 74, pg. 18 citing Chamberlain, B (1996), Farming and Subsidies: Debunking the Myths, Wellington, Government Print.
12. Federated Farmers of New Zealand, "Life after Subsidies," pp. 1–2.
13. New Zealand Ministry for Primary Industries, "Adverse Events," December 4, 2015, http://www.mpi.govt.nz/protection-and-response/responding/adverse-events/ (accessed March 29, 2016).
14. Federated Farmers of New Zealand, "Life after Subsidies," p. 4.

high and/or revenue is booming. During these very profitable times, successful farmers save and invest accordingly, and are ready for situations where they are not making as much money as they would like.

Legislators Should Care About Agricultural Policy. To have the best policy, agricultural policy should not be left to a small group of legislators, usually those serving on the agriculture committees. While it would not be reasonable to expect all legislators to be experts in agricultural policy, they should start to think independently about agriculture. Existing agricultural programs are like "Rube Goldberg" contraptions, overly complicated to address a task. Instead of working from the status quo, legislators should take a step back and start with the assumption that no agricultural programs exist. If there were to be any programs today, what would be a proper justification for the programs, and what should they look like?

Five Critical Points About Current Policy. There are many critical points throughout the report regarding how current agricultural policy addresses agricultural risk. The following are five that are particularly critical to remember:

1. Current policy has nothing to do with social welfare and helping the small, low-income farmer; farm households have greater income and wealth than non-farm households and even the smallest farms generally do well. Only 2 percent of farm households are in the bottom half of all households in terms of both income and wealth.[2]

2. Current policy does not require anything like a disaster for farmers to receive assistance.

3. Current policy covers even minor dips in revenue; it is not about a "safety net" as much as an attempt to shift ordinary business risk to taxpayers.

4. Current policy is a massive wealth transfer from taxpayers to large agricultural producers.

5. Current policy creates massive problems through subsidies, such as: discouraging private solutions; harming the environment; stifling innovation, especially innovations to mitigate risks; discouraging development of farmer risk-management skills; and creating obstacles for beginning farmers.

Questions Policymakers Should Ask Themselves. As policymakers consider the best public policy to address agricultural risk, there are some questions that should help point them in the right direction:

- Why should taxpayers hand out billions of dollars each year to agricultural producers simply because those businesses did not earn as much as they hoped?

- Why are taxpayers forced to give money to farm households when the overwhelming majority of the money goes to farm households that have much greater income and wealth compared to average non-farm households?

- Are families who run farms somehow more deserving than families who run other businesses, such as restaurants?

- When there is a disaster, why should farms be treated differently than other businesses?

- Are farmers and ranchers less capable of managing risk than other businesses?

- If free enterprise is the most efficient way to provide goods and services, why should it not apply in agriculture?

Policy Recommendations Regarding Agricultural Risk

Regulation Needs to Be Addressed. Farmers and ranchers have to address institutional risk, which covers uncertainties connected to governmental policies, such as with regulation. These uncertainties include whether policymakers will change the law, how agencies will enforce the law, and how farmers and ranchers need to comply with the law.

In addressing government intervention generally, a critical question is how the government intervenes in a way that makes it more difficult for farmers and ranchers to meet market needs.[3]

Big Picture on the Federal Taxpayer-Funded "Safety Net." There should be a shift away from government intervention to address risk in agriculture. As explained in the case study on New Zealand later in this section, this can be done all at one time. However, to have a smooth transition away from subsidies and because private risk management has been crowded out and even discouraged due to government intervention, this entire shift should not be done all at once.

To take a step towards getting rid of subsidies, taxpayers should not be compelled to ensure that farmers are covered for shallow losses, and minor dips in expected revenue. Farmers should not be insulated from the market and the challenges that all businesses face on a daily or fiscal year basis. Quite simply, if there is going to be a special taxpayer-funded safety net for agricultural producers, then it should act like a safety net as it is commonly understood.

A "safety net" in various contexts, such as welfare, presumes that someone has "fallen" and is in need of protection from falling to the bottom. It is supposed to help protect people so they are put in a position to get back on their feet.

This special protection during the move away from subsidies should at most protect from deep yield losses that farmers actually suffer from unforeseen events such as natural disasters and disease. Anything beyond this is exceeding any concept of a safety net. As it is, the taxpayer funded "safety net" for agricultural producers is counterproductive and an overly generous use of taxpayers' money.

Eliminate Title I Commodity Programs. Title I commodity programs should be eliminated, except for the Permanent Disaster Assistance Programs and the Noninsured Crop Disaster Assistance Program (NAP). This means getting rid of programs

such as the Agricultural Risk Coverage Program (a shallow loss program), the Price Loss Coverage program, the sugar program, and the dairy program. As has been explained, in moving away from subsidies, only measures that protect against deep yield losses connected to unforeseen events should remain in the short-term.

Properly Focus the Federal Crop Insurance Program. There are many problems with the federal crop insurance program, as was detailed in Section 4 of this report. To maintain this program is certainly questionable, but it can serve as the general taxpayer-funded safety net through a transition away from subsidies, so long as the program gets focused back on protecting against deep yield losses and disasters.

- **Eliminate revenue-based policies.** There should be a very simple and straightforward change. The program should subsidize yield-based policies only. The recent shift towards revenue-based policies is a means to provide excessive protection for farmers for even minor dips in revenue. These policies go way beyond the concept of a safety net. Farmers have succeeded without such policies, which have accounted for more covered acreage than yield-based policies only since 2003.[4]

- **Cover deep losses only.** Agricultural producers could still get the same coverage levels that exist now, and such policies would be reinsured through the Federal Crop Insurance Corporation. However, taxpayers should only subsidize coverage up to 70 percent (ensuring that there is at least a deep loss).

- **Do not undermine the program through ad-hoc disaster assistance.** There will inevitably be calls for ad-hoc disaster assistance, as there is now even with generous crop insurance and commodity programs in place. This federal crop insurance program would be *the* approach to address disasters during the move away from subsidies. If farmers do not want to participate, this is their decision. Providing ad-hoc disaster assistance itself undermines federally subsidized crop insurance because of double indemnities, and if money goes to those who do not participate, this creates a disincentive to participate in the federal crop insurance program.

  If participation in the program does decline, this is not a justification to ramp up crop insurance subsidies as has occurred in the past, but to recognize that this is a function of a more properly focused federal crop insurance program.

Treat Farmers and Ranchers the Same as Other Businesses When Addressing Disasters. There are many federal programs unrelated to agriculture that exist to address disasters.[5] To the extent that businesses are provided any assistance under these various programs, agricultural producers should be treated equally and offered the same type of assistance. Furthermore, these programs eventually should represent the full extent of federal disaster assistance to farmers.[6]

Involve States in the Transition Away from Federal Intervention in Agricultural Risk. States can help smooth the transition away from federal subsidies,

- **Provide One-Time Block Grants to States.** A *one-time* lump sum payment to states (not farmers) should be used to help transition away from federal subsidies. It should be a one-time payment, based on one year of savings from eliminating these programs, because this is not meant to be the start of a new federal program. States would receive some of the savings achieved from eliminating most of the Title I programs and subsidized revenue-based policies from the federal crop insurance program.

- **Allow for a Flexible Use of the Money.** States could use the money for agricultural purposes. The federal government should not place any restrictions on its use so long as it is clearly for agriculture. Through this block grant, states could have a significant role in this transition away from federal intervention or use it for other agricultural purposes.

Removing this extensive federal intervention would also allow the private market to develop new tools to address risk, in addition to the risk-management tools that already exist. Even if states created harmful programs to address agricultural risk, the scope of such programs would pale in comparison to existing federal intervention.

Conclusion

Getting rid of these massive subsidies to address agricultural risk is a must, as highlighted in Part I of this report. Any discussion of eliminating agricultural subsidies triggers a significant emotional response for some. However, emotion should not be allowed to distort the need for sound policy. Farmers have the means and expertise to manage risk and the goal should be to treat farmers fairly and equally (no better or worse) with all other business owners. Congress, and the laws it enacts, should show favoritism to none.

ENDNOTES: SECTION 5

1. See e.g. Brian D. Wright and Bruce L. Gardner "Reforming Agricultural Commodity Policy," AEI Press (1995), https://www.aei.org/wp-content/uploads/2014/07/-reforming-agricultural-commodity-policy_094250120288.pdf (accessed July 28, 2016). In particular, see the section by Brian D. Wright entitled "Agricultural Policy from the Ground Up: Goals for a New Regime."
2. U.S. Department of Agriculture, "Structure and Finances of U.S. Farms: Family Farm Report, 2014 Edition," December 2014, Table 10, http://www.ers.usda.gov/media/1728096/eib-132.pdf (accessed March 16, 2016).
3. For a more comprehensive discussion on regulatory issues, see Section 8 of this report.
4. Dennis A. Shields, "Federal Crop Insurance: Background," Congressional Research *Report to Congress*, August 13, 2015, p. 10.
5. See e.g. Federal Emergency Management Agency, DisasterAssistance.gov, Assistance by Category, https://www.disasterassistance.gov/get-assistance/assistance-by-category (accessed August 4, 2016).
6. This recommendation is in no way making any evaluation of the existing disaster programs. It is merely indicating that to the extent that there is assistance to businesses, agricultural producers should receive similar levels of assistance.

PART II:
Critical Issues Beyond Agricultural Risk

KEY POINTS:
U.S. Biofuels Policy and the Renewable Fuel Standard: Harmful to Agriculture, the Environment, and American Consumers

What Are Biofuels?

Biofuels are fuels derived from biological matter. Producers ferment sugar (sugarcane, sugar beets) and starch products (corn, potatoes) to create bio-alcohols, such as ethanol, and ferment oilseed crops (soybeans, sunflower seeds) and animal fats to create biodiesel. This basic technology is nothing new.

In the United States, the most common form of ethanol is corn-based. Before any subsidies and the current biofuels mandates were put in place, ethanol was already a valuable additive to gasoline, allowing fuel to burn cleaner and more efficiently. Biodiesel is commonly made from soybeans.

Biofuel Policies in the U.S.

Since 2002, every farm bill has included an energy title with biofuel programs and subsidies. The most invasive biofuel policy is the Renewable Fuel Standard (RFS), which was passed through separate legislation. The RFS mandates that by 2022, there must be 15 billion gallons (and no more toward meeting the mandate) of corn-based ethanol and a total of 36 billion gallons of biofuels blended into the nation's fuel supply, including soybean-based biodiesel. The program, however, does not end in 2022; rather it grants the EPA authority to set yearly targets beyond 2022. As a result of problems caused by the RFS, a number of diverse groups now oppose the mandate, including environmental organizations, world hunger activists, economists, energy companies, and many in the agricultural community.

The Harmful Impact of U.S. Biofuel Policy

U.S. biofuels policy is a case study in the unintended consequences of government intervention. In contrast to what politicians and special interest groups promised, biofuel policies have increased costs to taxpayers and drivers, had little to no impact on oil prices, hurt rural economies, and had unforeseen environmental costs. Some of the harms include:

- **Hurts the agricultural community.** Higher feedstock prices from the mandate unnecessarily raise costs for livestock farmers and ranchers. Further, by mandating a market for corn, soybeans, and biofuels, the RFS eliminates much of the risk of investing in biofuels. Yet, such risk—which every industry manages as a matter of doing business—is necessary for innovation, growth, and progress. Not only does this mandate favor a select few commodities, it also benefits just a few states at the expense of the vast majority. Over 50 percent of ethanol production is concentrated in three states: Illinois, Iowa, and Nebraska. Importantly, the benefits enjoyed by biofuels interests are limited and do not help the industry in the long run. The dependence on government to remain viable stunts the long-term growth of the industry by propping up the bioenergy industry and distorting the true price point at which biofuels will be competitive in the market.

- **High costs to American taxpayers and drivers.** Federal biofuel policies cost taxpayers $7.7 billion in 2011 and $1.3 billion in 2012—after the expiration of ethanol blenders tax credit, a 45-cent per gallon tax credit for blending ethanol into gasoline. Over a 30-year time frame ethanol subsidies have diverted $45 billion in taxpayer money.

  During times of high gas prices, ethanol may appear less expensive; however, after adjusting for the energy content difference, higher concentrations of ethanol fuels are still more expensive. Ethanol has only two-thirds the energy content as petroleum-based gasoline, meaning drivers are forced to pay more for a less efficient fuel.

- **Failure to deliver on promise to reduce dependence on oil.** Because ethanol

contributes such a small percentage of the overall transportation fuel market (a mere 5 percent in 2014) ethanol failed to tamp down gas prices which continued to climb from 2002 to 2012—despite increased mandated ethanol use and high oil prices allegedly making ethanol more competitive.

- **Higher food prices.** The RFS mandates a market for corn, soybeans, and biofuels. Rather than supporting rural communities, the federal government has buoyed corn growers at the expense of livestock producers. According to separate analyses, one by University of California–Davis economists and another by a Heritage Foundation economist, the mandate accounts for an increase in corn prices by 30 percent, or even as much as 68 percent, respectively. Though there are other factors at work in the price of corn—weather, global markets, and changing food preferences, for instance—the RFS has certainly contributed to increased prices.

  The USDA's Economic Research Service notes that "increased corn prices draw land away from competing crops, raise input prices for livestock producers, and put moderate upward pressure on retail food prices."

- **Unintended adverse environmental consequences.** The ability of biofuels—and particularly ethanol—to reduce greenhouse gas emissions has been unclear and controversial at best, regardless of the merits, or lack thereof, of such a goal.

  For example, in 2007 the U.N.'s Intergovernmental Panel on Climate Change (IPCC) reversed positions and acknowledged that biofuel policies negatively impact the lives of the poor, divert land to produce biofuels, have environmental consequences, and have dubious climate impacts. EPA acknowledged that increased renewable fuel would result in higher emissions of air pollutants such as particulate matter and nitrogen oxides while adversely impacting water quality.

Policy Recommendations

Politicians and special interest groups advocating the RFS have promised a lot—but delivered very little. While a select few derive some short-term benefit from special treatment, bioenergy policies have hurt taxpayers, energy consumers, the environment, the world's hungriest citizens, and the large segment of the agricultural community that does not profit from subsidies and RFS. Government intervention in biofuels also saps long-term innovation and progress. Policy recommendations that remove handouts will promote competition and fuel choice. These recommendations include:

- **Eliminate the bioenergy programs in the farm bill.** Congress should repeal all of the energy programs in the farm bill: Title IX from the farm bill as well as the Sun Grant program in Title VII.

- **Repeal the RFS in its entirety and allow consumers a choice at the pump.** Biofuels existed long before the RFS and, if economically competitive, will remain long after it. Removing the mandate will spur a healthier market—one that that promotes risk-taking and entrepreneurial activity rather than government dependence for near-term survival through favorable policies and tax treatment. Importantly, policymakers should not just repeal the corn-based part of the ethanol mandate, leaving the least competitive part, the cellulosic requirement.

- **Let producers drive alternative fuel innovation.** Use the repeal of the mandate as momentum for greater reform in the energy sector. Such future reforms should include a further leveling of the playing field for all energy companies and technologies. Congress should also remove preferential treatment for all transportation fuels and technologies.

SECTION 6:
U.S. Biofuels Policy and the Renewable Fuel Standard: Harmful to Agriculture, the Environment, and American Consumers

Nicolas D. Loris

The federal government provides a wide range of subsidies to boost the production and consumption of biofuels. Throughout the years, Congress has enacted special tax breaks, direct grants, government-backed loans and loan guarantees, and a mandate to generate a larger biofuel and biodiesel market.[1] To justify biofuels programs, policymakers have promised reduced dependence on foreign oil, a new source of cleaner energy to lower gas prices, a stronger economy, and an improved environment. None of this has materialized.

The problem is not the use of biofuels themselves but rather a set of policies and programs that pick winners and losers—a subsidization of production that benefits a select few while spreading the costs among American families and businesses. Even within the agricultural community, biofuel handouts reward those who are connected to the policy and adversely affect large parts of rural America. Having politicians centrally plan energy decisions has caused market distortions and demonstrated the high costs and unintended consequences of government intervention. The farm bill energy title and other biofuel policies, in particular the Renewable Fuel Standard (RFS), affect commodity production, prices, the economy, and the environment.

All of the biofuel programs, not just those in the farm bill, must be part of the discussion for agricultural reform. Policy recommendations for Congress include steps to eliminate the federal government's role in the forced production and consumption of biofuels and to empower individuals so that they can maximize the value of America's land and resources.

What Are Biofuels and How Are They Used?

The Environmental Protection Agency (EPA) classifies biofuels as "fuels produced from renewable organic material."[2] Producers ferment sugar (sugarcane, sugar beets) and starch products (corn, potatoes) to create bioalcohols and ferment oilseed crops (soybeans, sunflower seeds) and animal fats to create biodiesel.[3]

Ethanol, the most common biofuel, is made from corn, sugarcane, potatoes, soybeans, and other biomass. In the United States, the most common form of ethanol is corn-based. Before any subsidies and the current biofuels mandates were put in place, ethanol already was a valuable additive to gasoline, allowing fuel to burn more cleanly and more efficiently.[4] The use of biofuels is not new and is not the product of any government policy jumpstarting an infant industry: Henry Ford originally planned for the Model T to run on ethanol, and in 1897, Rudolf Diesel showcased a diesel engine running on peanut oil.[5]

Fuel suppliers mix biofuels into gasoline and diesel at blending stations. The fuel system in most vehicles can only contain gasoline blended with 10 percent ethanol (E10) and 90 percent gasoline. In 2011, the EPA approved a blend of 15 percent ethanol and 85 percent gasoline for model year 2001 and newer vehicles, but it is damaging to engines in older vehicles.[6] In addition, ethanol has proven to be harmful to smaller engines, such as lawnmowers, motorcycles, and boats.[7] Another fuel blend is E85, used in flex-fuel vehicles, which contains "51%–83% ethanol, depending on geography and season."[8] Flex-fuel vehicles have engines that can run on a range of blends of gasoline, including E85. Some gasoline stations offer "blender" pumps that allow consumers to choose which blend to use.[9]

The federal government distinguishes between conventional, first-generation biofuels and advanced, second-generation biofuels, also known as cellulosic ethanol. Producers generate advanced biofuels from non-food parts of crops and other biomass such as leaves, switchgrass, algae, and woodchips. However, commercial development of fuel from these resources has proven to be difficult.

U.S. Biofuel Policy: Farm Bills and the RFS

Since 2002, farm bills have contained an energy title with biofuel programs, but the federal government has a long history of using policy to inflate the use of biofuels. Over time, Congress and both Republican and Democratic Administrations have put in place a variety of subsidies—from tax credits, import tariffs, and grants to outright volumetric mandates—to increase the production, sale, and use of biofuels.

In response to the oil crisis of the 1970s, Congress passed the first ethanol tax credit—the Energy Tax Act of 1978—in an attempt to reduce dependence on foreign oil. Legislation such as the Biomass Research and Development Act of 2000, Healthy Forests Restoration Act of 2003, and American Jobs Creation Act of 2004 introduced or expanded an assortment of direct and indirect subsidies for biofuels. The federal government awards subsidies not just for the production of biofuels and ethanol plants, but also for biofuels infrastructure.[10] The 2002 farm bill continued to force the growth of a market for biofuel production and use; many of these programs were expanded in the 2008 and 2014 farm bills. The main source of U.S. biofuel policy is the RFS mandating billions of gallons of ethanol be blended into gasoline each year, with a peak of 36 billion gallons in 2022.[11]

Many of the farm bill's biofuel programs are designed to jumpstart new technologies, reduce dependence on oil, and improve the environment. Instead, they have created a biofuels industry that depends on preferential treatment, concentrating benefits among a select group of companies and dispersing the costs onto the rest of the American people, both as taxpayers and as energy consumers.

Beyond the farm bill, the federal government routinely intervenes in agriculture markets. One of the most pervasive instruments of this intervention is the Renewable Fuel Standard, which affords preferential treatment to the production of corn and soybeans at the expense of other agricultural products and significantly reduces the risk and competition necessary to drive innovation and economic growth.

The Energy Policy Act of 2005 first mandated that renewable fuels be mixed into America's gasoline supply, primarily by using corn-based ethanol. The 2007 Energy Independence and Security Act increased the quotas significantly. By 2022, 15 billion gallons (and no more toward meeting the mandate) of corn-based ethanol and a total of 36 billion gallons of biofuels must be blended into the nation's fuel supply, including soybean-based biodiesel. Moreover, the program does not end: The EPA has authority to set yearly targets beyond 2022.[12]

The economic and environmental problems caused by the RFS have led a diverse range of environmental organizations, world hunger activists, economists, energy companies, and many in the agricultural community to oppose the mandate. Within the agriculture community, the National Chicken Council, National Cattlemen's Beef Association, National Pork Producers Council, National Turkey Federation, and Milk Producers Council, and many other groups[13] have called on Congress to repeal the standard. Other prominent organizations like the American Petroleum Institute, National Resource Defense Council, American Fuel and Petrochemical Manufacturers, Environmental Working Group, Oxfam, and the United Nations have decried preferential treatment for corn ethanol.[14]

Besides the nearly universal outcry, the policy itself is reaching a breaking point as basic assumptions about the future on which it was built, such as national gasoline consumption and the commercial viability of advanced biofuels, prove to be invalid. Yet powerful biofuel lobbies have still been able to get Congress to withhold action on the RFS and its destructive economic and environmental effects.

Free Markets vs. Government Intervention in Energy Consumption

While the exact relationship between energy consumption and gross domestic product (GDP) can vary, one fact is clear: Energy is important to a nation's economic growth.[15] When the free market operates, resource extraction and production expand greatly, innovative technologies generate promising opportunities, and both job creation and overall economic growth are robust.

Over the years, federal policies have blocked access to opportunities, unnecessarily delayed projects, mandated expensive energy production, restricted choice, and given handouts to politically connected energy technologies. Politicians tout these programs as a way to usher in new technologies that will provide jobs and stimulate the economy. In reality, rather than providing an opportunity for all to compete, these policies allocate special benefits to the well-connected. Biofuel policy, through the farm bill and other pieces of legislation, has certainly been an example of such favoritism.

TABLE 1

Biofuel Subsidies in the 2014 Farm Bill

Program	Function	Funding in 2014 Farm Bill (FY 2014–FY 2018), in Millions of Dollars	
TITLE IX PROGRAMS		**Mandatory**	**Discretionary**
Biobased Markets Program	Requirement for federal agencies to develop a bio-product procurement program, additionally requires contractors to use biobased products on purchases over $10,000	$15	$10
Biorefinery, Renewable Chemical, and Biobased Product Manufacturing Assistance Program	Loan guarantees for biorefinery construction to convert to biomass to advanced biofuels	$200	$375
Repowering Assistance Program	Payments to eligible biorefineries for use of biomass to operate refinery	$12	$50
Biorefinery Program for Advanced Biofuels	Contracts and payments from USDA to advanced biofuel producers for annual increases in production	$75	$100
Biodiesel Fuel Education Program	Grants to educate the public and governments on the benefits of biodiesel	$5	$5
Rural Energy for America Program	Grants and loan guarantees for development and construction of renewable energy systems, including bioenergy systems, in rural communities	$250	$100
Biomass Research and Development Initiative	Grants, contracts, and financial aid for research, development, and demonstrations of technologies and processes that lead toward commercializing biofuels, feedstocks, and biobased products	$12	$100
Feedstock Flexibility Program for Bioenergy Producers	Program in coordination with the Commodity Credit Corporation that allows the USDA to buy surplus sugar and resell at subsidized rates to bioenergy producers	Such sums as necessary	
Biomass Crop Assistance Program	Matching funds and annual payments to farmers and foresters who want to harvest and deliver biomass feedstocks	$120	$0
Community Wood Energy Program	Grants to state and local governments and "biomass consumer cooperatives" for biomass heating systems	$25	$0
TITLE IX TOTALS		**$694**	**$765**
TITLE VII PROGRAMS		**Mandatory**	**Discretionary**
Sun Grant Program	Grants to universities to research and advance biobased energy technology and other applications within the economy	$0	$75 (annually)

SOURCE: Randy Schnepf, "Energy Provisions in the 2014 Farm Bill (P.L. 113-79)," Congressional Research Service *Report for Congress*, March 12, 2014, http://nationalaglawcenter.org/wp-content/uploads/assets/crs/R43416.pdf (accessed July 22, 2016).

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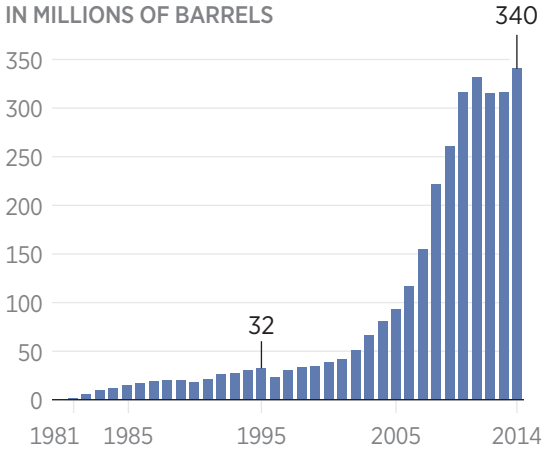
CHART 1

Ethanol Use as Fuel Additive



SOURCE: U.S. Energy Information Administration, "Petroleum and Other Liquids: U.S. Oxygenate Plant Production of Fuel Ethanol," 1985–2014, http://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=M_EPOOXE_YOP_NUS_1&f=A (accessed July 22, 2016).

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Perhaps the most perverse consequence of these subsidies is that they obstruct the long-term success and viability of the technologies and energy sources they are ostensibly intended to promote. Instead of relying on a process that rewards competition, taxpayer subsidies prevent a company from truly understanding the price point at which the technology will be economically viable. When the government plays favorites, it traps valuable resources in unproductive places and allocates labor and capital away from other investments.

If biofuels manage to succeed as a competitive source of transportation fuel, it will not be as a result of any taxpayer-funded handout or government-imposed mandate. Whether the industry flourishes or fails is for private actors, using their own resources, to determine. This holds true not just for biofuels, but for all energy resources and technologies.

The sustainable use of any transportation fuel will not be the result of any government program; it will be the result of market viability that makes all of these handouts wasteful and unnecessary. The United States has a robust, diverse energy market that can supply consumers with affordable and reliable energy—without the taxpayers' help. Each of these government programs in the farm bill represents problems (or opportunities) that the market can solve or capture.

The Biomass Crop Assistance Program (BCAP), for example, is a handout to farmers and ranchers who produce biomass for heat, power, bio-based products, or biofuels. As the U.S. Department of Agriculture (USDA) describes the program:

> BCAP addresses a classic chicken-or-egg challenge around the start up of commercial- scale bioenergy activities. If commercial-scale biomass facilities are to have sufficient feedstocks, then a large-scale energy crop must exist. Conversely, if profitable crop production is to occur, then viable consumers must exist to purchase the crop.... Many bioenergy facilities need several years to reach commercial scale. BCAP serves as a catalyst to unite these dynamics by reducing the financial risk for landowners who decide to grow unconventional crops for these new markets.[16]

Good ideas overcome chicken-and-egg challenges all the time without government assistance. It does not matter how many cell phones there are if there is no place to obtain a signal, but producers built cell phone towers and sold cell phones without a massive subsidy or government program initiated by Washington. The same can happen with biofuels if they are economically viable and meet real market needs. American households spend $2,000 to $2,500 a year on gasoline.[17] Globally, the transportation fuels market is a multitrillion-dollar opportunity. Any technology or fuel source that can capture just a sliver of that market will benefit tremendously, but it will not be the result of any federal government program. This holds true for all transportation fuels.

Evidence indicates that certain biofuels are cost competitive with traditional fuels and make a useful addition to gasoline—without special privileges from Washington. In the year before the federal government mandated the production of ethanol, American companies produced over 81 million barrels of ethanol.[18] Furthermore, ethanol is a cost-effective gasoline oxygenate, a gasoline additive that improves efficiency and helps to meet fuel emissions requirements.[19] A recent University of Tennessee Institute of Agriculture report estimates that in a market with no RFS and no ethanol tax credit, demand for corn ethanol as an oxygenate would

have been 4.34 billion gallons in 2014, or about 30 percent of corn ethanol production that year.[20]

Reducing government intervention in the biofuel sector and agricultural economy broadly would allow the most competitive elements of the biofuel industry to thrive in a free market. Competition driven by individuals would drive economic growth and benefit all of rural America, not just those special interests that are well-connected in Washington.

Unintended Consequences of U.S. Biofuel Policy

U.S. biofuel policy is a case study in the unintended consequences of government intervention. In contrast to what politicians and special interests promised, biofuel policies have increased costs for taxpayers and drivers, had little to no impact on oil prices, hurt rural economies, and resulted in unforeseen environmental costs.

Higher Costs for American Taxpayers and Drivers. Federal biofuel policies cost taxpayers $7.7 billion in 2011 and $1.3 billion in 2012 after the expiration of the ethanol blenders tax credit, a 45-cent per gallon tax credit for blending ethanol into gasoline.[21] Over a 30-year period, ethanol subsidies have diverted $45 billion in taxpayer money for ethanol.[22]

Furthermore, ethanol has done little or nothing either to keep fuel prices down, despite the arguments of proponents,[23] or to achieve the nebulous goal of independence from foreign oil. Even though ethanol production has increased as mandated and has accounted for nearly one-third of the increase in domestic fuel production over the past few years, biofuels still constitute a very small overall percentage of domestic gasoline consumption while increasing costs to consumers.

By its very nature, ethanol is not a perfect substitute for oil. Ethanol's energy content is only two-thirds the energy content of petroleum-based gasoline, and while biodiesel is closer to an even exchange at 92 percent of regular diesel's energy content, it is more expensive to fabricate.[24] During times of high gas prices, ethanol may appear to be less expensive, but after adjusting for the difference in energy content, higher concentrations of ethanol fuels are still more expensive. For instance, as of February 2016, the national average price of regular gasoline was $1.71 per gallon, and E85 was $1.52 per gallon.[25] But adjusting for E85's weaker energy density pushes its price to $1.99 per gallon.[26] The U.S. Department of Energy's Energy Information Administration (EIA) estimates that gasoline's energy content has decreased 3 percent from 1993–2013 as ethanol use has increased because of federal mandates.[27]

The joint EPA/U.S. Department of Energy website, FuelEconomy.Gov, provides eye-popping documentation of these costs. The size of the additional costs varies depending on ethanol and gasoline prices, but the big picture is always the same: The higher the ethanol content, the worse a car's gas mileage is and the more drivers have to spend to go the same distance. As of September 2015, depending on make and model, the typical motorist could spend as much as an additional $450 per year to run his flex-fuel vehicle on E85 rather than regular gasoline blended with E10.[28] Even when vehicles use premium gasoline, E85 is more expensive for drivers.

Failure to Reduce Dependence on Oil. In addition to forcing drivers to pay for a less efficient fuel, the RFS has not delivered on the promise that it would reduce dependence on oil and afford protection from high prices. In 2014, ethanol contributed a mere 5 percent of the overall transportation fuel market. (See Chart 2.) Because it contributes such a small percentage of the overall market, ethanol failed to tamp down prices, which mostly continued to climb from 2002 to 2012—despite increased mandated ethanol use and high oil prices that allegedly made ethanol more competitive.[29] Conversely, ethanol production has had little to do with the dramatic decrease in fuel prices that began in 2013 as a result of access to vast new energy resources in the U.S., a decrease that highlighted the disparity in cost and efficiency between ethanol and petroleum-based fuel.

The large majority of transportation fuel has come from petroleum; even the relative explosion of growth in biofuels as a result of the mandate is dwarfed by the actual demand for fuel. Conversely, ethanol consumes a large share of the corn crop and diverts valuable cropland away from other agricultural products, so while the impact of biofuels on fuel consumption is small, the impact on agriculture is large. The problem is that the diversion of land was a result of the mandates and subsidies. Market forces may very well have moved farmers in this direction, though not likely to such an extent. Nevertheless, the private sector will allocate those resources most efficiently.

Negative Consequences of Diverting Food to Fuel. The federal government's biofuel policy has diverted food away for fuel, increasing the cost of corn, soybeans, and feedstocks, as well as overall

TABLE 2

Yearly Gasoline Costs in Flex Fuel Vehicles: Regular vs. Ethanol

Vehicle	Regular Gasoline	E85 Gasoline	Difference
2015 Ford Focus, 2.0 L, 4 cyl., Automatic (AM6)	$1,150	$1,400	+$250
2015 Chrysler 200, 2.4 L, 4cyl., Auto 9-speed	$1,250	$1,500	+$250
2015 Dodge Dart, 2.0 L, 4 cyl., Automatic 6-speed	$1,300	$1,600	+$300
2015 Mercedes-Benz CLA250, 4Matic, 2.0 L, 4 cyl., Automatic (AM7), Turbo	$1,550	$1,600	+$50
2015 Chevrolet Equinox FWD, 2.4 L, 4 cyl., Automatic 6-speed	$1,350	$1,800	+$450
2015 GMC Terrain FWD, 2.4 L, 4 cyl., Automatic 6-speed	$1,350	$1,800	+$450
2015 Audi A4 Quattro, 2.0 L, 4 cyl., Automatic (S8), Turbo	$1,650	$1,800	+$150
2015 Jeep Cherokee FWD, 2.4 L, 4 cyl., Automatic 9-speed	$1,400	$1,800	+$400
2015 Jeep Renegade 2WD, 2.4 L, 4 cyl., Automatic 9-speed	$1,400	$1,700	+$300
2015 Chevrolet Equinox AWD, 2.4 L, 4 cyl., Automatic 6-speed	$1,400	$1,800	+$400
2015 Mercedes-Benz E350, 4Matic, 3.5 L, 6 cyl., Automatic 7-speed	$1,800	$1,900	+$100
2015 Chevrolet Impala, 3.6 L, 6 cyl., Automatic (S6)	$1,600	$2,000	+$400

SOURCE: U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, "New Flex-Fuel Vehicles," http://www.fueleconomy.gov/feg/PowerSearch.do?action=noform&path=1&year1=2014&year2=2015&vtype=E85&srchtyp=newAfv (accessed July 22, 2016).

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food prices. This increase has hurt both rural America and the world's poorest citizens.

From 2010–2012, 49 percent of the U.S. corn crop was used in the food industry and feed for livestock; another 12 percent was exported. Over 40 percent was used to fabricate ethanol fuel to meet the RFS standard.[30] In 2012, the amount of corn used to produce ethanol in the U.S. exceeded the entire corn consumption of the continent of Africa and in any single country with the exception of China.[31] While the majority of biofuel-related food price increases have resulted from the diversion of corn to fuel, diverting soybean crop to biodiesel has had similar effects.

Inflated demand created by the RFS and higher corn prices have incentivized farmers to grow more corn by adding acreage, increasing productivity, or devoting less existing farmland to other crops, but increasing supply to meet higher demand has its own costs. Pressure on the price of corn is exacerbated by the mandate, which requires the use of ethanol or available credits (called RIN credits) regardless of cost, while ranchers, farmers, the food industry, and motorists must take increased corn prices into account. Those who perhaps bear the costs of increased corn prices most acutely are farmers and ranchers who use corn for feed and countries that import American corn, which accounts for over 50 percent of the world's corn exports.[32]

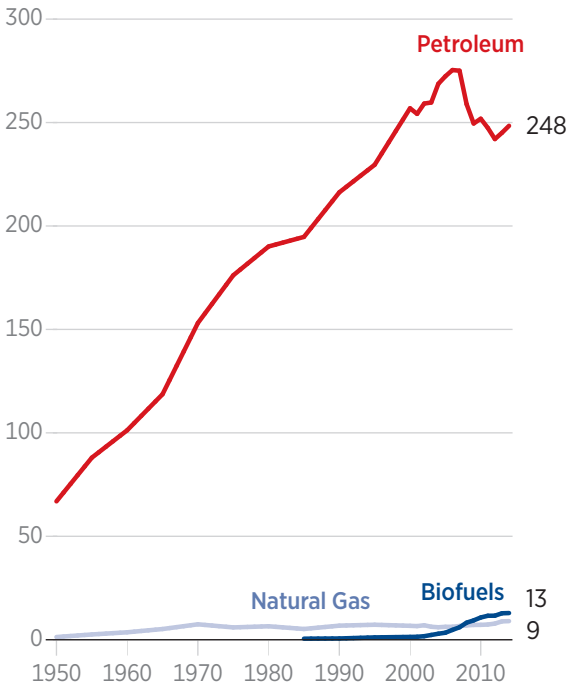
The USDA's Economic Research Service notes that "increased corn prices draw land away from competing crops, raise input prices for livestock producers, and put moderate upward pressure on retail food prices."[33] These side effects were all too apparent during the 2012 drought.

The 2012 summer drought destroyed a significant amount of America's crops, drove corn prices up 33 percent, and heightened concerns that the RFS and existing subsidies were needlessly diverting food to fuel.[34] Since corn is a staple ingredient for many foods and an important feedstock for animals, many in the food industry (from cattle and chicken farmers to restaurant associations) expressed concern regarding the mandate's effect on food prices. Rather than going to where market demand valued corn, roughly 40 percent of the corn crop in 2012 was used to create 12.98 billion gallons of corn-based biofuels, or 95 percent of the mandate.[35]

Between July 2012 and August 2012, governors from Arkansas, Delaware, Florida, Georgia, Maryland, New Mexico, North Carolina, Texas, Utah, Virginia,

CHART 2

Energy Use in Transportation Sector



NOTE: Some figures between 1950 and 2010 are interpolated.
SOURCES: U.S. Energy Information Administration, "Transportation Sector Energy Consumption," 1950–2014, http://www.eia.gov/totalenergy/data/monthly/pdf/sec2_11.pdf (accessed July 22, 2016).

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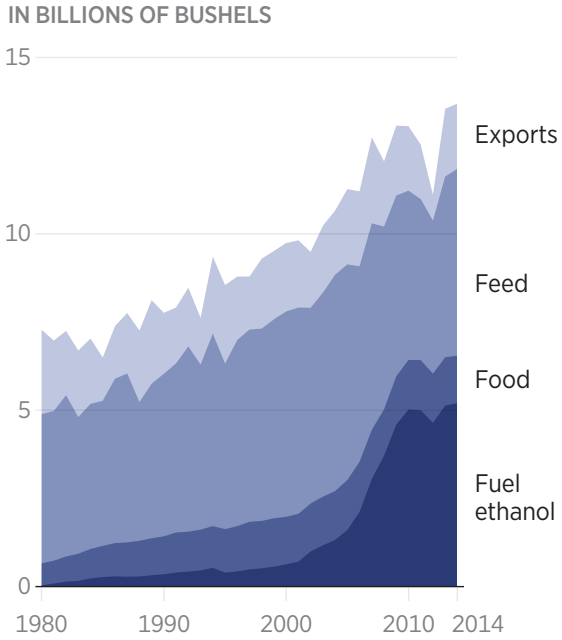
CHART 3

How Corn Is Used



NOTE: Figures are for marketing year, September–August.
SOURCE: U.S. Department of Agriculture, Economic Research Service, "U.S. Bioenergy Statistics: Data Set," Table 5. "Corn Supply, Disappearance and Share of Total Corn Used for Ethanol," 1980–2015, http://www.ers.usda.gov/data-products/us-bioenergy-statistics.aspx (accessed July 22, 2016).

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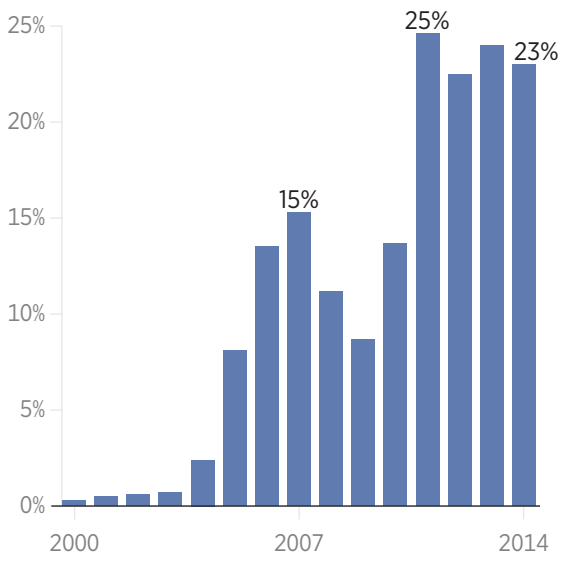
and Wyoming petitioned the EPA for a waiver of the RFS standards, which the EPA denied.[36] According to a recent study by economists from the University of Nebraska–Lincoln, "the drought's impact on corn prices could have been 'fully negated' by reducing the Renewable Fuel Standard by 23 percent that year."[37]

Higher prices resulting from government-created market distortions have a ripple effect well beyond the U.S. A number of organizations have demonstrated a link between biofuel policies and food prices and the adverse consequences of these policies for the world's poorest citizens. The Food and Agriculture Organization of the United Nations, ActionAid, the World Resources Institute, the Organisation for Economic Co-operation and Development, and the World Bank have all listed higher food prices as a resultant concern.[38]

The magnitude of the ethanol mandate's effect on corn prices and overall agricultural products is difficult to determine, partly because of the uncertainty of estimates regarding how much ethanol would be used for fuel absent a mandate, the price impacts of other factors affecting the price of corn, and what other agricultural products farmers would grow absent the mandate. While the magnitude of the mandate's impact on corn prices may not be certain, however, the direction is clear: The RFS has increased demand for corn and consequently has increased prices. According to separate analyses by University of California–Davis economists and a Heritage Foundation economist, the mandate accounts for an increase in corn prices of 30 percent or even as much as 68 percent, respectively.[39] Though other factors such as weather, global markets, and changing food preferences are at

CHART 4

Soybean Crop Increasingly Used for Biodiesel



NOTE: Figures are for marketing year, October–September.
SOURCE: U.S. Department of Agriculture, Economic Research Service, "Soybean Oil Supply, Disappearance and Share of Biodiesel Use," 2000–2015, http://www.ers.sda.gov/data-products/us-bioenergy-statistics.aspx (accessed July 22, 2016).

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work in the price of corn, the RFS has certainly contributed to increased prices.[40]

Proponents of the RFS and preferential treatment for biofuels sold these policies as a way to support economic growth in rural communities. Instead of supporting rural communities, however, the federal government has supported corn growers at the expense of livestock producers and has diverted resources to an industry that is not self-sustaining. Taking away such a crutch would doubtless be painful for farmers.

Furthermore, because of the RFS, fuel now competes indirectly with corn producers,[41] and this connection is not insignificant: Some 41 percent of the U.S. corn crop was dedicated to ethanol production in 2010–2012, compared to 14 percent when Congress mandated the original quota in 2005.[42] Without the mandate, ethanol, and thus corn-for-fuel, becomes less competitive, especially if more energy-efficient gasoline remains inexpensive.

Ethanol consumption is at historic highs for one simple reason: The federal government mandates its consumption. According to the Institute for Energy Research:

> If someone forces vegetarians to buy hamburgers, or non-smokers to buy cigarettes, that might look like "economic growth" and "job creation" but it doesn't actually make Americans better off. By the same token, if the government forces people to use ethanol, that's not genuine prosperity.[43]

The fact that the EPA can use its own discretion to set biofuel targets after 2022 is all the more reason for Congress to act now.

Ultimately, the RFS has less to do with price or customer choice and much more to do with meeting a government quota regardless of costs. Although biofuel technologies may someday prove to be a preferred fuel choice, biofuels have proved to be expensive to produce and less energy dense than gasoline and diesel. Federal subsidies and mandates have shifted those costs to motorists, the food industry, and sectors of the agriculture community that depend on corn and soy for feed, while benefits are concentrated among a select few.

Unintended Adverse Environmental Consequences. Policymakers sold biofuel programs and the RFS in part by promising several important benefits, including cleaner fuel and a reduction in the greenhouse gas emissions that allegedly contribute to climate change. Yet the ability of biofuels, particularly ethanol, to improve the environment and reduce greenhouse gas emissions—regardless of the benefits of such goals—has been unclear and controversial at best.

According to the EIA, biofuel carbon dioxide emissions are "considered to be part of the natural carbon cycle."[44] However, this assumption may be too broad. For example:

- After accounting for land-use conversion and the use of fertilizers, insecticides, and pesticides, as well as the fossil fuels used for production and distribution, biofuel production is quite carbon intensive.[45]

- The growing popularity of biofuel policies led the U.N.'s Food and Agriculture Organization (FAO) to focus on the issue in its 2008 *State of Food and*

Agriculture report. Citing several studies published in *Science*, the FAO noted that converting non-cropland to the production of corn ethanol released at least 17 times more emissions than the amount that is cut in carbon dioxide emissions by using biofuels, or a "carbon debt" of 48 years.[46]

- University of Michigan Energy Institute Professor Dr. John DeCicco finds that even without accounting for indirect changes in land use, biofuels increase the amount of carbon dioxide released into the atmosphere compared to regular gasoline.[47]

- Despite once hailing biofuels as an important tool in mitigating climate change, the U.N.'s Intergovernmental Panel on Climate Change reversed positions and acknowledged in 2007 that biofuel policy negatively affects the lives of the poor, diverts land to the production of biofuels, has environmental consequences, and has dubious climate impacts.[48]

Meanwhile, Congress has seemingly ignored apparent increases in real pollutants attributed to the RFS. Ethanol does have some benefits as a fuel additive that helps gasoline burn more cleanly and efficiently. The EPA acknowledged that increased renewable fuel would result in higher emissions of air pollutants such as particulate matter and nitrogen oxides and stated that "[i]n addition to air quality, there are also expected to be adverse impacts on both water quality and quantity as the production of biofuels and their feedstocks increase."[49] A study by Iowa State University researchers concluded that incentivizing more biofuel production with government policies leads to more adverse environmental consequences caused by farming, the use of fertilizers, and land-use conversion for agricultural production, resulting in increased soil erosion, sedimentation, and nitrogen and phosphorous runoff into lakes and streams.[50]

The unwanted environmental costs of agricultural production are a solvable problem. Almost all industrial output results in unwanted byproducts, whether air pollutants or runoff and discharge from the use of fertilizers. These byproducts are not necessarily a reason to eliminate an activity; doing so could reverse hard-won prosperity and progress. The real problem is that biofuels have been sold to policymakers and the public as "green" fuels, whereas in practice, they can be more environmentally damaging than petroleum-based fuels.

The Folly of Central Planning

The Renewable Fuel Standard mandate demonstrates just how bad the government is at understanding what the market can bear in terms of production and consumption. As Austrian economist F. A. Hayek once said, "The curious task of economics is to demonstrate to men how little they know about what they imagine they can design."[51] No matter how brilliant or well-informed with data, politicians and bureaucrats cannot plan markets and consumer needs. Basic assumptions about the RFS have proven to be short-sighted, revealing the inability of government to plan energy markets.

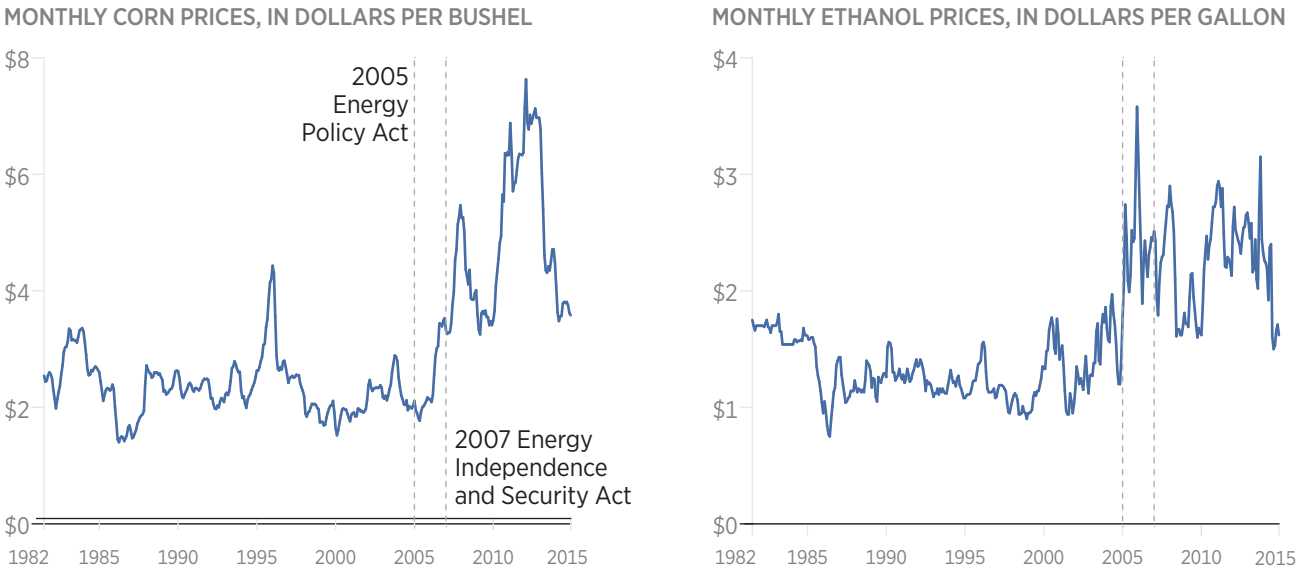
The Blend Wall. As the RFS has reached the midpoint on the path to its final target in 2022, petroleum refiners have come up against what is known as the blend wall. Because overall gasoline consumption has leveled off as a result of a slower economy and increased fuel efficiency, and because the RFS mandates ever-increasing amounts of ethanol, continued compliance with the RFS would force refiners to blend more ethanol than the market will bear.

According to the RFS, each refiner in the United States has to meet a requirement that a certain percentage of domestic sales contain blended ethanol, called a renewable volume obligation (RVO).[52] Refiners have an option to meet part of their requirement by buying credits instead of blending more ethanol. In order to track the renewable fuel quotas, the EPA requires a renewable identification number (RIN) to track the amount of biofuel reaching the market and to hold refiners accountable for blending enough ethanol. Refiners can either hold on to these credits and meet up to 20 percent of the RFS requirement in RIN credits or purchase RIN credits from other refiners when they fail to meet the requirement. Different RIN prices exist for different forms of biofuels.

The RIN trading system has resulted in numerous instances of fraud in which refineries bought fake credits with made-up RIN numbers for millions of dollars. Since refineries now face the blend wall, increased trading for RIN credits has driven up the price of the credit from pennies to over a dollar in 2013.[53] Bloomberg projects that overmandating (requiring the use of more ethanol than can be blended) and forcing the purchase of RINs could cost consumers an additional $13 billion at the pump—an artificial increase of 10 cents per gallon if RIN credit

CHART 5

Corn and Ethanol Prices



SOURCE: U.S. Department of Agriculture, Economic Research Service, "U.S. Bioenergy Statistics: Data Set," Table 14. "Fuel Ethanol, Corn and Gasoline Prices, by Month," 1982–2015, http://www.ers.usda.gov/data-products/us-bioenergy-statistics.aspx (accessed July 22, 2016).

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prices stay above one dollar.[54] But even if the price of RIN credits falls to 50 cents per credit, consumers will still be slapped with a multibillion-dollar bill.[55]

The economic consulting firm NERA warns that attempting to increase requirements to where the targets were set originally in the Energy Independence and Security Act of 2007 would result in intensified economic damage:

> When the required biofuel volume standards are too severe, as with the statute scenario, the market becomes disrupted because there are an insufficient number of RINs to allow compliance. "Forcing" additional volumes of biofuels into the market beyond those that would be "absorbed" by the market based on economics alone at the levels required by the statute scenario will result in severe economic harm.[56]

The possibility of "too much" ethanol creates an economic problem for ethanol producers that will become more pressing as corn-based ethanol reaches the statutory cap of 15 billion gallons and if gas prices remain low. According to the Congressional Research Service (CRS):

> In volumes above the RFS total renewable mandate, biofuels use is no longer obligatory and it must compete directly in the marketplace with its petroleum-based counterpart. As a result, once they have met their RFS blending mandates, fuel blenders, seeking to maximize their profits, are very sensitive to price relationships between petroleum-based fuels and biofuels. This is particularly important for ethanol since it contains only about 68% of the energy content of gasoline. As a result, value-conscious consumers could be expected to willingly pay only about 68% of the price of gasoline for ethanol.[57]

Higher economic growth, and therefore higher fuel consumption, could alleviate some blend wall concerns, but increased fuel-efficiency standards and higher volume targets for biofuels could cause the blend wall problem to persist. Flex-fuel vehicles capable of using E85 offer little economic relief for

TABLE 3

Production Falls Short of Cellulosic Biofuel Quotas

	EISA Targets for Cellulosic Biofuels (gallons)	EPA Mandate (gallons)	Actual Production (gallons)	Actual Production as Percentage of EPA Mandate
2010	100 million	6.5 million	0	0%
2011	250 million	6 million	0	0%
2012	500 million	8.65 million	20,069	0.23%
2013	1 billion	810,185	0	0%
2014	1.75 billion	33 million	728,509	2.2%
2015	3 billion	123 million	2,181,096	1.77%
2016	4.25 billion	230 million	n/a	n/a

SOURCES: Energy Independence and Security Act of 2007, P. L. 110-140; Kelsi Bracmort, "The Renewable Fuel Standard (RFS): Cellulosic Biofuels," Congressional Research Service *Report for Congress*, January 14, 2015, http://nationalaglawcenter.org/wp-content/uploads/assets/crs/R41106.pdf (accessed January 14, 2016); and U.S. Environmental Protection Agency, "Final Renewable Fuel Standards for 2014, 2015 and 2016, and the Biomass-Based Diesel Volume for 2017," https://www.epa.gov/renewable-fuel-standard-program/final-renewable-fuel-standards-2014-2015-and-2016-and-biomass-based (accessed April 18, 2016).

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the blend wall. Demand for these vehicles is very low,[58] and drivers who own flex-fuel vehicles often fill their tanks with E10 as opposed to E85 because the energy content in E85 is lower. Adjusted for energy content, E10 makes more financial sense than E85. Most important, no one knows what the future holds for economic growth and fuel consumption, which is why the government should not predict what markets will bear in 2022 with a law in 2005.

Ethanol and Price Volatility. Price volatility by itself is no reason to stop using biofuels in transportation fuel. Proponents of alternative fuel have used oil-market volatility to champion the government's use of biofuels, but ethanol has been subject to its own price volatility, especially since passage of the RFS, and has done little to curb the effects of oil price volatility. Most important, although agricultural commodities are subject to price volatility just as other commodities are, markets free of government intervention can respond most effectively to any price volatility, large or small.

As shown by Chart 5, corn prices reached record highs in 2008 only to free fall during the financial crisis. Again in 2012, drought in the U.S. caused corn prices to rise steeply and sparked the first decline in U.S. ethanol production since 1996 as ethanol producers stalled plants.[59] As CRS has noted about the 2008 price spike, "The experience of $7.00-per-bushel corn, albeit temporary, shattered the idea that biofuels were a panacea for solving the nation's energy security problems and left concerns about the potential for unintended consequences from future biofuels expansion."[60]

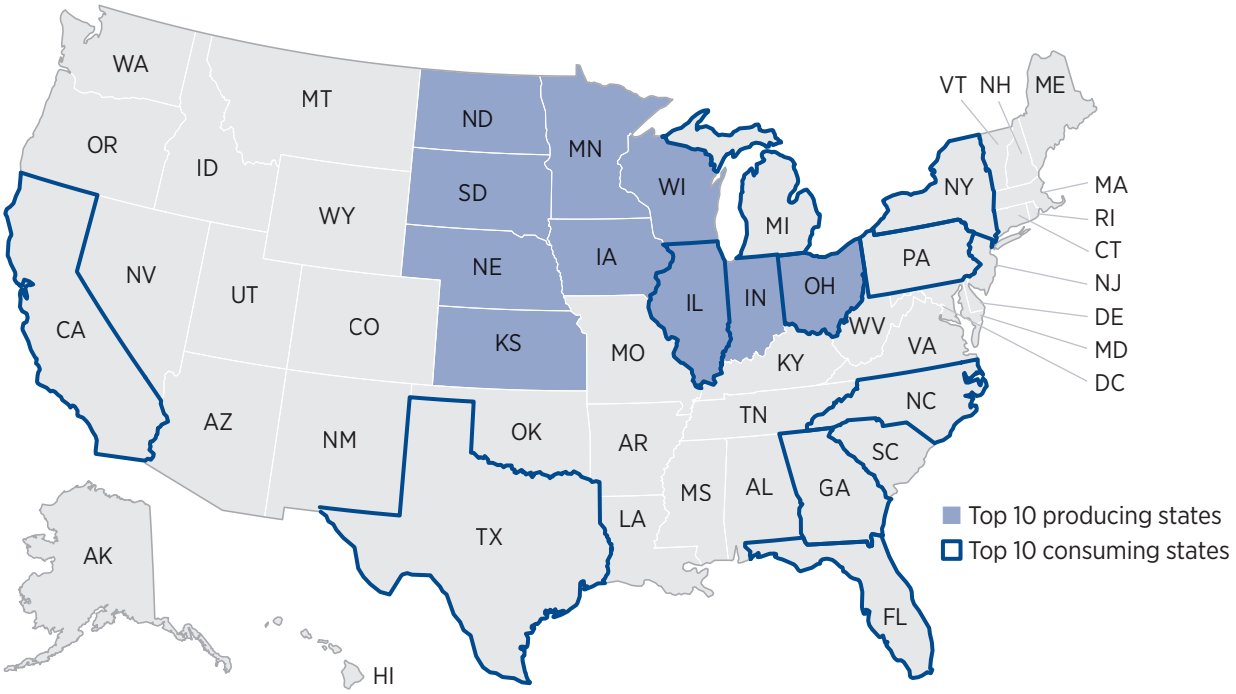
Problems with Advanced Biofuels. While corn-based ethanol production has outpaced the blend wall, the production of other biofuels to meet the RFS mandate has woefully underperformed.[61] The production of cellulosic ethanol, made from non-food sources, is nowhere near to meeting its targets, even though the RFS mandates that 16 billion gallons must be used by 2022. High capital costs and difficulty scaling up cellulosic biofuel conversion plants to meet large-scale demand have prevented non-food-sourced ethanol from being an economically viable option.

The EPA, which administers the RFS, has had to reduce Congress's original annual quotas for cellulosic ethanol every year since they were required by the mandate because not enough was available on the market. The EPA adjusted Congress's first cellulosic target down from 100 million gallons in 2010 to just 6.5 million. However, even the adjusted mandate was a stretch compared with reality: Zero gallons were produced that year and the following year.[62]

Consequently, refiners had to pay millions of dollars in waiver credits or surcharges for failing to comply with the EPA's minimum volume requirements, and they necessarily passed those costs on to the consumer. In January 2013, the D.C. Circuit

MAP 1

Top Ethanol Producers and Consumers



SOURCE: U.S. Energy Information Administration, "State Energy Data System (SEDS)," https://www.eia.gov/state/seds/seds-data-complete.cfm (accessed April 10, 2016).

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Court of Appeals ruled that the EPA "let its aspirations for a self-fulfilling prophecy divert it from a neutral methodology" and that the target was an "unreasonable exercise of agency discretion."[63] The court vacated the cellulosic ethanol requirement required by the RFS for 2012. The EPA has since proposed cellulosic mandates for 2014–2016 that are equally as out of touch with market realities.

Private Benefits, Dispersed Costs. The strong lobbying of corn producers and the political importance of the geographic region where America produces corn make ethanol policy the perfect example of a focus on political profit as opposed to economic progress. They have been successful despite the unique and diverse mix of organizations opposed to the ethanol mandate.

The RFS essentially mandates a market for corn, soybeans, and biofuels that eliminates much of the risk of investing in biofuels—risk that every industry manages as a matter of doing business and that ultimately is necessary for a healthy and growing economy. Not only does it favor a select few commodities, but the mandate also benefits just a few states at the expense of the vast majority. Over 50 percent of ethanol production is concentrated in three states: Illinois, Iowa, and Nebraska.[64]

Ultimately, however, the benefits enjoyed by biofuel interests are limited and do not help the industry in the long run. The dependence on government to remain viable stunts the industry's long-term growth by propping up bioenergy and distorting the true price point at which biofuels will be competitive in the market.

What Needs to Be Done

Longtime proponents of the ethanol mandate have come to recognize the problems of corn-based ethanol. In fact, several Members of Congress have introduced legislation to repeal only the corn requirement of the Renewable Fuel Standard.[65]

Removing corn's share of the requirement, perhaps the most economically viable part of the

mandate, is problematic for several reasons. Biodiesel generated from soybeans presents the same food-for-fuel problem as the corn-ethanol mandate presents. Advanced biofuels from non-food-based sources are the least economically competitive of all such fuels and demonstrate just how incompetent the federal government is at centrally planning what the market can bear. And both the Renewable Fuel Standard and the federal government's promotion of biofuels create unintended environmental concerns.

Consequently, Congress should:

- **Eliminate the bioenergy programs in the farm bill.** Congress should repeal all of the energy programs in the farm bill: Title IX as well as the Sun Grant program in Title VII.

- **Repeal the mandate in its entirety and allow consumers a choice at the pump.** Biofuels existed long before the Renewable Fuel Standard and, if economically competitive, will remain long after it is gone. Removing the mandate would encourage a healthier market that promotes risk-taking and entrepreneurial activity rather than dependence on government for near-term survival through favorable policies and tax treatment. It is also important that policymakers not just repeal the corn-based part of the ethanol mandate and leave the least competitive part, the cellulosic requirement, intact.

- **Let producers drive alternative fuel innovation.** Use repeal of the mandate as momentum for greater reform in the energy sector. Such future reform should include a further leveling of the playing field for all energy companies and technologies. Congress should also remove preferential treatment for all transportation fuels and technologies.

Conclusion

Favoritism toward biofuels and bioenergy has promised much but delivered very little. While a select few benefit from special treatment, bioenergy policies have come at significant cost to taxpayers, energy consumers, the environment, the world's hungriest citizens, and the large segment of the agricultural community that does not profit from the subsidies and Renewable Fuel Standard. Policy reforms that removed handouts would promote competition and fuel choice.

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KEY POINTS:
Promoting Free Trade in Agriculture

Benefits of Free Trade in Agriculture

Farmers, ranchers, and consumers derive immense benefits from free trade in agriculture and participation in the global trading system. These benefits include:

- **Greater consumer choice and value.** U.S. consumers have improved access to food that was once considered seasonal or cost prohibitive, and these imports help Americans eat healthier without government intervention. As noted by the Congressional Research Service, agricultural imports benefit Americans by "lowering costs (given a wider supply network), improving eating quality, assuring food safety, conducting promotions, and reducing product losses."

- **Customers for agricultural production.** Agricultural productivity is growing faster than domestic demand for food and fiber; therefore the agriculture sector relies on exports to maintain prices and revenues.

- **Increased values of exports and imports.** Both exports and imports of farm goods have approximately tripled in value between 1998 and 2014 (in nominal terms) and more than doubled in real terms.

- **Economic growth and jobs.** U.S. agricultural exports have had a ripple effect through the economy. According to the USDA's Economic Research Service, the $150 billion in agricultural exports in 2014 created an additional $190.6 billion in economic activity, and over 1 million full-time jobs.

The Importance of Trade Agreements

According to the USDA, export gains were strong for countries with which the United States has a free trade agreement (FTA): Between 2004 and 2014, U.S. agricultural exports to those countries increased more than 145 percent—from $24 billion to $59 billion.

- **NAFTA.** For the North American Free Trade Agreement (NAFTA) alone, USDA found that "[b]etween 1993 and 2000, U.S. agricultural exports to Canada and Mexico expanded by 59 percent, while corresponding exports to the rest of the world grew only 10 percent."

  A survey of economic analyses conducted by the USDA after NAFTA's full implementation in 2008 found that "[i]n addition to increasing regional agricultural trade, NAFTA has helped to broaden the seasonal availability of fresh produce and to increase the variety of food products available to consumers."

- **World Trade Organization (WTO).** The United States' participation in the multilateral trading system (i.e., the WTO) has produced tangible gains for U.S. agricultural interests. For example, prior to the WTO, the U.S. had little recourse to address barriers for U.S. farm exports, including non-tariff barriers, discriminatory health, and safety rules and subsidies.

The U.S. Hampers Free Trade in Agriculture

Despite its many benefits, U.S. agricultural trade continues to be undermined by tariffs and non-tariff trade barriers such as subsidies and regulatory barriers. While such policies are supposed to address issues such as consumer welfare, they are, in fact, a pretext for protectionism. Subsidies and protectionist measures:

- **Hurt farmers and ranchers.** Several studies have assessed the impact of additional liberalization of U.S. agricultural trade and subsidies, and found that both consumers and the farm sector would benefit. For example, a 2005 CBO survey of five different academic studies found that each analysis predicted benefits for U.S. agriculture from full liberalization of trade in the sector.

- **Hurt consumers, especially the poor.** According to a 2009 study by the U.S. International Trade Commission (ITC), American consumers paid up to 57 percent more than their foreign counterparts for heavily protected foods like milk, butter, sugar, and tuna. These trade barriers are highly regressive, as poor consumers are forced to expend a larger proportion of their budgets to afford daily food essentials.

- **Expose U.S. exports to retaliation.** Because U.S. agricultural protectionism often violates the United States' international obligations under the WTO agreements or bilateral/regional free trade agreements, U.S. farmers face retaliatory tariffs on their exports when trading partners challenge U.S. trade barriers through dispute settlement.

- **Distort markets.** U.S. barriers to farm trade distort global markets and exacerbate boom and bust cycles in the United States and abroad. They also promote resource hoarding by foreign trading partners who seek to keep domestic commodity prices artificially low via export restrictions.

The Fair Trade Myths

Many supporters of U.S. agricultural subsidies argue that subsidies are necessary to offset massive subsidization by competitors' foreign governments, particularly in the EU, China, and Brazil. These arguments suffer from many flaws, such as:

- **Could apply to many industries.** The U.S. generally does not subsidize an entire industry just because another country does so. If it did, America's currently unacceptable level of cronyism, protectionism, and corporate welfare would skyrocket.

- **Follow the misguided lead of other countries that are hurting themselves.** There is overwhelming evidence that subsidies, particularly those for agriculture, distort markets and reduce economic welfare; just because one country harms its citizens is no reason for the United States to do the same. Often, like with the sugar program, the subsidies help a narrow special interest at the expense of consumers, other businesses, workers, and the U.S. economy.

- **Undermine chances of reform.** No WTO member appears to be willing to take the political risk necessary to be a first-mover on broad subsidy reform, particularly not until the United States moves. Therefore, all WTO Members are doomed to inaction.

- **Ignore the many tools the U.S. has to address the subsidies of other countries.** The United States could eliminate all of its subsidies and still have ample legal tools at its disposal to encourage others to follow suit, from new multilateral negotiations to the WTO dispute process.

Policy Recommendations

The federal government has a critical role to play with free trade. While getting rid of our own barriers is a key part of what needs to be done, the federal government also needs to help knock down foreign barriers. The following are just some of the important recommendations that will help promote free trade:

- **Unilateral liberalization of traditional tariff barriers.** The U.S. Congress should pass legislation eliminating tariffs on agricultural products and inputs. Doing so would benefit consumers by purging a regressive tax on food, while instantly eliminating the complexity of the current U.S. tariff system.

- **Full compliance with international trade obligations.** The United States Trade Representative (USTR) should work with Congress and the Executive Branch to enact policies that would bring the United States into full compliance with its WTO obligations.

- **More vigorous demands (and offers) in WTO negotiations.** The United States should dramatically improve its offers in WTO negotiations to reduce trade-distorting U.S. farm subsidies. Doing so will eliminate one of the main roadblocks to robust multilateral trade negotiations, while permitting the United States to make more aggressive demands that other WTO members likewise eliminate their subsidies and other barriers to farm trade.
- **Increased trade barrier and subsidy monitoring, reporting, and (if necessary) litigation.** Although the United States has many mechanisms to assess and attack global farm trade barriers and subsidies, these mechanisms are not being fully utilized. For example, the United States should stop being so hesitant to litigate agricultural trade barriers and subsidies through WTO dispute settlement.

SECTION 7:
Promoting Free Trade in Agriculture

Scott Lincicome

Farmers, ranchers, and consumers derive immense benefits from free trade in agriculture and participation in the global trading system. Despite these benefits, however, U.S. agricultural protectionism is still prevalent through traditional barriers like tariffs and quotas, as well as non-traditional barriers like subsidies and onerous regulations that do little to advance public health or safety.

Such protectionist policies are unnecessary. The experience of less-protected U.S. farm sectors and of other countries demonstrates that farmers can be globally competitive without protectionism. The United States should therefore not hesitate to move its agricultural trade system in a more modern, market-based direction.

This report assesses how the U.S. farm sector has benefited from open trade yet still suffers from rampant protectionism. In the process, it will also highlight key points about U.S. agricultural trade policy and make concrete policy recommendations to promote free trade in agriculture.[1]

Benefits of Free Trade in Agriculture

Trade liberalization and the global trading system have generated vast benefits for U.S. agricultural producers and consumers. These benefits have come in two basic forms: economic benefits from lower tariffs and non-tariff barriers to trade in farm products and recourse to the World Trade Organization (WTO) dispute settlement system to resolve foreign trade barriers that affect U.S. agricultural interests.

Economic Benefits of Free Trade in Agriculture. Because agricultural productivity in the United States is growing faster than demand for food and fiber, "U.S. farmers and agricultural firms rely heavily on export markets to sustain prices and revenues."[2] Fortunately, trade in agricultural products has exploded. According to the U.S. Department of Agriculture (USDA), both exports and imports of farm goods approximately tripled in value between 1998 and 2014 in nominal dollars; in real dollars, the amount has more than doubled. Over this period, which coincides with implementation of the WTO and the North American Free Trade Agreement (NAFTA), annual U.S. farm exports increased from approximately $52 billion to $150 billion, while imports rose from approximately $37 billion to $2 billion (see Chart 1).[3]

- **Benefits of exports.** U.S. agricultural exports have had a ripple effect through the economy. According to the USDA's Economic Research Service, the $150 billion in agricultural exports in 2014 created an additional $190.6 billion in economic activity (see Chart 2) and over 1 million full-time jobs.[4]

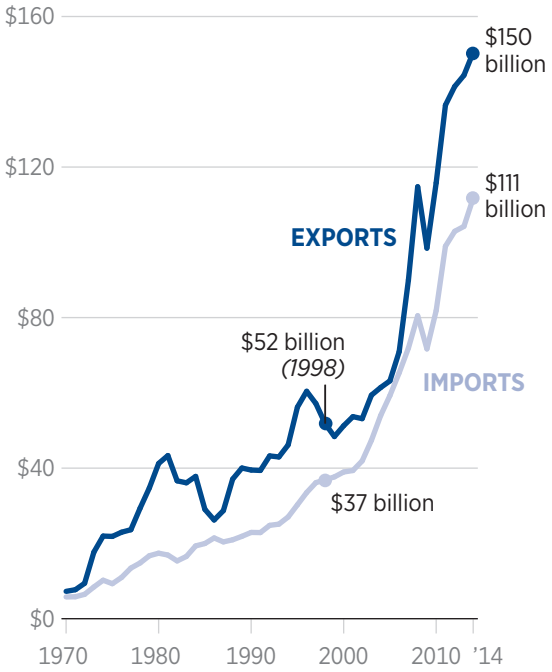
- **Benefits of imports.** Imports give U.S. consumers improved access to food that was once considered seasonal or cost-prohibitive and help them to eat more healthfully without the need for top-down government intervention. Between 1999 and 2014, for example, U.S. imports of fish, vegetables, fruit, and nuts increased by approximately 32 percent, 50 percent, 35 percent, and 44 percent, respectively.[5] (See Chart 3.) The Congressional Research Service notes that agricultural imports benefit Americans by "lowering costs (given a wider supply network), improving eating quality, assuring food safety, conducting promotions, and reducing product losses."[6]

- **Critical importance of trade agreements.** It is undeniable that U.S. trade agreements like the General Agreement on Tariffs and Trade (GATT) and North American Free Trade Agreement have contributed to the growth in U.S. farm exports.[7] According to the USDA, export gains were strong for countries with which the United States has a free trade agreement (FTA):[8] Between 2004 and 2014, U.S. agricultural

CHART 1

Value of Agricultural Exports and Imports Skyrockets

IN BILLIONS OF NOMINAL DOLLARS



SOURCE: U.S. Department of Agriculture, Economic Research Service, "Value of U.S. Agricultural Trade, by Calendar Year," 1935–2014, http://www.ers.usda.gov/data-products/foreign-agricultural-trade-of-the-united-states-(fatus)/calendar-year.aspx (April 6, 2016).

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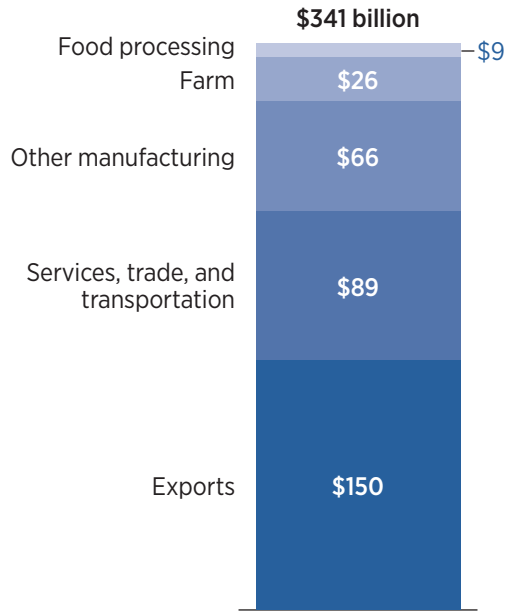
CHART 2

Economic Activity from Agricultural Trade, 2014



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exports to those countries increased more than 145 percent, from $24 billion to $59 billion.[9] For NAFTA alone, the USDA found that "[b]etween 1993 and 2000, U.S. agricultural exports to Canada and Mexico expanded by 59 percent, while corresponding exports to the rest of the world grew only 10 percent."[10]

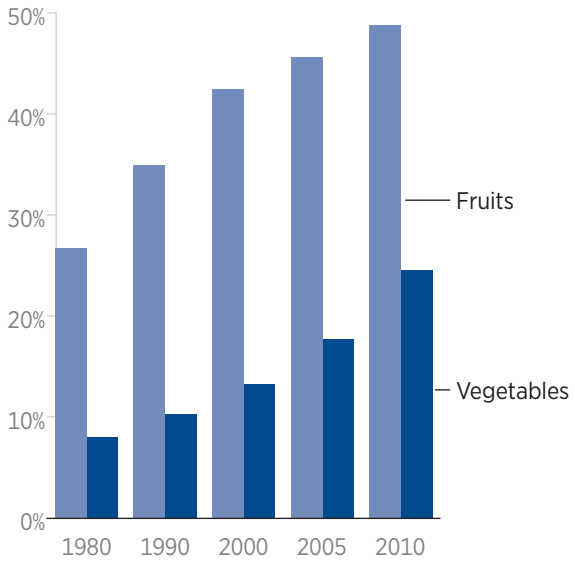
Unsurprisingly, the countries selling the most food in the United States were most often those with which the United States has free trade agreements or has unilaterally reduced tariffs through preference programs: Mexico, Chile, Costa Rica, and Guatemala for fruit; Mexico, Canada, Peru, and Guatemala for vegetables; and Australia, Canada, Mexico, and Nicaragua for meat. Imports from China also experienced significant gains following that country's entry into the WTO. (For a list of country suppliers of fruits and vegetables, see Appendix 1.)

These imports also mean jobs: Unfettered access to agricultural imports is often critical for downstream U.S. companies—e.g., grocers, restaurants, and food processors—to remain competitive. Because these corporate consumers often employ far more American workers than do their upstream suppliers, agricultural protectionism can create disproportionate harms for the U.S. labor market. Further, access to international markets through imports allows U.S. companies to buy less expensive inputs to their products, which leads to savings that allow U.S. products to be more competitive both at home

CHART 3

More Fruits and Vegetables Are Being Imported to the U.S.

SHARE OF IMPORTED FRUITS AND VEGETABLES CONSUMED



SOURCE: Congressional Research Service, "The U.S. Trade Situation for Fruit and Vegetable Products," January 15, 2014, p. 13, https://www.fas.org/sgp/crs/misc/RL34468.pdf (accessed April 7, 2016).

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and abroad and that ultimately are shared by their customers.

A survey of economic analyses conducted by the USDA after NAFTA's full implementation in 2008 found that, compared to what would have occurred without the agreement, NAFTA produced significant gains in U.S. agricultural exports and imports. Expert assessments found that the agreement's impact on U.S. agricultural trade was biggest in the commodity sectors that experienced the most significant reductions in tariff and non-tariff barriers.

The report further found that "[i]n addition to increasing regional agricultural trade, NAFTA has helped to broaden the seasonal availability of fresh produce and to increase the variety of food products available to consumers." Among the "new varieties" of imports available to American consumers were grape tomatoes and fresh avocados, "products whose importation has benefited not only from trade liberalization under NAFTA but also from the introduction of a tomato variety from Taiwan (grape tomatoes), and more trade-oriented 'phytosanitary' (agriculture-related) regulations (fresh avocados)."[11]

The Trans-Pacific Partnership Offers New Liberalization. The recently concluded Trans-Pacific Partnership (TPP) looks to offer similar tariff liberalization benefits for U.S. consumers and agricultural exporters. While imperfect, the TPP would lower, either immediately or over a short phase-in period, U.S. tariffs on a wide range of grains, fruits and vegetables, meats, and dairy products.[12] Many of these tariffs are currently quite high, thus enhancing the benefit of the TPP's liberalization for American consumers. As the Peterson Institute notes, the United States would eliminate about two-thirds of its "more restrictive tariffs (including all tariffs above 5 percent and specific tariffs)" as soon as the TPP enters into force, and "most of the higher tariffs to be eliminated immediately are in agriculture (such as vegetables and beans), chemicals and apparel."[13] Similar tariff liberalization would occur in the TPP's other member countries, including lucrative new markets like Japan[14] and Vietnam,[15] thereby benefiting U.S. farmers and ranchers.[16]

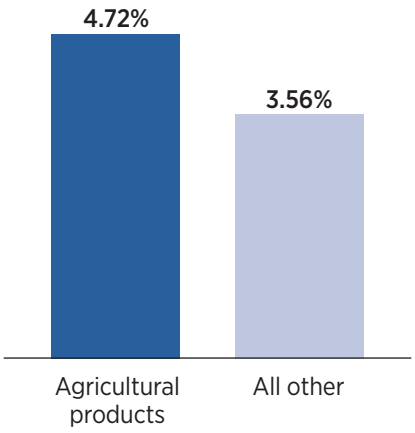
Benefits of the World Trade Organization

The United States' participation in the multilateral trading system (i.e., the WTO) has produced tangible gains for U.S. agricultural interests. These benefits have accrued through basic trade-liberalization commitments made by all WTO members and in many WTO venues, most notably the dispute settlement system, in which WTO member governments request consultations with one another about trade barriers before possibly litigating those barriers before an independent, WTO-appointed adjudicative panel or the permanent Appellate Body. In response to final rulings of the panel or Appellate Body, WTO members either remove a WTO-inconsistent measure or accept "retaliation" by the member(s) who first requested consultations.

Significant U.S. Success in WTO Dispute Settlement Proceedings. According to the WTO, the United States government has initiated 29 dispute

CHART 4

U.S. Maintains High Barriers to Agricultural Trade



SOURCE: World Trade Organization, Tariff Analysis Online, https://tao.wto.org/ (accessed April 6, 2016).

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settlement proceedings over other WTO members' barriers to U.S. farm exports, including non-tariff barriers, discriminatory health and safety rules, and subsidies. Prior to the WTO, these foreign trade barriers were virtually impossible to challenge without self-defeating U.S. protectionism because systemic limitations in GATT dispute settlement left the United States with few alternatives other than to impose retaliatory sanctions (e.g., under Section 301 of U.S. trade law, which at the time permitted unilateral U.S. retaliation against foreign trade barriers[17]) or to negotiate "voluntary export restraints" with foreign governments. Often, unilateral U.S. trade sanctions produced a "tit-for-tat" retaliation by offended foreign trading partners, further injuring U.S. economic interests.

The WTO broke this painful cycle by providing a formal legal venue for enforcing other WTO members' trade-liberalization commitments. As indicated in Appendix 3, the United States achieved a "victory"—an affirmative ruling and/or the elimination or modification of the measure at issue—in every single WTO case that moved beyond the first government-to-government "consultations" stage (and even in many of the consultations-only disputes). In only two cases did the offending WTO member refuse to comply with an adverse ruling, and only once did the United States need to resort to retaliation in order to convince one of these members to implement the WTO ruling at issue. The multilateral trading system has enforced the WTO agreements' tangible market-access benefits for U.S. farmers and ranchers without the use of protectionist tariffs or market-distorting subsidies that harm American consumers and the economy more broadly and without the threat of foreign retaliation. (For a list of U.S.-initiated proceedings, see Appendix 3.)

How the U.S. Undermines Free Trade in Agricultural Markets

Despite the demonstrated and far-reaching benefits of free trade in agriculture, the U.S. government still maintains—and in some cases vigorously defends—measures that restrict or distort free trade in farm products. This protectionism can take the form of tariffs or non-tariff barriers.

Tariffs Undermine Free Trade. Although U.S. tariffs and non-tariff barriers are low on average, the United States still maintains high barriers to trade in many agricultural products. For example, according to the U.S. International Trade Commission (ITC), the United States maintains basic "most favored nation" (MFN) tariffs (i.e., not affected by free trade agreements or preference programs) of 5 percent or more on 1,427 different "agricultural" products.[18] Of those, 240 products are cotton, wool, and other textiles and fabrics,[19] and 579 cover basic food products.[20] Moreover, these examples are part of a broader trend: The WTO estimates that the United States imposes, on average, tariffs on agricultural products that are substantially higher than the average U.S. tariff on non-agricultural imports. (See Chart 4.)

Outside the basic tariffs, the United States also maintains tariff rate quotas (TRQs)—under which imports are not capped, but tariffs increase significantly upon imports reaching a certain volume—on, among other things, olives; tuna; cotton products; wool fabrics; sugar products; beef; milk, cheese, and other dairy products; chocolate; various condiments and seasonings; mixes and doughs; peanut butter and peanuts; and tobacco.[21] These TRQs can vary according to whether they were negotiated at the WTO or under various free trade agreements and preference programs.

The WTO estimates that the total duties collected on these goods (i.e., taxes paid by U.S. consumers) was over $5.37 billion in 2014.[22] The vast majority of these taxes—$3.48 billion—was paid on imports

TABLE 1

U.S. Most Favored Nation Tariffs on Selected Foods

Product	Tariff
Peanuts	131.8%
Tuna	35%
Cantaloupes	29.8%
Apricots	29.8%
Various Meat	26.4%
Mixed Nuts	22.4%
Various Dairy	20%
Sardines	20%
Spinach	20%
Soybean Oil	19.1%
Baby Formula	17.5%
Watermelons	17%
Carrots	14.9%
Celery	14.9%
Okra	14.9%
Artichokes	14.9%
Brussel Sprouts	14%
Avocados	11.2 cents/kg

NOTE: The vast majority of U.S. Most Favored Nation tariffs are applied on an *ad valorem* basis (i.e., as a percentage of value), while specific duties apply to a small number of other goods, such as avocados.
SOURCE: U.S. International Trade Commission, Tariff Databases, https://www.usitc.gov/tariff_affairs/tariff_databases.htm (accessed July 21, 2016).

heritage.org

of basic food products, particularly fruits, nuts, and vegetables. These payments also do not reflect the hidden tax imposed on U.S. food consumers in the form of higher prices on American farm products due to a lack of price competition from imports.

According to a 2013 ITC report, traditional trade barriers on three food categories impose disproportionate harms on U.S. consumers:

- **Sugar.** The United States administers a highly restrictive TRQ system on imports of raw cane and refined sugar, as well as blended sugar syrups, that keeps domestic prices artificially high. The "[r]emoval of restrictions on imports of sugar would result in a welfare gain to U.S. consumers of $1,660 million over 2012–17, or an average of $277 million per year."[23]

- **Cheese.** The U.S. cheese sector also is subject to high tariffs and restrictive TRQs (131 of the dairy sector's 157 cheese products are subject to a TRQ of some sort) that limit U.S. cheese prices and inflate consumer costs. Removal of these trade barriers would increase U.S. consumer welfare by $50 million per year and lower domestic prices relative to world prices.[24]

- **Canned tuna.** Duties on tuna packed in oil are subject to a high tariff of 35 percent, and imports of canned tuna packed in water are subject to a TRQ with an over-quota duty rate of 12.5 percent. Liberalization of these barriers would increase U.S. consumer welfare by $7.7 million per year and lower domestic prices relative to world prices.[25]

Non-Tariff Barriers Undermine Free Trade. The U.S. also undermines free trade through numerous non-traditional barriers to trade that have the same or worse effects that tariffs have on U.S. consumers and the economy. Three of these barriers include:

- **Subsidies.** U.S. agricultural subsidies create a particularly harmful non-tariff barrier to imports and also distort foreign export markets. Non-market financial support for specific farm commodities, as well as broader government support for agriculture through programs like crop insurance, can artificially depress U.S. prices and thus make foreign exporters uncompetitive in the U.S. market.

  Subsidies also can allow U.S. exports to undercut global competition unfairly. For example, U.S. cotton subsidies have long been criticized for harming African cotton growers by depressing global prices. According to one recent study, a "typical small cotton farm would have gained more than $100 per year if US programs had not depressed cotton prices."[26] That might not mean much to American agribusiness, but it can make a world of difference for poor African farmers. Nevertheless, the United States continues to maintain its subsidies at the expense of both the world's poorest

What Are "Trade Remedies"?

"Anti-dumping" seeks to offset "unfair" pricing decisions made by private exporters by imposing duties on an imported product that are equal to the difference between the product's U.S. export price and either its home market price or its cost of production.

"Countervailing duties" are intended to offset government subsidies of an imported product.

"Safeguard" measures seek to protect U.S. producers from global surges of a fairly traded product.

No measures may be imposed unless the domestic industry is found to be injured (or threatened with injury) by the imports at issue. The Department of Commerce assesses dumping and subsidization, and the International Trade Commission (ITC) assesses import injury.

farmers and trade-liberalization initiatives like the WTO's "Doha Round" of global trade negotiations meant to update and expand the body's trade-liberalizing agreements.

- **Regulatory barriers.** Often, U.S. regulations promulgated under the guise of "consumer welfare" are in fact a pretext for protectionism. These barriers on agricultural inputs, food, and agricultural products hurt farmers and ranchers by increasing prices and creating supply chain problems for multinational agricultural companies that routinely source feed, seed, and product from other countries.[27] Ultimately, this hurts American consumers. Appendix 2 lists examples that reflect the trade problems posed by U.S. regulations. From onerous regulatory regimes on products like tuna, catfish, and biofuels to the controversial Country of Origin Labeling (COOL), the U.S. has used trade regulations to protect special interests at the expense of the greater economy.

- **Trade "remedies."** The United States also restricts imports of agricultural products through trade remedy measures (anti-dumping, countervailing duty, and safeguards) and related "suspension agreements" that temporarily stop cases in exchange for import price floors and/or volume limits. Although intended to remedy "unfair" and/or injurious trading practices by foreign governments and companies, trade remedies have long been recognized as unfairly discriminating against imports and U.S. consumers to the benefit of a well-connected cadre of domestic producers.[28] They impose duties on imports that are often far above—frequently over 100 percent of—the level necessary to remedy the supposed injury to the U.S. industry. The United States currently maintains 22 anti-dumping or countervailing duty orders on agricultural products,[29] as well as two suspension agreements with Mexico on sugar and tomato imports.[30] (See text box, "What Are 'Trade Remedies'"?)

Barriers on Agricultural Inputs

U.S. farmers and ranchers also suffer from traditional and non-traditional barriers on imported agricultural inputs into the United States. Some examples of these barriers include:

- **Feed.** Trade barriers on feed act as an explicit or implicit tax on American producers of poultry and livestock. For example, most favored nation (MFN) tariffs on several forms of feed with milk or milk derivatives are significant, ranging from 6.4 percent to 7.5 percent.[31] Animal feed is also subject to a restrictive TRQ.[32] According to the WTO, average tariffs on animal feeds[33] are approximately 3.5 percent by value, and U.S. importers paid almost $10 million in duties on these products in 2014.

- **Farm machinery/equipment.** Imports of the vast majority of farm machinery and equipment[34] may enter the United States duty-free except for machinery for breweries (2.3 percent[35]); machinery for the preparation of meat and poultry (2.8 percent[36]); and parts of machinery for the industrial preparation or manufacture of food or drink (2.8 percent[37]).

- **Fertilizer.** Tariffs on fertilizer imports are zero, but the United States imposes anti-dumping duties on ammonium nitrate and solid urea from Russia and Ukraine.[38] These duties have been in place since the mid-1980s and force American farmers to pay more for a critical input product and suffer from market uncertainty.[39]

These barriers on agricultural inputs, just like those on food and agricultural products, hurt U.S. consumers—in this case, farmers and ranchers.

Protectionism in U.S. Agreements and the WTO

Agricultural protectionism is also a hallmark of the U.S. government's actions in its bilateral, regional, and multilateral trade agreements.

Trade Agreement Negotiations. Although U.S. free trade agreements typically liberalize the vast majority of parties' tariffs and non-tariff barriers, the U.S. Trade Representative (USTR) historically has fought to maintain various exceptions—for example, long phaseout periods or total exemptions—for many agricultural products. Perhaps the most egregious example is the complete exclusion of sugar from additional liberalization under the U.S. free trade agreement with Australia, one of the world's largest and most economically efficient sugar producers.[40]

The TPP, regrettably, would continue this trend. In fact, despite liberalizing many U.S. agricultural tariffs immediately or within a few years after entry into force, the TPP would maintain—and in some cases would even create—new barriers to imports of supposedly "sensitive" food imports. According to the USDA, the agreement would maintain long phase-in periods for U.S. tariffs on, for example, beef (15 years); dairy products (20–30 years); processed fruit (15 years); and rice (15 years). Even more troubling, the TPP would target some of the most competitive TPP exporters by establishing restrictive TRQs on sugar, beef, and dairy imports and "special safeguard mechanisms," which restrict "surges" of fairly traded imports from these countries, for sugar and dairy. (See text box, "TPP Country-Specific Tariff Rate Quotas.")

In the WTO's Doha Round, meanwhile, the USTR refused to make either ambitious offers to or demands of other countries on farm subsidies.[41] The 2008 U.S. offer—the last, best one made to the WTO—was immediately deemed insufficient by almost all countries and was largely blamed for the collapse of talks in July 2008.[42] President Barack Obama made no effort to improve the U.S. offer, thereby ensuring the Doha Round's struggles.

Preference Programs. U.S. unilateral preference programs suffer from the same problems that beset U.S. free trade agreements when it comes to agricultural exclusions. Preference programs—the Generalized System of Preferences (GSP); African Growth and Opportunity Act (AGOA); Caribbean Basin Initiative (CBI); and Andean Trade Preference Act (ATPA)—are intended to provide duty-free access to developing country imports. Yet many agricultural products—for example, agricultural products that are subject to TRQs[43]—are completely exempt from these programs, and even eligible farm imports are subject to low caps when they become too "competitive."[44]

WTO Disputes. Despite effectively using WTO dispute settlement to challenge other members' agricultural trade barriers, the United States has repeatedly refused to comply with adverse WTO decisions against its own farm policies. This non-compliance not only exposes U.S. exports to WTO-sanctioned retaliation, but also further undermines U.S. efforts to negotiate new reductions in global farm protectionism and subsidies.[45] Prominent cases of non-compliance include the *Upland Cotton*, *COOL*, and *Tuna II* cases discussed elsewhere in this report.[46] New WTO disputes against U.S. agricultural policies could be on the horizon.[47]

Costly Impact of U.S. Agricultural Protectionism

Protectionists will claim that these trade barriers are necessary for the success of U.S. agriculture. However, these barriers harm agriculture, including America's farmers and ranchers. They also harm consumers, generate WTO-consistent retaliation against U.S. exports (often farm exports), deter the further liberalization of key foreign markets, and undermine America's diplomatic standing in the world.

Economic Impact of Protectionism. American agricultural protectionism and subsidies have numerous harmful economic effects. Specifically, they:

- **Hurt farmers and ranchers.** Trade barriers have had a dulling effect on the success that the agriculture industry could have (and the consequent benefits for customers) if markets were liberalized. Several studies have assessed

TPP Country-Specific Tariff Rate Quotas

AUSTRALIA
- Raw sugar
- Raw and refined sugar and sugar-containing products
- Creams and ice cream
- Condensed milk
- Butter
- Milk powders
- Other dairy products
- American and cheddar cheeses
- Swiss-type, European-type, and other cheeses

CANADA
- Cheese
- Skim milk powder
- Whole milk powder
- Dried yogurt, sour cream, whey, and products of milk constitutes
- Concentrated milk
- Cream, sour cream, ice cream, and milk beverages
- Butter and butter substitutes
- Other dairy products
- Sugar
- Sugar-containing products

CHILE
- Sugar and sugar-containing products

JAPAN
- Beef
- Sugar and sugar-containing products

NEW ZEALAND
- Cheese
- Skim milk powder
- Whole milk powder
- Concentrated milk
- Creams
- Butter and butter substitutes
- Organic butter
- Other dairy products

PERU
- Cheese
- Condensed and evaporated milk
- Processed dairy products
- Raw and refined sugar and sugar-containing products

VIETNAM
- Raw and refined sugar and sugar-containing products

SOURCE: Office of the U.S. Trade Representative, Trans-Pacific Partnership, Chapter 2, "National Treatment and Market Access for Goods, US Appendix A, Tariff Rate Quotas," https://ustr.gov/trade-agreements/free-trade-agreements/trans-pacific-partnership/tpp-full-text (accessed July 7, 2016).

the impact of additional liberalization of U.S. agricultural trade and subsidies and have found that both consumers and the farm sector would benefit. For example, a 2005 Congressional Budget Office (CBO) survey of five different academic studies found that each analysis predicted benefits for U.S. agriculture from full liberalization of trade in the sector.[48] Four of five studies predicted gains in terms of agricultural output, and the only one predicting negative effects still forecast continued growth of the farm sector, just at a slower rate.[49]

- **Hurt consumers, especially the poor.** Tariffs and non-tariff barriers on farm imports raise the costs of such goods for consumers, forcing American families and businesses to pay higher prices for food than they would pay in the absence of such protectionism. For example, according to a 2009 ITC study, American consumers paid up to 57 percent more than their foreign counterparts paid for heavily protected foods like milk, butter, sugar, and tuna.[50] These trade barriers are highly regressive, forcing poor consumers to expend a larger proportion of their budgets to afford daily food essentials.

- **Expose U.S. exports to retaliation.** Because U.S. agricultural protectionism often violates the United States' international obligations under the WTO agreements or bilateral/regional free trade agreements, U.S. farmers face

retaliatory tariffs on their exports when trading partners challenge U.S. trade barriers through dispute settlement. For example, due to U.S. non-compliance in the *Upland Cotton* and *COOL* disputes discussed elsewhere in this report, U.S. farmers, ranchers and other exporters faced almost $4 billion in potential retaliatory sanctions imposed by aggrieved WTO members. (See text box, "The Cost of Agricultural Protectionism: *Upland Cotton* and *COOL* Cases at the WTO.")

If the United States loses disputes regarding its agricultural trade protectionism (as it almost always does), American companies will be exposed to legal retaliation against their exports of farm products or other goods or their intellectual property. Even the threat of such retaliation is often sufficient to harm U.S. economic interests, a particularly troubling possibility given that retaliation often targets U.S. commercial sectors that have nothing to do with farm trade.

- **Impede global development.** U.S. agricultural tariffs and subsidies harm developing country exporters by denying them access to the U.S. market or depressing global prices. As a result, the U.S. measures thwart market-based global development and impoverish future potential customers (e.g., African cotton).[51] This harm is especially problematic in a time of contentious and strained U.S. foreign aid budgets.

- **Distort markets.** U.S. barriers to farm trade distort global markets and exacerbate boom-and-bust cycles both in the United States and abroad. They also promote resource hoarding by foreign trading partners who seek to keep domestic commodity prices artificially low by imposing export restrictions. These and other measures, in turn, further corrupt global agricultural markets.

- **Bust the federal budget.** Domestic agricultural trade policies are costly. U.S. farm subsidies, including just the Title I commodity subsidies and crop insurance subsidies alone, total about $15 billion per year.[52] According to the CBO's projections for the 2014 farm bill, the United States will spend $3.6 billion on the bill's trade-specific programs through 2023.[53]

Diplomatic and Foreign Policy Harms of Protectionism. Since the Administration of President Franklin D. Roosevelt, free trade has been a pillar of U.S. foreign policy, accepted and promoted by the U.S. State Departments of Republican and Democratic Presidents alike. The primary vehicle for trade liberalization has been U.S. free trade agreements,[54] which promote national security in a myriad of ways. When the United States flouts such agreements or imposes lawful trade barriers that harm key trading partners it acts against both its economic and its long-term security interests. U.S. farm subsidies and import barriers have undermined and in some cases have thwarted trade agreement negotiations in which the United States participates.

For example, it has long been argued by U.S. analysts and foreign trading partners that U.S. recalcitrance on the reduction of farm subsidies was one of the primary reasons that the Doha Round ground to a halt in 2008–2009.[55] U.S. cotton trade policy has also been a long-standing target of WTO members, particularly poorer African nations with large export potential;[56] as the WTO languishes, so does the ability of poor African cotton farmers to improve their lives and benefit U.S. consumers. More recently, a leaked summary of the TPP negotiations indicated that the United States was the only participant to refuse to eliminate its agricultural export subsidies,[57] thus further slowing the negotiations.

The Biggest Myth: Foreign Subsidies Justify Domestic Subsidies

Despite the benefits that Americans have derived from free trade policies, as well as the far-reaching costs of protectionism, the myth that removing U.S. protectionist barriers is as foolish as unilateral disarmament persists. Supporters of U.S. agricultural subsidies argue that subsidies are necessary in order to offset massive subsidization by competitors' foreign governments, particularly in the European Union, China, and Brazil.

There also are variations of this argument. For example, connected to the sugar program is the "zero-for-zero" argument, which claims the U.S. should get rid of its sugar subsidies only when other governments do the same. In addition, there are the arguments that the presence of "un-free" markets (i.e., those featuring subsidies or protectionism) justifies the United States' use of similar measures until truly "free and fair" trade is achieved.

The Cost of Agricultural Protectionism: Upland Cotton and COOL Cases at the WTO

U.S.: UPLAND COTTON[1]

The United States not only has refused to comply with several WTO rulings against its export subsidies for cotton, but also has gone so far as to pay Brazilian cotton farmers hundreds of millions of dollars in "technical assistance" to ensure that the Brazilian government would not impose almost $1 billion in retaliatory sanctions against U.S. exports and intellectual property.[2] Thus, American taxpayers continue to subsidize both U.S. and Brazilian cotton farmers simply because Congress was unwilling to get rid of improper subsidies for cotton farmers in the 2014 farm bill. In fact, a recent report from the International Centre for Trade and Sustainable Development found that the farm bill's cotton subsidies continue to distort U.S. and global markets and remain vulnerable to WTO challenge.[3]

U.S.: COOL[4]

Despite multiple WTO rulings against the U.S. Country of Origin Labeling (COOL) regime, it was only after more than seven years of litigation that the U.S. government repealed it in early 2016. As a result, U.S. exporters barely avoided lawful retaliation: Canada and Mexico each requested WTO authorization to impose approximately $3 billion ($2.4 billion by Canada and $653 million by Mexico) in retaliatory tariffs on U.S. exports of agricultural and non-agricultural goods. The COOL case thus has transitioned from an example of U.S. non-compliance to one of how the WTO system benefits the United States—in this case, U.S. consumers and exporters.

1. World Trade Organization, "United States—Subsidies on Upland Cotton," Dispute Settlement: Dispute DS267, October 30, 2014, https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds267_e.htm (accessed March 25, 2016).
2. Michael Grunwald, "Why the U.S. Is Also Giving Brazilians Farm Subsidies," *Time*, April 9, 2010, http://content.time.com/time/nation/article/0,8599,1978963,00.html (accessed March 30, 2016).
3. Christian Lau, Simon Schropp, and Daniel A. Sumner, "The 2014 U.S. Farm Bill and Its Effects on the World Market for Cotton," International Centre for Trade and Sustainable Development *Issue Paper* No. 58, September 2015, http://www.ictsd.org/themes/agriculture/research/the-2014-us-farm-bill-and-its-effects-on-the-world-market-for-cotton (accessed February 6, 2016).
4. World Trade Organization, "United States—Certain Country of Origin Labelling (COOL) Requirements," Dispute Settlement: Dispute DS384, February 22, 2016, https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds384_e.htm (accessed March 25, 2016), and World Trade Organization, "United States—Certain Country of Origin Labelling Requirements," Dispute Settlement: Dispute DS386, January 20, 2016, https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds386_e.htm (accessed March 25, 2016).
5. Mary Clare Jalonick, "U.S. Repeals Meat Labelling Law After Trade Rulings Against It," Associated Press, January 3, 2016, http://bigstory.ap.org/article/205509946eed4aeab719e7afc68bbc1e/us-repeals-meat-labeling-law-after-trade-rulings-against-it (accessed March 25, 2016).

These arguments suffer from many flaws, not the least of which is the fact that they could apply to almost any industry. The U.S. generally does not subsidize an entire industry just because another country does so. If it did, America's already unacceptable level of cronyism, protectionism, and corporate welfare would skyrocket even further.

This is not to say that foreign agricultural subsidies should be ignored; that would be a major mistake. Instead, the United States should be aggressive in fighting against foreign subsidies in order to open up market opportunities for U.S. farmers and ranchers. Creating or maintaining our own subsidies or protectionist measures inhibits these efforts and hurts American workers and businesses in the process. To address foreign agricultural subsidies, the United States therefore:

- **Should not follow the misguided lead of other countries by hurting itself.** There is overwhelming evidence that subsidies, particularly those for agriculture, distort markets and reduce economic welfare; just because one country harms its citizens is no reason for the

United States to do the same. This argument is sometimes used to justify the sugar program. This program provides clear evidence of how subsidies help a narrow special interest at the expense of consumers, other businesses and workers, and the U.S. economy. A 2006 International Trade Administration study of U.S. sugar trade barriers found that "[f]or each one sugar growing and harvesting job saved through high U.S. sugar prices, nearly three confectionery manufacturing jobs are lost." The study also found that sugar trade barriers had caused many sugar-using companies to close or move to foreign markets (e.g., Canada and Mexico) where sugar prices were lower.[58] A 2013 Iowa State University report found that getting rid of the sugar program would save consumers up to $3.5 billion per year.[59] Maintaining boondoggles just because other countries do the same is the height of irrationality.

- **Should not cede control of U.S. economic policy to other countries.** The zero-for-zero argument maintains that the United States should not unilaterally dismantle protectionist or subsidy programs. This cedes U.S. control of its own economic decisions to countries like China and Brazil. The United States should remain free to improve its economy without having to wait for other countries to do likewise.

- **Should not undermine chances for reform.** The zero-for-zero approach would likely prohibit reform in the United States or elsewhere. The WTO's Doha Round spent over a decade trying and failing to produce an agreement among members to reduce and bind their total farm subsidy levels. (Members did finally agree to eliminate agricultural export subsidies, but this outcome is far narrower than originally intended and still permits agricultural export credits like those used to support U.S. cotton exports.[60]) Many WTO members blame their own subsidization, as well as the Doha Round's failure, on U.S. farm subsidies. This stasis is proof of a "prisoners' dilemma": Because no member appears to be willing to take the political risk that being a first-mover on broad subsidy reform would entail, particularly not until the United States moves, all WTO members are doomed to inaction. Zero-for-zero would do the same.

- **Should not ignore the many tools that it has available to address the subsidies of other countries.** The zero-for-zero argument also ignores the fact that the United States could eliminate all of its subsidies and still have ample legal tools at its disposal to encourage others to follow suit. Multilateral negotiations could introduce new, binding caps on global subsidies, and the United States would be, unlike the current situation, in a superior moral and diplomatic position to demand them. Current and future U.S. free trade agreements could provide another venue for subsidy reforms. Finally, international anti-subsidy disciplines permit consultations with a foreign government over its trade-distorting farm subsidies and, if such consultations fail, investigation of the alleged subsidies and eventual imposition of remedial U.S. tariffs on imports from the offending government.[61] These consultations or investigations can occur either at the WTO (through dispute settlement) or as a part of U.S. "countervailing duty" cases.

The Related Fair Trade Myth. Another, very similar argument in favor of subsidies is also based on the notion that the U.S. regulatory burden is greater than the regulatory burdens of other nations. The only way to help offset this allegedly unfair advantage, it is argued, is to level the playing field with subsidies. This claim, however, is just as misguided as the zero-for-zero concept.

Ever-increasing U.S. farm exports demonstrate that U.S. farmers and ranchers are not at a serious competitive disadvantage globally vis-à-vis developing country exporters with lower regulatory burdens. Furthermore, most of the aforementioned arguments against zero-for-zero would apply here as well. Subsidies and import barriers are harmful, distort markets, and undermine needed reforms at home and abroad. If U.S. regulations are so onerous as to put U.S. farmers at a competitive disadvantage globally (which, as noted, does not appear to be the case), then the obvious solution is to change those regulations, not to burden U.S. families and companies with another layer of costly regulations (i.e., subsidies and protectionism).

Although the economic arguments for dismantling self-destructive trade barriers and subsidies are strong, politically powerful special interests often are able to resist such reforms. Free trade agreements, in addition to reducing foreign barriers

to U.S. exports, may create support for reductions in U.S. barriers that otherwise would be politically difficult to achieve.

What Needs to Be Done

The United States government should undertake a two-stage approach that will ensure reform of the U.S. trade system and help to reform global trade barriers and subsidies in agriculture. These solutions would help farmers and ranchers as they seek more opportunities to reach new markets with their goods.

Stage 1: Get our own house in order. There is no doubt that other countries are, much like the United States, heavily distorting global agricultural markets through trade barriers and subsidies. However, the solution to this problem is not harmful proposals like zero-for-zero, but rather a more calculated and principled approach to the problem that first addresses U.S. farm policies. This first stage should include some, if not all, of the following reforms:

- **Unilateral liberalization of traditional tariff barriers.** The U.S. Congress should pass legislation eliminating tariffs and TRQs on agricultural products and inputs. Doing so would benefit consumers by purging a regressive tax on food while instantly eliminating the complexity of the current U.S. tariff system. Farmers and ranchers face few such taxes on their main inputs, and there is no reason why their customers do not deserve the same benefits.

  If the total elimination of tariff barriers proves to be politically impossible, then Congress should at least enact the following reforms:

  1. Streamline the U.S. tariff structure so that all tariffs on food products are low and uniform across countries, or

  2. Reform the GSP to provide long-term, duty-free access for food imports from least developed countries.

- **Full compliance with international trade obligations.** The USTR should work with Congress and the executive branch to adopt policies that would bring the United States into full compliance with its WTO obligations. This would include

  1. Legislation to reform or eliminate U.S. export subsidies for cotton and

  2. Regulatory or legislative reform of the "dolphin safe" tuna labeling system to ensure that all tuna, regardless of source, is subject to the same certification procedures and that the system incorporates the latest evidence regarding safe fishing methods.

  The USTR would then notify the WTO of its full compliance, thereby ending years of costly WTO litigation.

- **Assessment and elimination of non-tariff barriers.** Congress or the President should direct the U.S. ITC to conduct a general fact-finding investigation, permitted under Section 332 of U.S. trade law,[62] of subsidies and non-tariff barriers (including trade-remedy measures) and their effects on the U.S. economy and trade. This report should then be used as a baseline for reforming or eliminating these measures, but any such reforms would necessarily include:

  1. Immediate elimination of remaining export subsidies (i.e., the GSM-102 export credit guarantee program[63]);

  2. Replacement of the various U.S. labeling regimes with a uniform, permissive, non-discriminatory system based on internationally accepted standards; and

  3. Reform of U.S. trade-remedy laws so that any final determination must consider consumer interests (a "public interest" standard, similar to the one now in place in New Zealand[64]) and must ensure that assessed duties are no greater than necessary to cease causing injury to the U.S. industry (a "lesser duty rule").[65]

Stage 2: Go on offense. Unilateral reform of U.S. agricultural trade policy not only would produce tangible economic benefits, but also would put the United States and American farmers and ranchers in a much better position to confront other countries' trade barriers and subsidies aggressively. Although the United States reportedly has amplified its efforts in these areas, more should be done. These efforts

will not be effective, however, if the United States does not have the moral authority to pursue needed global reforms:

- **Revise U.S. free trade agreement negotiating objectives for food.** As a first step, Congress should revise Trade Promotion Authority (Public Law 114–26) to include new "Principle Negotiating Directives" for trade in agriculture that expressly prohibit the exemption of certain commodity groups from tariff and non-tariff liberalization; ensure that any remaining barriers are channeled into low, transparent tariffs; and require the USTR to confront members at the WTO more aggressively. Although the USTR has the implied authority under current law to achieve these objectives, they should be expressly stated in the law, thereby binding future Administrations.

- **Include more vigorous demands and offers in WTO negotiations.** The United States, as part of a new "post-Doha" WTO negotiating round, should dramatically improve its offer to reduce trade-distorting U.S. farm subsidies. Doing so would eliminate one of the main roadblocks to robust multilateral trade negotiations while permitting the United States to make more aggressive demands that other WTO members likewise eliminate their subsidies and other barriers to farm trade. It also would re-establish the United States as a global leader in trade-liberalization initiatives—a status regrettably relinquished over the past decade.

- **Launch a new voluntary trade agreement on barriers to trade in food.** If Doha's demise demonstrates that broad multilateral negotiations are not currently feasible, the United States should consider launching a new "plurilateral" (i.e., voluntary participation among a subset of WTO members) trade agreement on barriers to trade in food. Such a deal could be narrow in scope like the WTO's Information Technology Agreement and cover only food tariffs, or it could be broader like the Trade in Services Agreement (TiSA) and cover tariffs, non-tariff barriers, health/safety issues, and subsidies. While each approach has potential costs and benefits (e.g., a narrow deal could be done quickly but would omit important non-tariff barriers), the simple elimination of tariffs would be economically beneficial and relatively easy politically.

- **Increase trade barrier and subsidy monitoring, reporting, and (if necessary) litigation.** Although the United States has many mechanisms with which to assess and attack global farm trade barriers and subsidies, these mechanisms are not being fully utilized. On the assessment front, the USTR should expand its annual National Trade Estimate (NTE),[66] both to include more detailed information on global agricultural trade barriers and to address trade-distorting domestic subsidies (as opposed to only export subsidies) and trade-remedy measures. The NTE also should be supplemented with an ITC Section 332 report on the economic effects of these agricultural trade barriers, including commodity-specific analyses. (The ITC regularly conducts *ad hoc* analyses on a country-specific and commodity-specific basis but does not undertake an annual market assessment.)

  The United States should rely on these analyses to be far more aggressive at the WTO. First, the United States should be more public and forceful in the WTO's regular work—in the Committees on Agriculture, Subsidies and Countervailing Measures and Sanitary and Phytosanitary Measures—with respect to members' farm trade barriers and unwillingness to participate fully in the WTO's mandatory transparency and reporting requirements. (Members are required to provide periodic reports on various trade barriers, but many are unwilling to do so on a regular basis.) The United States recently took this more aggressive approach with China; it should do the same with other large WTO members. Members' continued refusal to abide by their WTO obligations should be mentioned specifically in the NTE.

  Second, the United States should stop being so hesitant to litigate agricultural trade barriers and subsidies through WTO dispute settlement. As noted, the United States has been very successful in achieving the elimination of farm trade barriers through WTO disputes but has filed very few cases against members' farm subsidies, despite substantial increases in these

measures over the past few years. The WTO provides the optimal venue for these disputes because it permits the United States to challenge subsidies that harm U.S. agribusiness interests not only in the domestic market, but also in foreign markets, including the market of the subsidizing member. Domestic countervailing duty investigations provide another venue for anti-subsidy challenges but isolate the injury review to the U.S. market (thus requiring substantial foreign imports) and often result in duties on imports (and thus taxes on consumers) that far exceed the level of subsidization actually occurring.[67]

Conclusion

Despite decades of liberalization through successes like NAFTA and the WTO, many costly, trade-distorting subsidies and barriers remain in place both in the United States and abroad. Reform is necessary, and experience here and elsewhere shows that the elimination of these non-market measures would not destroy the U.S. farm sector; in fact, the sector would grow even stronger.

Congress should enact reforms that convert the U.S. farm trade system into one that better reflects free-market principles, limits government intervention on behalf of well-connected cronies, and offers a broader array of benefits to U.S. consumers and the economy. These reforms also would give the United States the moral authority to demand more of its trading partners through trade negotiations and dispute settlement. Trade has provided immense benefits to the U.S. and global agricultural sectors, but the job is not yet complete.

APPENDIX 1

U.S. Fruit and Vegetables Suppliers

	In Millions of Dollars		Share of Total Import Value		
	2001	2011	2001	2011	Leading Product Imports of Fruits and Vegetables in 2011
Mexico	2,764	7,873	31%	36%	Tomatoes, avocados, peppers, grapes, cucumbers, melons, berries, onions, cucumbers, asparagus, lemons, vegetables
Canada	1,242	2,628	14%	12%	Potatoes, tomatoes, peppers, cranberries, cucumbers, mushrooms, beans, carrots, fresh/preserved vegetables/fruits
China	240	1,670	3%	8%	Fruit juices, citrus, processed/frozen fruit and vegetables/ fruits, onions, garlic, preserved mushrooms, stonefruit
Chile	708	1,649	8%	8%	Grapes, cranberries, apples, avocados, citrus, stonefruit, berries, fruit juices
Costa Rica	621	1,012	7%	5%	Pineapples, bananas, orange juice, melons, tropical and preserved fruits/vegetables
Guatemala	331	947	4%	4%	Bananas, pineapples, and tropical fruits, preserved and frozen fruits/vegetables, melons, tomatoes, beans, and berries
Peru	108	706	1%	3%	Asparagus, preserved/frozen vegetables, grapes, onions, avocados, tropical fruits
Ecuador	314	619	4%	3%	Bananas, tropical fruits, fruit juice, peas and beans, preserved fruits/vegetables
Argentina	193	477	2%	2%	Fruit juices, berries, olives, strawberries, grapes, garlic
Thailand	166	437	2%	2%	Pineapples, processed fruits, beans, fruit juices, tropical/preserved fruits/vegetables
Brazil	125	398	1%	2%	Orange juice and other fruit juices, grapes, tropical fruits and vegetables
Spain	363	381	4%	2%	Olives, mandarins, peppers, fruit juices, cucumbers, mushrooms, stonefruit, citrus fruit and juice, preserved foods
Honduras	165	293	2%	1%	Bananas, melons, pineapples, cucumbers, beans fresh/preserved fruits/vegetables
Philippines	155	262	2%	1%	Fresh pineapples and juice, bananas, tropical fruits/vegetable, root vegetables
Colombia	204	246	2%	1%	Bananas, pineapples, preserved/frozen fruits/vegetables, tropical products, fruit juices, beans, lemons, potatoes
Subtotal	7,700	19,598	87%	91%	
All Other	**1,123**	**1,992**	**13%**	**9%**	
Total	**8,823**	**21,590**	**100%**	**100%**	

SOURCE: Renee Johnson, "The U.S. Trade Situation for Fruit and Vegetable Products," Congressional Research Service *Report for Congress*, January 15, 2014, p. 4, https://www.fas.org/sgp/crs/misc/RL34468.pdf (accessed January 13, 2016).

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Appendix 2: Examples of Regulatory Barriers

COOL. The United States implemented mandatory Country of Origin Labeling (COOL) requirements that imposed burdensome new rules on most imports, including meat from Canada and Mexico.[68] Among COOL's many rules, eligibility for the coveted designation of "U.S. origin" could be derived only from an animal that was born, raised, and slaughtered in the United States. For many U.S., Canadian, and Mexican ranchers and meat-packers that share grazing land across borders and have integrated supply chains, compliance with COOL's onerous system was impossible. The USDA estimated that the COOL regime imposed $2.6 billion in implementation costs on U.S. producers, packers, and retailers ($1.3 billion for beef alone); resulted in economic welfare losses totaling $8.07 billion for the U.S. beef industry and $1.31 billion for the pork industry; and, despite some "small" economic benefits for consumers in the form of increased information, would "result in an estimated $212 million reduction in consumers' purchasing power" by 2019.[69]

In December 2008, Canada and Mexico challenged the COOL regime at the WTO, arguing that the COOL standard deviates from international labelling standards, does not fulfill a legitimate regulatory objective, and would exclude all beef or pork produced from livestock exported to but slaughtered in the United States.[70] In May 2015, the WTO Appellate Body ruled against the United States in its final appeal and agreed with Canada and Mexico about the discriminatory effect of the original and since-modified COOL regimes. After more than seven years of litigation and the threat of WTO-sanctioned retaliation by Mexico and Canada, the United States finally repealed the COOL system in early 2016.[71]

Tuna. Along with import tariffs, the United States also maintains an onerous regulatory regime that establishes a voluntary "dolphin-safe" label on tuna products and conditions access to that label on the provision of documentary evidence that varies depending on the area where and the method by which the tuna is caught. The regime has resulted in an effective ban of tuna imports from Mexico[72] and has been widely criticized as both protectionist and misleading because it arbitrarily bans the sale of dolphins caught by environmentally sound methods.[73]

Mexico brought a WTO dispute settlement complaint against the regime (*U.S.–Tuna II*) in 2008, and the WTO Appellate Body has repeatedly found that the regime is in fact discriminatory and thus WTO-inconsistent. Mexico now could be authorized to retaliate against U.S. exports to the tune of billions of dollars.

Biofuels. Although U.S. import duties on ethanol have been lifted, the Renewable Fuel Standard (RFS) still provides the U.S. biofuels industry with ample opportunity to restrict foreign competition. For example, in March 2015, the U.S. biodiesel industry challenged a U.S. Environmental Protection Agency (EPA) decision to permit Argentinian imports to qualify as RFS-compliant.[74] An EPA decision to side with the domestic industry would effectively ban Argentinian imports from the U.S. market.[75]

Catfish and Shrimp. Although safety inspections for imported seafood are typically undertaken by the U.S. Food and Drug Administration, the 2008 farm bill was subjected to a new and more onerous system administered by the USDA. An earlier Heritage Foundation study concluded that the program would have serious trade implications because it would harm foreign catfish exporters, reduce competition, raise prices for consumers, and subject U.S. exporters—likely in industries other than catfish—to retaliation.[76]

The U.S. Government Accountability Office concluded that the program is unnecessary and would not improve safety as alleged, and the program is opposed by both the Obama Administration and many Members of Congress. Nevertheless, as a result of lobbying by a few key Senators representing domestic catfish special interests, the 2014 farm bill did not kill the program.[77] The USDA issued its final rule in November 2015 with an effective date of March 1, 2016.[78] Some have suggested that the program, instead of being repealed, could be expanded to shrimp imports.[79] Catfish and shrimp imports have long been the subject of U.S. protectionism and currently face significant duties under U.S. trade-remedy laws.

APPENDIX 3

WTO Proceedings Initiated by U.S. (Page 1 of 2)

No.	**Subject and Title of Complaint** (complainant in parentheses)	Date Initiated	Result
DS3	South Korea—Measures Concerning the Testing and Inspection of Agricultural Products (U.S.)	April 4, 1995	Consultations
DS5	South Korea—Measures Concerning the Shelf-Life of Products (U.S.)	May 3, 1995	MAS
DS13	European Communities*—Duties on Imports of Grains (U.S.)	July 19, 1995	MAS
DS16	European Communities—Regime for the Importation, Sale, and Distribution of Bananas (Guatemala, Honduras, Mexico, and U.S.)	September 28, 1995	MAS
DS21	Australia—Measures Affecting the Importation of Salmonids (U.S.)	November 20, 1995	MAS
DS26	European Communities—Measures Concerning Meat and Meat Products (Hormones) (U.S.)	January 26, 1996	W—Compliance (MOU)
DS27	European Communities—Regime for the Importation, Sale, and Distribution of Bananas (Ecuador, Guatemala, Honduras, Mexico, and U.S.)	February 5, 1996	W—Compliance (MAS)
DS35	Hungary—Export Subsidies in Respect of Agricultural Products (Argentina, Australia, Canada, New Zealand, Thailand, and U.S.)	March 27, 1996	MAS
DS41	South Korea—Measures Concerning Inspection of Agricultural Products (U.S.)	May 24, 1996	Consultations
DS74	Philippines—Measures Affecting Pork and Poultry (U.S.)	April 1, 1997	MAS
DS76	Japan—Measures Affecting Agricultural Products (U.S.)	April 7, 1997	W—Compliance (MAS)
DS101	Mexico—Anti-Dumping Investigation of High-Fructose Corn Syrup (HFCS) from the U.S. (U.S.)	September 4, 1997	Consultations
DS102	Philippines—Measures Affecting Pork and Poultry (U.S.)	October 7, 1997	MAS
DS103	Canada—Measures Affecting the Importation of Milk and the Exportation of Dairy Products (U.S.)	October 8, 1997	W—Compliance (MAS)
DS104	European Communities—Measures Affecting the Exportation of Processed Cheese (U.S.)	October 8, 1997	Consultations
DS132	Mexico—Anti-Dumping Investigation of High-Fructose Corn Syrup (HFCS) from the U.S. (U.S.)	May 8, 1998	W—Non-compliance
DS158	European Communities—Regime for the Importation, Sale and Distribution of Bananas (Guatemala, Honduras, Mexico, Panama, and U.S.)	January 20, 1999	MAS
DS161	South Korea—Measures Affecting Imports of Fresh, Chilled, and Frozen Beef (U.S.)	February 1, 1999	W—Compliance (Implementation)
DS203	Mexico—Measures Affecting Trade in Live Swine (U.S.)	July 10, 2000	Consultations
DS210	Belgium—Administration of Measures Establishing Customs Duties for Rice (U.S.)	October 12, 2000	MAS
DS223	European Communities—Tariff-Rate Quota on Corn Gluten Feed from the U.S. (U.S.)	January 25, 2001	Consultations
DS245	Japan—Measures Affecting the Importation of Apples (U.S.)	March 1, 2002	W—Compliance (MAS)
DS275	Venezuela—Import Licensing Measures on Certain Agricultural Products (U.S.)	November 7, 2002	Consultations

KEY
Consultations: Case did not result in litigation before a panel or in a "mutually agreed solution"
MAS: Mutually agreed solution between disputants, thereby resolving dispute
MOU: Memorandum of understanding between disputants, thereby resolving dispute.
W—Compliance: U.S. won dispute (affirmative panel or appellate body ruling find measures at issue to violate WTO rules), and respondent member complied with the ruling by (1) implementing the ruling by reforming or eliminating the offending measure(s), or (2) coming to a MAS or MOU with the U.S.
W—Non-Compliance: U.S. won dispute, but the respondent member refused to comply with the panel or appellate body ruling

* Until 2009, "European Communities" was the WTO's term for the European Union.

APPENDIX 3

WTO Proceedings Initiated by U.S. (Page 2 of 2)

No.	**Subject and Title of Complaint** (complainant in parentheses)	Date Initiated	Result
DS276	Canada—Measures Relating to Exports of Wheat and Treatment of Imported Grain (U.S.)	December 17, 2002	W—Compliance (Implementation)
DS291	European Communities—Measures Affecting the Approval and Marketing of Biotech Products (U.S.)	May 13, 2003	W—Non-compliance (retaliation suspended)
DS295	Mexico—Definitive Anti-Dumping Measures on Beef and Rice (U.S.)	June 16, 2003	W—Compliance
DS338	Canada—Provisional Anti-Dumping and Countervailing Duties on Grain Corn from the U.S. (U.S.)	March 17, 2006	Consultations
DS430	India—Measures Concerning the Importation of Certain Agricultural Products from the U.S. (U.S.)	March 6, 2012	W—Compliance ongoing
DS489	China—Measures Related to Demonstration Bases and Common Service Platforms Programmes (U.S.)	February 11, 2015	Panel proceedings

KEY

Consultations: Case did not result in litigation before a panel or in a "mutually agreed solution"
MAS: Mutually agreed solution between disputants, thereby resolving dispute
MOU: Memorandum of understanding between disputants, thereby resolving dispute.
W—Compliance: U.S. won dispute (affirmative panel or appellate body ruling find measures at issue to violate WTO rules), and respondent member complied with the ruling by (1) implementing the ruling by reforming or eliminating the offending measure(s), or (2) coming to a MAS or MOU with the U.S.
W—Non-Compliance: U.S. won dispute, but the respondent member refused to comply with the panel or appellate body ruling

* Until 2009, "European Communities" was the WTO's term for the European Union.
SOURCE: World Trade Organization, Dispute Cases Database, https://www.wto.org/english/tratop_e/dispu_e/find_dispu_cases_e.htm#results (accessed January 13, 2016).

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ENDNOTES: SECTION 7

1. This report does not address Title III of the farm bill (the "trade" title), which covers programs like international food aid and export market development. See Renee Johnson and Jim Monke, "What Is the Farm Bill?" Congressional Research Service *Report for Congress*, July 23, 2014, https://www.fas.org/sgp/crs/misc/RS22131.pdf (accessed July 7, 2016).
2. U.S. Department of Agriculture, Economic Research Service, "U.S. Agricultural Trade: Overview," last updated May 20, 2016, http://www.ers.usda.gov/topics/international-markets-trade/us-agricultural-trade.aspx (accessed July 7, 2016).
3. U.S. Department of Agriculture, Economic Research Service, "Value of U.S. Agricultural Trade, by Calendar Year," updated March 31, 2016, http://www.ers.usda.gov/data-products/foreign-agricultural-trade-of-the-united-states-(fatus)/calendar-year.aspx (accessed July 7, 2016).
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5. U.S. Department of Agriculture, Foreign Agricultural Service, "Global Agricultural Trade System (GATS) Online," searchable databases, updated January 2016, http://apps.fas.usda.gov/gats/default.aspx (accessed July 7, 2016).
6. Johnson and Monke, "The Farm Bill: An Overview," p. 12.
7. See, e.g., Steven Zahniser and John Link, eds., "Effects of North American Free Trade Agreement on Agriculture and the Rural Economy," U.S. Department of Agriculture, Economic Research Service, *Agriculture and Trade Report* No. WRS-0201, July 2002, http://www.ers.usda.gov/publications/wrs-international-agriculture-and-trade-outlook/wrs0201.aspx (accessed July 7, 2016); Larry Sanders, Kirby Moulton, Mechel Paggi, and Barry Goodwin, "The GATT Uruguay Round and the World Trade Organization: Opportunities and Impacts for U.S. Agriculture," http://www.ces.ncsu.edu/depts/agecon/trade/seven.html (accessed July 7, 2016); and U.S. Trade Representative, "America and the World Trade Organization," http://www.iatp.org/files/America_and_the_World_Trade_Organization.htm (accessed July 7, 2016).
8. The 20 U.S. FTA partners are Australia, Bahrain, Canada, Chile, Colombia, Costa Rica, the Dominican Republic, El Salvador, Guatemala, Honduras, Israel, Jordan, Mexico, Morocco, Nicaragua, Oman, Panama, Peru, Singapore, and South Korea.
9. U.S. Department of Agriculture, "U.S. Agriculture Benefits from Trade Agreements," April 2015, http://www.fas.usda.gov/sites/default/files/2015-04/us_ag_benefits_from_trade_agreements_apr_2015.pdf (accessed July 7, 2016).
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13. Caroline Freund and Sarah Oliver, "TPP Tradeoffs: The United States and Japan," Peterson Institute for International Economics, November 11, 2015, http://blogs.piie.com/trade/?p=500 (accessed July 7, 2016).
14. Ibid.
15. Ibid.
16. U.S. Department of Agriculture, Foreign Agricultural Service, "TPP: Benefits for U.S. Agricultural Products."
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18. U.S. International Trade Commission, "Harmonized Tariff Schedule," Chapters 01–24, 29, 33, 35, 38, 41, 43, and 50–53, https://hts.usitc.gov/current (accessed July 7, 2016). Products grouped at the eight-digit harmonized tariff schedule (HTS) level.
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30. The United States recently negotiated a "suspension agreement" with the Mexican government related to recent anti-dumping and countervailing duty investigations of sugar from Mexico. Instead of duties, the deal establishes minimum import prices for and a total cap on Mexican sugar. It has been roundly criticized by U.S. consumer groups as curtailing sugar imports, causing higher prices, and thereby harming the businesses and workers that use sugar as an input. In fact, the ITC approved the suspension agreement precisely because it would limit supply and "stabilize" prices at their above-market levels: "As a result of the volume and price restrictions in the suspension agreements, the record indicates that domestic sugar producers will be able to charge higher prices" than previous years, thus improving domestic producers' revenues. U.S. International Trade Commission, *Sugar from Mexico*, Investigation Nos. 704-TA-1 and 734-TA-1 (Review), Publication No. 4523, April 2015, p. 37, http://www.usitc.gov/publications/701_731/pub4523.pdf (accessed July 7, 2016). The United States maintains a similar "suspension agreement" with Mexico on imported tomatoes.
31. U.S. International Trade Commission, "Harmonized Tariff Schedule 23099022 (7.5 percent)," 2016 HTSA Basic Edition, https://hts.usitc.gov/?query=23099022 (accessed July 7, 2016); U.S. International Trade Commission, "Harmonized Tariff Schedule 23099024 (7.5 percent)," 2016 HTSA Basic Edition, https://hts.usitc.gov/?query=23099024 (accessed July 7, 2016); U.S. International Trade Commission, "Harmonized Tariff Schedule 23099028 (6.4 percent)," 2016 HTSA Basic Edition, https://hts.usitc.gov/?query=23099028 (accessed July 7, 2016); U.S. International Trade Commission, "Harmonized Tariff Schedule 23099042 (7.5 percent)," 2016 HTSA Basic Edition https://hts.usitc.gov/?query=23099042 (accessed July 7, 2016); U.S. International Trade Commission, "Harmonized Tariff Schedule 23099044 (7.5 percent)," 2016 HTSA Basic Edition, https://hts.usitc.gov/?query=23099044 (accessed July 7, 2016); and U.S. International Trade Commission, "Harmonized Tariff Schedule 23099048 (80.4 cents/kg + 6.40 percent)," 2016 HTSA Basic Edition, https://hts.usitc.gov/?query=23099048 (accessed July 7, 2016).
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35. U.S. International Trade Commission, "Harmonized Tariff Schedule, 84384000," 2016 HTSA Basic Edition, https://hts.usitc.gov/?query=84384000 (accessed July 7, 2016).
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37. U.S. International Trade Commission, "Harmonized Tariff Schedule, 84389090," 2016 HTSA Basic Edition, https://hts.usitc.gov/?query=84389090 (accessed July 7, 2016).
38. U.S. International Trade Commission, "Research Tools," http://www.usitc.gov/trade_remedy/trade_research_tools (accessed July 7, 2016).
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40. See Aaron Lukas, "A Sticky State of Affairs: Sugar and the U.S.–Australia Free-Trade Agreement," Cato Institute *Free Trade Bulletin* No. 9, February 9, 2004, http://www.cato.org/publications/free-trade-bulletin/sticky-state-affairs-sugar-us-australia-free-trade-agreement (accessed July 7, 2016). U.S. free trade agreements with Chile, Morocco, Bahrain, Central America (DR–CAFTA), Oman, Peru, Korea, and Colombia also exclude sugar products from complete liberalization. Other U.S. free trade agreements contain carve-outs for beef; various dairy products; vegetables like kale, carrots, spinach, and onions; and syrups and chocolate. As noted, the United States also has negotiated commodity-specific TRQs under various free trade agreements.
41. The WTO Agriculture Agreement permits certain types of subsidies based on complex formulas and a member's level of development, but all farm subsidies remain subject to the WTO's Agreement on Subsidies and Countervailing Measures, which authorizes two types of anti-subsidy actions: (1) national countervailing duty cases against subsidized imports that injure a member's domestic industry or (2) multilateral WTO disputes against members' subsidy programs that are "prohibited" (e.g., export subsidies) or cause "adverse effects" in a complaining member's market or elsewhere. Subsidies that conformed to the Agriculture Agreement were exempt from national and multilateral anti-subsidy disciplines during the Agriculture Agreement's implementation period, but this "peace clause" expired in 2003. As noted, the United States has imposed countervailing duties on many agricultural products, and five challenges to members' farm subsidy schemes have been filed at the WTO.
42. Bruce Einhorn and Mehule Srivastava, "WTO: Why India and China Said No to U.S.," Bloomberg, July 30, 2008, http://www.bloomberg.com/bw/stories/2008-07-30/wto-why-india-and-china-said-no-to-u-dot-s-dot-businessweek-business-news-stock-market-and-financial-advice (accessed July 7, 2016).
43. U.S. Code, Title 19, Section 2463(b)(3).
44. Sallie James, "The U.S. Generalized System of Preferences: Helping the Poor, But at What Price?" Cato Institute *Trade Policy Analysis* No. 43, November 16, 2016, http://object.cato.org/sites/cato.org/files/pubs/pdf/tpa-043.pdf (accessed July 7, 2016).
45. The WTO Agriculture Agreement permits certain types of subsidies based on complex formulas and a member's level of development, but all farm subsidies remain subject to the WTO's Agreement on Subsidies and Countervailing Measures (see note 42).
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KEY POINTS:
Eliminating and Reducing Regulatory Obstacles in Agriculture

Brief Overview

Too often federal agricultural policy focuses on helping farmers through massive government programs. rather than determining how government itself creates problems for farmers and ranchers. Regulations, in particular, make agricultural production and innovation more difficult by limiting farmers' and ranchers' ability to address agricultural risk, work their land, and meet market needs. The list of regulatory obstacles for agricultural producers is extensive. However, there are some types of regulations that are particularly troubling.

Key Regulatory Obstacles in Agriculture

Federal regulation is often based on unsound science and data, and agencies develop regulations that extend beyond the scope of the underlying statute. For regulated entities, such as farmers and ranchers, these unnecessary regulations can impose major compliance costs and other significant burdens. Some of the biggest regulatory obstacles affecting agriculture include:

- **Overbroad application of Title VII of Dodd–Frank.** In 2010, The Dodd–Frank Wall Street Reform and Consumer Protection Act (Dodd–Frank) was enacted to address the 2008 financial crisis. Yet, this law is being interpreted broadly by the Commodities Futures Trading Commission (CFTC) to cover businesses that had nothing to do with the 2008 crisis, including agricultural producers.

  The use of commodity derivatives is extremely critical for farmers and is undermined by convoluted and restrictive regulations. For example, the CFTC is making decisions as to what is the proper nature of hedging transactions, as if anyone could (or should) evaluate the variety of ways that risk can be effectively managed. These regulations will make hedging more difficult and costly.

- **Federal overreach in addressing nonpoint sources of water pollution.** The Environmental Protection Agency (EPA) is ignoring the critical state role in addressing water quality and instead seeking to expand its own power. This extension of federal control is evidenced by the EPA's efforts to address water quality in the Chesapeake Bay, where the agency is seeking to effectively regulate agricultural runoff and other nonpoint sources of pollution (pollution coming from multiple sources over a wide area, as opposed to pollution from a point source that is a specific and identifiable source). There is even concern that the EPA could determine where farming is allowed.

- **EPA's and Corps' land- and water-grab through the "Waters of the United States" Rule.** On June 29, 2015, the EPA and the Army Corps of Engineers (Corps) published their final rule defining what waters are covered under the Clean Water Act (CWA). Under the CWA, the federal government has jurisdiction over "navigable waters," which is further defined as "the waters of the United States, including the territorial seas." This rule seeks to regulate almost any type of water, including certain man-made ditches and so-called waters that are dry land most of the time. This vast overreach is consistent with past attempts by the agencies to grab power through broadly interpreting the definition of "waters of the United States."

  For property owners, including farmers and ranchers, this regulatory overreach is problematic. If a water is covered under the law (i.e., a jurisdictional water), property owners could be required to secure costly and time-consuming

permits to take actions that impact these waters. Since there will be more jurisdictional waters, there will be a need to secure more CWA permits. Consequently, property owners, such as farmers, who want to use their property for normal business activities will have to secure more permits. They may choose not to engage in ordinary activities because of the time and cost of securing a permit.

- **ESA's failure to protect species and disrespect for property rights.** In 1973, the Endangered Species Act (ESA) was enacted into law to promote the conservation of species. Unfortunately, the law has failed and, in so doing, has trampled on property rights. There are 1,585 domestic species and 661 foreign species on the endangered species list (includes both threatened and endangered species). In the more than 40 years of the ESA, only 33 species have been "recovered" and delisted from the endangered species list.

  Society has determined that protecting species is an important objective. Therefore, the costs of protecting species should be paid by society as a whole, not by individual property owners. Property owners need to be compensated for restrictions placed upon the use of their land. Instead, the federal government expects property owners, who are merely using their land without harming others, to change how they use their property.

- **Federal government's poor management of public land.** Federal land is important, particularly for ranchers, many of whom draw their livelihood from use of public lands. According to the Public Lands Council, "Nearly 40% of western cattle herd and about 50% of the nation's sheep herd spend time on public lands."

  The grazing lands are a sliver of the greater federal government estate of 640 million acres, in addition to millions of subsurface acres. Federal land management has a unique impact on farmers and ranchers in the western United States where nearly 47 percent of federal lands are located. Indeed, the federal government owns roughly 85 percent of Nevada, 64 percent of Utah, and 61 percent of Idaho, topping the ranks for the federal ownership among states in the continental U.S.

  However, the federal government does not manage this land well. For example, as explained by the Property and Environment Research Center, "the federal grazing system may be resulting in poor rangeland conditions. According to the BLM, more than 21 percent of BLM grazing allotments are not meeting or making significant progress toward meeting the agency's own standards for land health." From 2009–2013, federal lands held by the BLM and the Forest Service also lost taxpayers nearly $2 billion a year on average, while the state trust lands evaluated in a recent Property and Environment Research Center study earned taxpayers $200 million.

- **Undermining of genetically engineered food through mandatory labeling.** Despite the science and the safe and wide use of genetically engineered crops, Congress passed legislation requiring the mandatory labeling of genetically engineered food. On July 29, 2016, President Obama signed the bill into law.

  Mandatory labeling has been framed as a pro-consumer issue; yet, it is exactly the opposite. Mandatory labeling could be harmful to consumers by misleading them into thinking that genetically engineered food is unsafe for consumption. It uses the force of government to compel companies to disclose information that has no bearing on health or safety. A government-mandated label will also send a signal to the consumer, whether intended or not, that the government has determined that genetically engineered food is dangerous or less nutritious.

Policy Recommendations

- **Prohibit the application of Title VII of Dodd–Frank to farmers.** This regulatory burden will make it more difficult for agricultural producers and possibly discourage the use of commodities markets to manage risk.

- **Protect the ability of states, communities, and individuals to manage water resources.** Water bodies are unique and so are their water quality issues. Therefore, a federal one-size-fits-all approach is bound to fail. States, local

communities, and private citizens are closer to the problems facing local water bodies than the federal government and should be empowered to develop solutions to these problems. New ideas, including water trading markets, will develop and provide the best solutions.

- **Prohibit federal efforts to regulate (directly or indirectly) nonpoint sources of pollution.** Federal overreach to effectively regulate agricultural runoff and other nonpoint sources of pollution should be prohibited. States, local communities, and private citizens can address challenges to water quality, such as any problems that may exist in the Chesapeake Bay.

- **Repeal the EPA and Army Corps's "Waters of the United States" Rule.** While there are legal challenges pending, Congress needs to repeal this rule. This is the best way to stop a power grab that would undermine property rights and would also block another attempt by the EPA to ignore the state role in water policy. Ultimately though, Congress needs to define "navigable waters." Any definition should generally limit federal authority to regulate traditional "navigable waters" only.

- **Reform the Endangered Species Act.** There are many reforms that need to be made to the ESA, from improving the scientific analysis of designations to developing a better listing process. The law should be less of a regulatory scheme and more of a government program with clear appropriations for all of the government's actions, including covering any costs imposed on property owners. Regulation can hide the true costs of government action. The costs of all ESA-related efforts should be accounted for in a transparent manner.

- **Transfer management of federal lands to states and private citizens.** The responsibility to manage public lands should be shifted from the federal government to states and private citizens. Both groups are in a much better position to manage public land, and local control should benefit ranchers who seek a system more responsive to their needs. Most importantly, as a matter of principle, the federal government should not be such a significant land owner; indeed, even states should not be massive land owners. Land, in general, should be in the hands of private citizens.

- **Repeal the federal law mandating the labeling of genetically engineered food.** Congress should repeal the recently passed and misguided federal mandatory labeling law. If the law is repealed, as it should be, the more complicated question is whether the federal government should preempt states, as the federal mandatory labeling law does. There is a strong case for preemption that goes beyond the standard concern over a patchwork of state laws. For example, states with mandatory labeling requirements would be using the power of government to compel speech that will likely be misleading to consumers. States should not force companies to engage in speech that is not justified by the science.

SECTION 8:
Eliminating and Reducing Regulatory Obstacles in Agriculture

Daren Bakst

Too often, federal agricultural policy focuses on helping farmers through massive programs rather than on determining how government itself creates problems for farmers and ranchers. Regulations, in particular, make agricultural production and innovation more difficult by limiting farmers' and ranchers' ability to address agricultural risk,[1] work their land, and meet market needs.

In general, federal regulation is often based on unsound science and data, and agencies develop regulations that extend beyond the scope of the underlying statute. For regulated entities, such as farmers and ranchers, these unnecessary regulations can impose major compliance costs and other significant burdens. They can also discourage a party from taking an action (e.g., using land for ordinary business activities) due to fear of being out of compliance or because the regulation prohibits the action or makes it cost prohibitive. Regulatory costs are borne not merely by those parties who are regulated, but also by third parties such as consumers who may have to pay higher prices for goods and services.

The list of regulatory obstacles for agricultural producers is extensive. However, there are some types of regulations that are particularly troubling. For example, any government intervention that makes it more difficult to manage the risk inherent in agriculture is a serious problem. Additionally, the overreach and scope of environmental regulations is inflicting serious harm on farmers and ranchers alike. Finally, because technology and innovation help the agriculture industry meet critical new challenges, any regulation that hinders important developments is a major concern.

This report highlights just some of the biggest regulatory obstacles, focusing on regulations that affect risk management, hurt farmers because of environmental overreach, and undermine innovation. It also provides some specific policy recommendations to address these obstacles.

Overbroad Application of Title VII of Dodd–Frank

Like every business, agricultural producers face a number of serious risks. There are many ways that farmers and ranchers can manage different kinds of risk through private means. One of the best risk-management tools is to hedge risk through participation in the commodities market. Unfortunately, one regulatory development is making this risk-management tool far more difficult for farmers to use.

In 2010, the Dodd–Frank Wall Street Reform and Consumer Protection Act[2] (Dodd–Frank) was enacted to address the 2008 financial crisis.[3] Yet this law is being interpreted broadly by the Commodities Futures Trading Commission (CFTC) to cover businesses that had nothing to do with the 2008 crisis, including agricultural producers. As Senator Pat Roberts (R–KS), Chairman of the Senate Agriculture Committee, explained:

> Farmers, ranchers and end-users did not cause the 2008 financial crisis, and Congress did not intend for them to be subject to Title VII of Dodd–Frank. However, five long years later, they continue to be subjected to a bounty of rules and regulations stemming from the regulatory implementation of Dodd–Frank.[4]

The use of commodity derivatives is extremely critical for farmers and is undermined by convoluted and restrictive regulations. For example, the CFTC is narrowly interpreting[5] the statutory term "bona fide hedge."[6] This interpretation has resulted in "many types of trading in derivatives markets that were long recognized as legitimate hedging by commercial firms and regulators...now no longer afforded *bona fide* hedging treatment," according to the Commodity Markets Council, "a trade association that brings together exchanges and their industry counterparts,"[7] in comments made to the CFTC.[8]

The CFTC is making decisions as to what is the proper nature of hedging transactions, as if anyone could (or should) evaluate the variety of ways that risk can be managed effectively. CFTC Commissioner Jill Sommers, in her opening statement at a meeting to consider Dodd–Frank final rules (the final rule addressing "bona fide hedge" was vacated by a district court[9]) explained:

> When analyzing the potential impact this rule will have on market participants, I am most concerned about the effect on bona fide hedgers—that is the producers, processors, manufacturers, handlers, and users of physical commodities. This rule will make hedging more difficult, more costly, and less efficient, all of which ironically can result in increased costs for consumers.[10]

A recent Cato Institute report by New York University Professor Bruce Tuckman captures the problem of making use of derivatives more difficult, stating that "rules that make derivatives harder to use will reduce derivatives risks; but the reduction will be at the expense of increasing business risks."[11]

Federal Overreach in Addressing Nonpoint Sources of Water Pollution

The Clean Water Act (CWA) expressly says that states are supposed to play the leading role in protecting water:

> It is the policy of the Congress to recognize, preserve, and protect the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution, to plan the development and use (including restoration, preservation, and enhancement) of land and water resources.[12]

The U.S. Environmental Protection Agency (EPA) is ignoring this state role and instead seeking to expand its own power. This extension of federal control is evidenced by the EPA's efforts to address water quality in the Chesapeake Bay, where the agency is effectively seeking to regulate agricultural runoff and other nonpoint sources of pollution (pollution coming from multiple sources over a wide area, as opposed to pollution from a point source that is a specific and identifiable source).[13]

Specifically, the EPA is allocating specific limits of pollution for numerous segments of the Bay by source, including nonpoint sources. There is even concern that the EPA could determine where farming is allowed.[14] This Chesapeake Bay scheme was challenged in the Third Circuit Court of Appeals (the court upheld the agency's actions[15]), and petitioners, including the American Farm Bureau Federation, asked the United States Supreme Court to hear the case.[16] Former U.S. Secretary of Agriculture John Block warned of the consequences of the Court's declining to hear the case: "[I]n a matter of days or at most weeks the Environmental Protection Agency (EPA) could become our national zoning board."[17] On February 29, 2016, the Court declined to hear the case.[18]

This overreach by the EPA has practical impacts on farming. Secretary Block illustrated this point:

> Myopic rigidity, typical of federal regulators and particularly EPA, has human costs. In lower court filings, Pendleton County, West Virginia, reported that "a significant amount of farmland will have to be removed from production" as a result. Pendleton, the court document noted, is a poor county where families "displaced from farming would have little to no opportunity to replace their loss."[19]

EPA's and Corps' Land- and Water-Grab Through the "Waters of the United States" Rule

On June 29, 2015, the EPA and the Army Corps of Engineers (Corps) published their final rule[20] defining what waters are covered under the CWA. Under the CWA, the federal government has jurisdiction over "navigable waters," which is further defined as "the waters of the United States, including the territorial seas."[21] This rule seeks to regulate almost any type of water, including certain man-made ditches and so-called waters that are dry land most of the time. This vast overreach is consistent with past attempts by the agencies to grab power by broadly interpreting the definition of "waters of the United States." In just over a decade, the United States Supreme Court twice struck down the agencies' efforts to regulate more waters: in 2001, in *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*,[22] and in 2006, in *Rapanos v. United States*.[23]

For property owners, including farmers and ranchers, this regulatory overreach is problematic. If a water is covered under the law (i.e., a jurisdictional water), property owners could be required to secure costly and time-consuming permits to take actions that affect these waters. Under the CWA, this impact can be nominal and does not even require

environmental harm. Someone may need a permit just for kicking sand into a jurisdictional water.[24]

Property owners could be required to secure a permit if there is a discharge of dredged material (material excavated or dredged from waters of the U.S.) or fill material ("material placed in waters such that dry land replaces water—or a portion thereof—or the water's bottom elevation changes").[25]

In *Rapanos v. United States*, the late Justice Antonin Scalia cited a study highlighting the following costs and delays for one of the major types of permits (Section 404 dredge and fill permits): "The average applicant for an individual permit spends 788 days and $271,596 in completing the process, and the average applicant for a nationwide permit spends 313 days and $28,915—not counting costs of mitigation or design changes."[26]

Since there will be more jurisdictional waters, there will be a need to secure more CWA permits. This means that property owners, such as farmers, who want to use their property for normal business activities will have to secure more permits. They may choose not to engage in ordinary activities because of the time and cost of securing a permit.

The rule is also vague, making compliance difficult. The risk of not complying with the vague and subjective rule is another disincentive to using property for ordinary business activities.[27] The risk is compounded by the significant civil and criminal penalties for not securing a permit. One case now pending before a federal court involves a Wyoming family who are facing $16 million in fines for constructing a stock pond on the family's eight-acre farm for the family's horses and cattle.[28]

The ESA's Failure to Protect Species and Its Disrespect for Property Rights

In 1973, the Endangered Species Act (ESA) was enacted into law to promote the conservation of species.[29] Unfortunately, the law has failed and, in so doing, has trampled on property rights.

There are 1,585 domestic species and 661 foreign species on the endangered species list (including both threatened and endangered species).[30] Only 33 species have been "recovered" and delisted from the endangered species list in the more than 40 years of the ESA.[31] Almost as many species (29 species) have been delisted because they never should have been on the list due to technical errors or because they became extinct.[32]

For as little success as the ESA has had, it has also had a negative impact on the rights of private property owners. Society has determined that protecting species is an important objective. Therefore, the costs of protecting species should be paid by society as a whole, not by individual property owners. Property owners need to be compensated for restrictions placed on the use of their land, as they have not created any harm that affects anyone else beyond their boundaries; there is no "polluter-pay" issue. Instead, the federal government expects property owners, who are merely using their land without harming others, to change how they use their property.

The Federal Government's Poor Management of Public Land

Federal land is important particularly for ranchers, many of whom draw their livelihood from use of public lands. According to the Public Lands Council, "Nearly 40% of western cattle herd and about 50% of the nation's sheep herd spend time on public lands."[33] The U.S. Department of the Interior's Bureau of Land Management (BLM) manages 139 million acres of grazing land,[34] and the Forest Service (under the Department of Agriculture) manages 93 million acres of public grazing land and 10 million acres of private land within those bounds.[35] The BLM and the Forest Service manage roughly 90 percent of federal lands in the West.[36]

The grazing lands are a sliver of the 640 million surface acres owned by the federal government in the U.S. Federal land management has a unique impact on farmers and ranchers in the western United States where nearly 47 percent of federal lands are located.[37] The federal government owns roughly 85 percent of Nevada, 64 percent of Utah, and 61 percent of Idaho, topping the ranks for federal ownership among states in the continental U.S.[38]

However, the federal government does not manage this land well. Federal land management decisions directly affecting states and ranchers are handled by federal bureaucrats and through omnibus appropriations bills and unilateral presidential designations. The sheer size and diversity of the federal estate are proving too much for distant federal bureaucracies.

For example, federal administration and management of public grazing lands is broken. The BLM has struggled to manage persistent grazing permit backlogs.[39] The Forest Service's most recent budget

request sought more funding to manage a backlog in environmental improvements needed on grazing land.[40] Further, as explained by the Property and Environment Research Center, "the federal grazing system may be resulting in poor rangeland conditions. According to the BLM, more than 21 percent of BLM grazing allotments are not meeting or making significant progress toward meeting the agency's own standards for land health."[41]

Both the BLM and the Forest Service have expressed frustration with the environmental review process under the National Environmental Policy Act (NEPA), the costs of which are exacerbated by nuisance litigation, often from extreme environmental activist groups. In recent years, the Forest Service has spent more on navigating the NEPA process for renewing grazing permits than it has on grazing allotments management.[42] The Forest Service writes that:

> Challenges to this work [NEPA analysis] include increased complexity of analyses, increased workload associated with litigation, increased costs for obtaining comprehensive resource condition and trend data to support decisions, and the lack of completed assessments necessary to support the record for making management decisions.[43]

From 2009–2013, federal lands held by the BLM and the Forest Service also lost taxpayers nearly $2 billion a year on average, while the state trust lands evaluated in a recent Property and Environment Research Center study earned taxpayers $200 million.[44] Broken down per acre, federal lands lost $4.38 per acre, while state lands earned $34.6 per acre.[45] While the federal government can absorb unrecovered costs and spread expenses across federal taxpayers, state trust lands are required to turn a profit.[46]

There are also continual attempts to expand this federal estate, often hurting ranchers. For example, the Antiquities Act allows the President, independent of Congress, to restrict federal land use on the premise of protecting "objects of historic or scientific interest."[47] In doing so, Presidents have overridden the diverse interests and needs of the communities affected by these decisions and discounted the consensus building, trade-offs, goals, and local efforts to manage land, including the interests of the agricultural community. For instance, in 1996, President Bill Clinton designated 1.9 million acres in Utah. Though this designation was made 20 years ago, the BLM still does not have a grazing plan in place, thereby upsetting both ranchers and anti-ranching environmental groups.[48]

The federal government's management of public lands has drained taxpayers, but ranchers have contributed important economic and environmental benefits to these public lands. According to the Public Lands Council, "The work ranchers do to maintain the land saves the Bureau of Land Management approximately $750 million in taxpayer dollars each year."[49] Additionally, the BLM notes that:

> Livestock grazing serves as an important tool that provides environmental benefits such as preservation of open space, managing fuel loads to reduce wildfire risks and enhancing distribution of available water for wildlife. Ranchers often serve as the eyes and ears for public land managers and assist with public health and safety. They provide public lands information, report wildfires, assist in wildfire suppression when appropriate, restore land health, and assist in search and rescue operations.[50]

The Undermining of Genetically Engineered Food Through Mandatory Labeling

People have been modifying the genetic makeup of food for thousands of years. Genetic engineering is just one method to achieve this same objective. Genetically engineered food has been in the U.S. food supply since the 1990s. Through the genetic engineering process, scientists can introduce desired traits into a crop plant more efficiently and more precisely.

Genetically engineered crops are prevalent. In November 2015 guidance, the U.S. Food and Drug Administration (FDA) explained:

> In 2013, in the United States, bioengineered soybeans made up 93 percent of the acreage of planted soybeans, bioengineered cotton made up 90 percent of the acreage of planted cotton, and bioengineered corn varieties made up 90 percent of the acreage [of] planted corn. In addition, bioengineered sugar beets accounted for 95 percent of the acreage of planted sugar beets in the 2009–2010 crop year. [internal citations omitted].[51]

The genetically engineered foods on the market today are as safe as their non–genetically engineered counterparts. There is wide agreement on this point, from the FDA and National Academy of

Sciences to the World Health Organization.[52] If genetically engineered foods do differ in any material way from their non–genetically engineered counterparts, the FDA already requires labeling to disclose those differences.[53]

Despite the science and the safe and wide use of genetically engineered crops, Congress has passed legislation requiring the mandatory labeling of genetically engineered food, and President Barack Obama signed the bill into law on July 29, 2016.[54] Ironically, mandatory labeling has been framed as a pro-consumer issue. It is exactly the opposite. Mandatory labeling could be harmful to consumers by misleading them into thinking that genetically engineered food is unsafe for consumption. Voluntary labeling efforts already exist.[55] Mandatory labeling, however, uses the force of government to compel companies to disclose information that has no bearing on health or safety. A government-mandated label will also likely send a signal to the consumer, whether intended or not, that the government has determined that genetically engineered food is dangerous or less nutritious. The labeling says nothing about the safety or nutritional value of ingredients, only about the process used to develop them.

What Needs to Be Done

To begin addressing these regulatory obstacles, Congress should:

Prohibit the application of Title VII of Dodd–Frank to farmers. This regulatory burden will make it more difficult for agricultural producers and possibly discourage the use of commodities markets to manage risk.

Protect the ability of states, communities, and individuals to manage water resources. Water bodies are unique, and so are their water quality issues. Therefore, a federal one-size-fits-all approach is bound to fail. States, local communities, and private citizens are closer to the problems facing local water bodies than the federal government is and should be empowered to develop solutions to these problems. New ideas, including water trading markets, will develop and provide the best solutions.

Prohibit federal efforts to regulate (directly or indirectly) nonpoint sources of water pollution. Federal overreach to effectively regulate agricultural runoff and other nonpoint sources of pollution should be prohibited. States, local communities, and private citizens can address challenges to water quality, such as any problems that may exist in the Chesapeake Bay. If this does not happen, the EPA's expansive approach to water quality in the Chesapeake Bay will simply be applied to other water bodies.

Repeal the EPA and Army Corps' "Waters of the United States" rule. While there are legal challenges pending, Congress itself needs to repeal this rule.[56] This is the best way to stop a power grab that would undermine property rights and would also block another attempt by the EPA to ignore the state role in water policy.

Ultimately though, Congress needs to define "navigable waters," which is the actual statutory term, not "waters of the United States." This distinction is critical because any definition needs to recognize that Congress was seeking to regulate not just any waters, but those waters that were "navigable." Any definition should generally limit federal authority to regulation of traditional "navigable waters" only.

Reform the Endangered Species Act. There are many reforms that need to be made to the ESA, from improving the scientific analysis of designations to developing a better listing process. The law should be less of a regulatory scheme and more of a government program with clear appropriations for all of the government's actions, including covering any costs imposed on property owners. Regulation can hide the true costs of government action. The costs of all ESA-related efforts should be accounted for in a transparent manner.

An approach that infringes on property rights fosters a confrontational relationship between the federal government and property owners. If the federal government is going to seek to conserve species, it should work with property owners instead of creating an adversarial relationship. Respecting property rights will go a long way in promoting this partnership.

States should play a much greater role in protecting species, in large part because they are closer than the federal government to any situation that needs to be addressed. Most states, if not all, already have conservation programs.[57] By having states work in partnership with property owners, any threats to species can be addressed more effectively.

Transfer management of federal lands to states and private citizens. The responsibility to manage public lands should be shifted from the federal government to states and private citizens. Both groups are in a much better position to manage public land, and local control should benefit ranchers who seek a system that is more responsive to their

needs. While the federal government can pass on the costs of poor or nonexistent management to federal taxpayers, states and the private sector have powerful incentives for better management of resources on federal lands. State governments and budgets can be more accountable to the people who will directly benefit from wise management decisions or be marginalized by poor ones, making it more likely that resources will be developed and that this development will be done in a way that protects the environment.[58]

Taxpayers and ranchers should benefit by the federal government's transferring the management of much of the federal land to states, as well as a cessation of continual attempts to expand the federal estate. States will also face challenges, but the localized management approach, new innovations from multiple "laboratories of democracy," and greater accountability to state citizens, among other factors, should ultimately prove beneficial. Further, states should be strongly encouraged to transfer ownership and management of the lands, particularly those to be used for commercial production, to private interests, who are generally better suited to managing with financial prudence and enhanced stewardship.

Most important, as a matter of principle, the federal government should not be such a significant land owner; for that matter, even states should not be massive land owners. Land, in general, should be in the hands of private citizens.

Repeal the federal law mandating the labeling of genetically engineered food. Congress should repeal the recently passed and misguided federal mandatory labeling law. If the law is repealed, as it should be, the more complicated question is whether the federal government should preempt states, as the federal mandatory labeling law does. This situation, especially because of the numerous problems connected to state mandatory labeling, looks to be one of those rare instances[59] where preemption is likely appropriate, assuming that labeling is prohibited on both the state and federal levels. Indeed, if unchecked, states would be damaging the interstate market for genetically engineered foods and creating a patchwork of laws. A federal mandate, though, just to avoid the patchwork problem ignores the even more important problems that mandatory labeling causes. Congress, through the recently passed federal mandate, merely traded flawed state mandates for a flawed federal mandate.

Mandatory labeling requirements would be using the power of government to compel speech that will likely be misleading to consumers.[60] Government, whether federal, state, or local, should not force companies to engage in speech that is not justified by the science, including the FDA's own science. It also hurts the development of genetically engineered foods that are critical for the nation and global efforts to counteract malnutrition.[61]

Conclusion

Addressing the specific obstacles identified above, as well as other regulatory challenges, would only be the start of what needs to be done to remove government intervention that hampers farmers and ranchers. To remove obstacles that continue to hurt agricultural producers, the entire regulatory system itself has to be addressed.

Congress needs to stop delegating so much power to federal agencies, and when regulations are developed, there need to be statutory protections in place to ensure that those regulations are clearly authorized by statute and consistent with the intent of Congress when it passed the statute. If these protections were already in place, many of the existing regulatory obstacles facing farmers and ranchers would likely not exist.

ENDNOTES: SECTION 8

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