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AGRICULTURAL OPTIONS: AN ALTERNATIVE TO FEDERAL FARM PROGRAMS

INTRODUCTION

The production and marketing of U.S. agricultural commodities has changed significantly in the past half-century. Changed too are the environment in which the U.S. agricultural industry operates and the needs of the industry. Yet current federal agriculture programs are essentially those developed to deal with the agricultural problem of the 1930s.

In an attempt to make federal farm programs relevant for the 1980s, the Reagan Administration is proposing a Farm Bill that will reduce government's influence on agriculture and move the industry toward a market-based system. A key feature of this system should be the agricultural options market. Agricultural options are contracts that give farmers the right to sell at a predetermined price during some period in the future. The options are a private sector device that can give the farmer price protection similar to that which he now gets from federal agricultural programs.

The primary objective of these programs has been to assure price and income stability to farmers. In essence, agricultural programs have insured farmers against a decline in the price they

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This study is the fifth in a Heritage series on agriculture. It was preceded by Bruce Gardner, "Agriculture's Revealing--and Painful--Lesson for Industrial Policy," Heritage Foundation Backgrounder No. 320, January 3, 1984; E.C. Pasour, Jr., "The High Cost of Farm Subsidies," Heritage Foundation Backgrounder No. 388, October 22, 1984; E. C. Pasour, Jr., "The Free Market Answer to U.S. Farm Problems," Heritage Foundation Backgrounder No. 389, October 30, 1984; and Thomas Grennes, "Helping U.S. Farmers Sell More Overseas," Heritage Foundation Backgrounder No. 411, February 27, 1985.

will get from selling their crops. In the past, such insurance
was not available through the private sector. Agricultural..
options were banned in the U.S. for almost 50 years. This changed
last October 29, when the Commodity Futures Trading Commission
allowed such options for trading in the U.S. under an agricultural
options pilot program. Now options can be used as insurance
against commodity price declines, instead of farmers obtaining
such insurance paid for by America's taxpayers.

Agricultural options give the agriculture industry an
important new risk-management tool. They can protect farmers,
for example, from adverse and rapid price declines while allowing
farmers to profit from price rises. Because agricultural options
can be used to establish minimum prices, they represent an alter-
native method to expensive governmental agricultural programs of
achieving certain policy goals, such as stabilizing farm income.

Economists have noted, in fact, that federal price support
programs and target price programs currently available for pro-
ducers of many agricultural commodities are actually a form of
option markets. The Department of Agriculture guarantees a
target price and a loan price to farmers who participate in the
program, but allows them to sell their commodities in the market
if higher prices are available--just as the options markets do
for such commodities as cattle, corn and soybeans. The difference
is that farmers enjoy this federal price protection at essentially
no cost because the taxpayers pay for differences between the
target price and the price established in the market. There is
no mechanism, moreover, for these target prices to adjust with
changes in market conditions, nor for the costs to be spread
throughout the farming industry.

Instead of expensive government price insurance programs,
farmers could buy options which are traded competitively. A
comprehensive private option market could form the foundation of
a transition from a government-influenced agricultural sector to
the "market-based" agriculture industry that Agriculture Secretary
John Block is advocating. Agricultural options can be used to
stabilize farm income and free farmers from many uncertainties
regarding prices--without many of the costly federal programs.

There are, however, political and practical obstacles to a
more market oriented agriculture sector. Farmers would object,
for example, to such a proposal because they would have to pur-
chase the price protection that they currently receive essentially
free from U.S. taxpayers. Yet, the obstacles may be made manage-
able if the transition from government programs to the use of
agricultural options is gradual.

The benefits from using agricultural options in place of
government programs would be significant.

1) The elimination of price support programs and their
   restrictions on price movements would allow the market

to give accurate price signals for the optimal alloca-
tion of resources. As a result, U.S. agricultural
commodities could become more competitively priced in
world markets, causing an increase in U.S. exports.

2) The use of agricultural options instead of agricultural
price support programs would provide farmers more
flexibility and more control in determining how much
price protection they needed for their price risk
management. Farmers would then have an incentive to
economize in risk management.

3) Taxpayers would no longer be burdened with the cost of
providing price protection to farmers. Instead, farmers
who want price protection would pay for it themselves.

Agricultural options can provide an alternative to price
support and target price programs. A full options market would
complement the free market measures already proposed in the
Reagan Administration's new Farm Bill.

AGRICULTURAL OPTIONS TRADING

Although the trading of agricultural commodity options began
in the U.S. in the mid-19th century, trading of regulated domestic
commodity options was banned by the Congressional Commodity Act
of 1936.[1]

In 1982 Congress passed the Futures Trading Act which per-
mitted agricultural options trading under the regulation of the
Commodity Futures Trading Commission (CFTC). The CFTC approved
the first agricultural option contracts in October 1984 and
trading began in that month.

Under CFTC rules, each exchange is allowed to trade options
on two agricultural futures contracts. Options are now traded on
corn, wheat, cotton, live cattle, soybeans, and hog futures
contracts.[2] The CFTC is expected to consider lifting the restric-
tions regarding the number of options per exchange. If they are
lifted, options on additional agricultural futures contracts
probably will begin trading.

By permitting agricultural options trading, Washington is
spurring development of an important risk management tool for the

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[1] The regulated domestic commodities included most, if not all, of the
major agricultural commodities produced domestically (for example, corn
and wheat).

[2] Options on sugar futures contracts are also traded. However, because
sugar was not a regulated domestic commodity, sugar options began trading
under the earlier options pilot program.

nation's farmers. It even may be possible, say some economists, to allow agricultural options to replace agricultural price support and target price programs.[3]

Mechanics of Trading Agricultural Options[4]

An agricultural option on a futures contract (as currently traded in the U.S.) is a contract which gives the buyer the right to buy or sell a particular futures contract at a predetermined price anytime during the life of the option. A futures contract is an agreement to buy or sell an item at some specified future date. The seller of the option has the obligation to acquire the opposite futures position at the same predetermined price, if the buyer exercises his right.

Two types of options exist. A "call" option gives the buyer of the option the right to buy a futures contract, and the seller of the option the obligation to sell the futures contract. A "put" option gives the buyer of the option the right to sell a futures contract and the seller of the option the obligation to buy the futures contract. The predetermined price at which the futures contract will be acquired is called the "exercise" price or the "strike" price. The price of the option itself, called the premium, is the amount that the buyer pays the seller to assume the obligation.

Assume, for example, that there is a 20¢-per-bushel premium for a put option on the November 1985 soybean futures contract with a strike price of $6.00 per bushel. What this means is that the buyer of that put option pays 20¢ per bushel to the seller for the right to sell a November soybean futures contract at $6.00 per bushel during the life of the option.[5] If the price of the November soybean futures contract remains above $6.00 during the life of the option--that is, if traders expect the market price in November to be above $6.00--the buyer will not exercise his option. In this case he will be able to sell a futures

[3]   Bruce L. Gardner, "Commodity Options for Agriculture," American Journal of Agricultural Economics, December 1977, pp. 986-992; Bruce L. Gardner, The Governing of Agriculture (Lawrence, Kansas: The Regents Press of Kansas, 1981), pp. 107-112; Michael T. Belongia, "Commodity Options: A New Risk Management Tool for Agricultural Markets," Federal Reserve Bank of St. Louis, Vol. 65, No. 6, June/July 1983, pp. 5-15; Todd E. Petzel, "Alternatives for Managing Agricultural Price Risk: Futures, Options and Government Programs," Studies in Economic Policy, AEI, November 1984.
[4]   For more discussion on the mechanics of trading agricultural options, see for example Belongia, op. cit.; David E. Kenyon, "Farmers' Guide to Trading Agricultural Commodity Options," USDA Agricultural Information Bulletin No. 463 (Washington, D.C., April 1984);or Randall E. Sheldon and Jin W. Choi, "Agricultural Options," unpublished paper, Chicago Board of Trade, January 1983.
[5]   Throughout this paper, transaction costs are ignored for simplification.

contract at a higher price by selling in the futures market
directly and letting his option expire worthless.[6] The buyer has
a loss of 20¢ per bushel and the seller has a profit of 20¢ per
bushel.

If the November soybean futures price, however, falls to
$5.50 during the life of the option, the buyer can exercise his
option, selling a November soybean futures contract at $6.00.
Because he can buy back the futures contract at the market price
of $5.50 he can make a profit of 50¢ per bushel on his futures
contract. After deducting the option premium of 20¢, the option
buyer will have a net profit of 30¢ per bushel. If the buyer
exercises his option in this case, the seller is obligated to buy
a futures contract at $6.00 Because he can sell the futures
contract at the market price of $5.50, he loses 50¢ per bushel.
However, he received a 20¢ premium for selling the option, thus
cutting his net losses to 30¢ per bushel in this case.

The premium is the maximum amount that the buyer can lose
from his option transaction, because he will not elect to exercise
the option if he can obtain the desired futures position at a
more favorable price by transacting in that market directly.
Similarly, the premium is the maximum amount that the seller will
gain from his option transaction. Because the option seller is
obligated to act at the buyer's election, the seller's potential
losses are virtually limitless.

The size of the premium is determined competitively by
supply and demand in the market. In a competitive market, the
premium equals the market's determination of the expected value
of the option--that is, it is equal to the probability that the
option will be exercised multiplied by the expected gain if it is
exercised.

For example, if there is a 50 percent chance that the market
price will be $6.20 and a 50 percent chance that the market price
will be $5.80, then in a competitive market one would expect the
premium for a put option with a strike price of $6.00 to be 10¢
per bushel. The premium value is calculated by multiplying the
probability that the market price will be below $6.00 which is
the probability that the option will be exercised (0.5) by the
expected gain if exercised ($6.00-$5.80).

Options as an Insurance Policy

Buying an option is like buying insurance. One pays the
premium and has the right to obtain a specified asset if a parti-

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[6] ⋅ Throughout this paper, for simplicity it is assumed that the only way an
option buyer may liquidate his option contract is through exercise. In
reality, the buyer of an option may offset his option contract in the
option market prior to the expiration of the contract and receive part of
the premium that he originally paid.

cular event occurs. In the case of fire insurance, the buyer
receives an amount equal to the value of the property minus any
stated deductibles if the property is destroyed by fire. If the
property is not destroyed by fire, the insurance policy becomes
worthless at the end of the specified term and the buyer simply
loses the premium as 'the price of his (unused) protection. The
buyer of insurance, in other words, is paying the premium to
guarantee himself against a loss of assets during the period. If
the property is destroyed by fire, the insurance company will pay
the insurance buyer the value of the property. If the property
is not destroyed by fire, the buyer will continue to own the
property.

Similarly, a farmer may buy a put option to protect himself
from low revenues caused by commodity price declines.[7] A soybean
farmer, for example, may pay a premium of 20¢ per bushel for a
put option with an exercise price of $6.00 to protect himself
from soybean price declines below $6.00. If soybean prices
increase to $7.00 when the farmer wishes to sell his soybeans, he
obviously will not exercise his option to sell his crop for
$6.00. He simply will sell his soybeans in the cash market for
$7.00. His net revenue will be $6.80 per bushel--$7.00 minus the
20¢ cost of the option.

If soybean prices fall below $6.00 when the farmer wishes to
sell his soybeans, he can exercise his option. The farmer will
then receive a futures contract with a built-in profit equal to
the difference between $6 and the market price. Although the
farmer will sell his soybeans in the cash market at the market
price (which is below $6),the profits from his option contract
will offset the lower revenue caused by the cash price decline.
Thus the farmer can assure himself, in advance, of the $6.00
soybean price stated in the option contract. His total revenue
in this case will be $5.80 per bushel (that is, $6.00 minus the
20¢ option premium).

Figure 1 demonstrates how a farmer's revenue changes when he
purchases put options.[8] The straight line shows the farmer's
revenues if he sells his commodity on the open market at the
prevailing price: his revenues per bushel are always equal to
the selling price. The dashed line shows the farmer's revenues
if he buys the put option with a strike price of $6.00 and a

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[7] In this example, the difference between cash and futures prices (called
the basis) is assumed to be zero. That is, the cash and futures prices
are assumed to be equal at all times. Although this assumption is un-
realistic, it simplifies the example considerably. The inclusion of a
non-zero basis would not change the major point demonstrated in the
example--that put options allow farmers to limit their losses if prices
fall but permit them to take advantage of price increases.

[8] Similar graphs have been used by Gardner in "Commodity Options for Agricul-
ture" and by Belongia.

Figure 1. Comparison of Revenues from Cash Sales with Revenues After Buying a Put Option
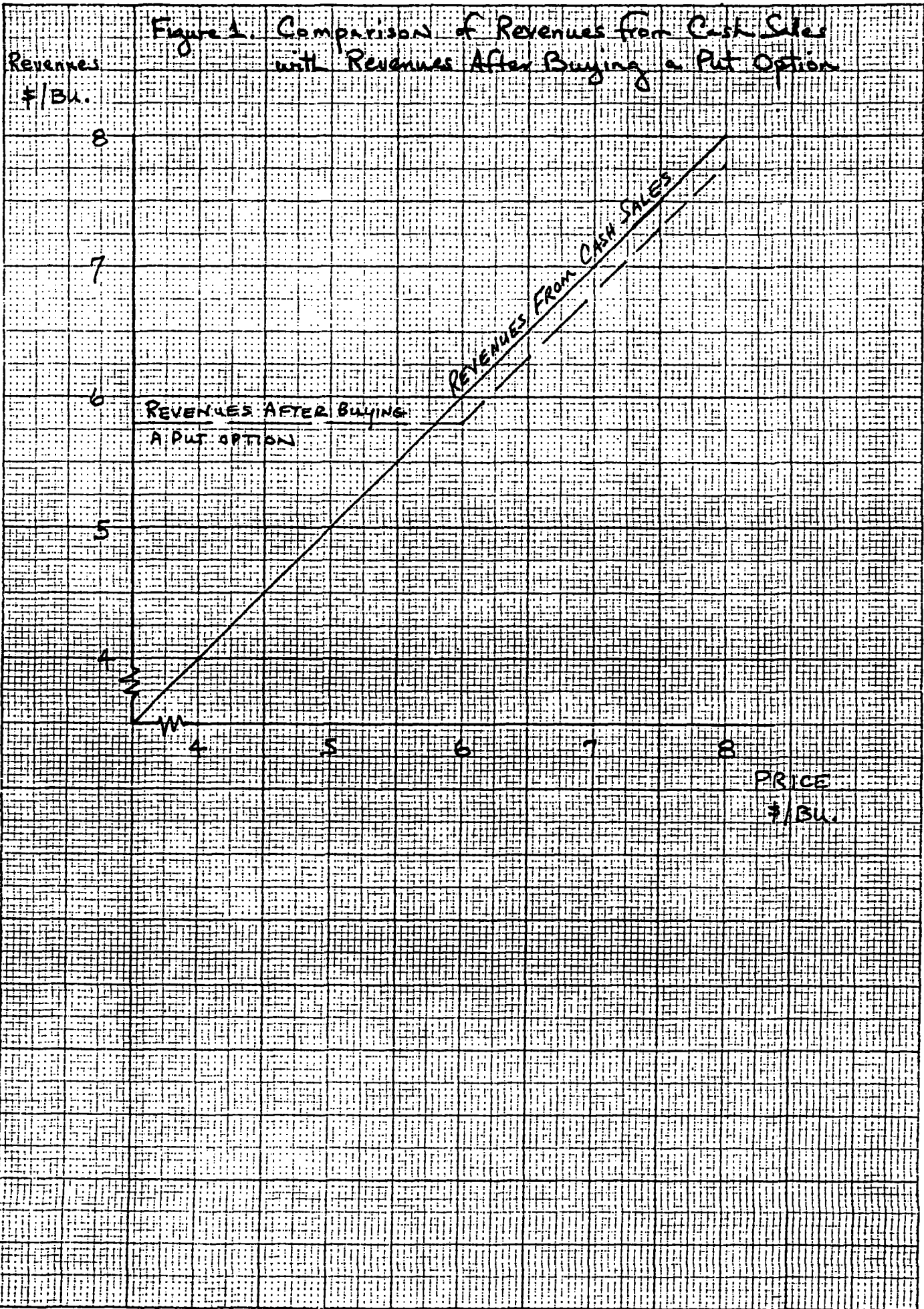
premium of 20¢. The horizontal segment of the dashed line shows that the farmer is guaranteed $5.80 per bushel (the strike price minus the option premium) for all market prices below $6.00. And the sloping segment of the dashed line shows that the farmer will receive the prevailing price minus the option premium for all prices above $6.00. Thus, by buying a put option, a farmer can limit his losses if prices fall--while still taking advantage of a price increase.

At any point in time, options having different strike (or exercise) prices are traded. Because higher selling prices are more valuable than lower selling prices, the premium for put options increases as the strike price increases. For example, on January 4, 1985 (with the March 1985 soybean futures contract closing at $5.735), the closing premiums for the various put options on the March 1985 soybean futures contract were as follows:

Strike Price	Premium
(¢/bushel)	(¢/bushel)
550	3
575	12.5
600	30
625	53
650	76.5

A farmer could thus compare the costs of different levels of price protection and decide how much protection he is willing to buy. The more price protection he sought, the higher the cost.

Options thus enable farmers to purchase the right to a guaranteed price and still be able to take advantage of higher prices. In addition, options enable farmers to purchase the amount of price protection that they are willing to buy. Such options, suggest the evidence, can replace existing agricultural programs and create the resulting market would be far superior to current policies.

CURRENT U.S AGRICULTURAL POLICIES

Observes University of Missouri professor of agricultural economics Bruce Bullock: "Farm programs have been justified on grounds that (a) price support programs are necessary to keep farm family income on par with nonfarm family income, and (b) without government intervention agricultural prices would fluc- tuate too widely and create hardships for both producers and consumers."[9]

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[9]   J. Bruce Bullock, "Future Directions for Agricultural Policy," American Journal of Agricultural Economics, Vol. 66, No. 2, May 1984, p. 234.

The evidence indicates that the first goal is inappropriate today. Although incomes of farmers have been significantly less than incomes of nonfarmers historically, the incomes are now approximately equivalent.[10]

A goal of rigid price stability, moreover, is inappropriate for agricultural policy. Price stability created by restricting the market distorts market signals and prompts misallocations of resources, as farmers grow too much or too little in response to artificial prices. To be sure, policies preventing very large price and income swings caused by unusual circumstances may be justified on the grounds that they would prevent large erratic adjustment costs that might put many efficient and careful farmers out of business.

A variety of programs have been and are used to accomplish the goals of agricultural policy. In particular, major programs have been developed to increase the demand for U.S. agricultural commodities and therefore increase the price received by the farmer. Examples include export subsidies, import restrictions, U.S. food donations to other countries (P.L. 480) and food distribution programs in the U.S. such as the school lunch and food stamp programs.

Programs also have been sought to decrease the supply of U.S. agricultural commodities, thereby increasing prices and thus the income received by farmers. Examples of these include acreage allotments and set-aside programs in which the farmers are given incentives to let some farmland lie idle. Other programs, such as price supports, prevent the price from falling below a certain level by having the government buy excess supply at that price. And there are programs to subsidize farm income by guaranteeing producers a certain price for their production by having the government pay them any difference between the target price and the market price.

Problems With Current Agricultural Programs

There are several significant problems with these programs.

1)   They are very expensive. The costs of agricultural programs were $3 billion in 1981, $10 billion in 1982,[11] and $28 billion (including the Payment-in-Kind Program) in 1983.[12]

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[10]   "Per capita disposable income of farm operators has averaged 88 percent of non-farm income over the past 10 years....Given the favorable tax treatment of farmers, there is no longer any basis for arguing that farm incomes need to be supported relative to nonfarm incomes. A major reason for the closing of the income gap between farm and nonfarm families has been the increased access of farm families to nonfarm sources of income." Ibid., p. 235.

[11]   G. Edward Schuh, "Future Directions for Food and Agricultural Trade Policy," American Journal of Agricultural Economics, Vol. 66, No. 2, May 1984, p. 242.

[12]   Economic Report of the President, February 1984.

2) The minimum price established by U.S. agricultural
    price support programs at times is above the world
    competitive price. By restricting the natural decline
    of prices, agricultural programs have caused U.S.
    commodities to become uncompetitive in international
    markets, thus reducing U.S. farm sales abroad.[13]

3) Most of the benefits of agricultural programs accrue to
    the owners of large farms, who have larger incomes on
    the average than nonfarmers. In fact, half of the
    direct federal payments in agriculture go to only 15
    percent of the farmers, generally the large agribusi-
    nesses.[14] In addition, the program benefits accrue to
    owners of specialized farm resources (primarily farmland
    owners) because the prices of these resources are bid
    up as the expected profit from using these resources in
    production increases.[15]

4) Agricultural programs tend to raise prices of agricul-
    tural commodities, thus raising food prices.[16]

THE OPTIONS ROLE IN AGRICULTURAL POLICY

With the introduction of trading in agricultural options,
the market offers some of the benefits provided now by agri-
cultural programs--but at no cost to the taxpayer. Agricultural
options will not increase the price artificially, but will provide
producers who participate in the market a minimum price that they
will receive for their commodity. Agricultural options could be
used instead of price support and target price programs to provide
income stability for farmers.

Maryland professor of agricultural economics Bruce Gardner
argues that the price support program currently in use for grains
is really a put option market in disguise.[17] Farmers who partici-
pate in the program and meet all set-aside restrictions are
guaranteed the loan rate for their production, because the govern-

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[13] Thomas Grennes, "Helping U.S. Farmers Sell More Overseas," Heritage Founda-
      tion Backgrounder No. 411, February 27, 1985.

[14] E. C. Pasour, Jr., "The High Cost of Farm Subsidies," Heritage Foundation
      Backgrounder No. 388, October 22, 1984, p. 1.

[15] For a discussion of the capitalization of program benefits, see for
      example, E. C. Pasour, Jr., "Cost of Production: A Defensible Basis for
      Agricultural Price Supports?" American Journal of Agricultural Economics,
      Vol. 62, No. 2, May 1980, pp. 244-248.

[16] For example, estimates indicate that the U.S. sugar program costs U.S.
      consumers more than $1.9 billion in one year through higher sugar prices.
      Petzel, op. cit.

[17] Bruce L. Gardner, The Governing of Agriculture (Lawrence, Kansas: The
      Regents Press of Kansas, 1981).

ment is willing to buy as much of the production as is available at the loan rate. Thus, the participating farmer in effect is the buyer or holder of a put option with the loan rate as the strike price. The government is in effect the seller or "writer" of the option.

A major difference between a market-traded option and the price support program, however, is the cost to the participants. In the price support program, the premium is not market determined-- it is politically determined and essentially paid by U.S. taxpayers. The only cost to the farmer is forgone profits from the harvest which could have come from the land required to be set aside.

Gardner adds that target prices are also put options, guaranteeing the farmer a minimum price but allowing him to profit from higher prices.[18] In effect, the government program is an option with two strike prices (one at the loan rate and the other at the target price) and with different maturities.

Genuine agricultural options could be used instead of price support programs to guarantee a price floor to farmers. Instead of receiving a disguised put option from the government for participating in a government program, farmers could buy authentic put options traded competitively, with the cost carried by the industry itself, not the taxpayer.

Advantages of Using an Options Market

A private options market would have many advantages over the current agricultural programs. Among them:

1) The trading of agricultural options by farmers would not prevent the price from moving to its equilibrium market level. Thus, options would allow the market to give accurate price signals for the optimal allocation of resources. Price support programs, on the other hand, restrict market prices from moving to their equilibrium levels at times. As a result, they send misleading market signals and create a costly misallocation of resources. This means higher costs to consumers.

2) In an options market, the individuals seeking price protection pay for the protection. Farmers would pay for the guaranteed price floor. Under a price support program, the cost of the program is borne largely by the taxpayers, while farmers reap most of the benefits.

3) In an options market, many options with different strike prices are listed for trade. Thus, participants may compare the prices of various amounts of protection

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[18]   Ibid.

and decide how much protection they are willing to buy. Farmers participating in the federal price support program are not given choices of how much protection they seek. They may participate and get the protection stated in the program, and the bill is sent to the taxpayer, or they may choose not to participate.

The Problem with Options

The use of agricultural options may be appealing in theory, but does present some practical problems.

Cost to Farmers: Farmers are accustomed to receiving price protection at essentially no cost. Farmers would likely object therefore to losing this subsidy and to the increase in their cost of obtaining price protection. Yet federal agricultural benefits in any event probably will be reduced by deficit-sensitive budget cutters. This will force farmers to examine alternatives to traditional programs.

Unfamiliarity: Farmers generally are unfamiliar with agricultural options. The gradual reduction of support prices over time, as the Reagan Administration has already proposed, would provide a steadily increasing incentive for farmers to learn how to use options. In addition, the government initially could allocate money for education, and even subsidize the initial premium paid by farmers, to reduce the adjustment costs.[19]

Degree of Protection: The current options market may not permit farmers to obtain the price protection they desire, because options with strike prices that they want may not be listed for trading. The only options now listed for trading have strike prices relatively close to the current market price. A farmer seeking price protection at a price level significantly below the current market price would not be able to obtain such protection from the options listed for trade. As trading in agricultural options increases, however, options with strike prices farther from the market price are likely to be listed. Exchanges certainly will list additional strike prices if there is sufficient trading interest. If there is sufficient demand for greater protection, the market will provide it.

Length of Protection: The option market may not offer farmers price protection for sufficiently long periods of time. Currently, agricultural option contracts are listed for approximately six months into the future. Farmers may want price assurance for several years into the future before making the signifi-

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[19] Obviously, there would be problems in developing and administering such governmental programs. A partial tax credit for the premium paid appears to be a low cost way to subsidize the costs to farmers.

cant investments necessary to produce efficiently.[20] As trading in options develops, however, options for longer periods of time will be available if there is sufficient demand for such options.

Stabilizing Long-Term Income: Although options can be used to provide stability for farm income, options do not support farm prices and thus do not guarantee farm income over the long term. Because the option market will not significantly affect the price level, the option market will not guarantee farmers a particular price in every year. A farmer wishing to guarantee himself $2.00 per bushel may face prohibitively high premium prices for such options if the market generally expects prices to be closer to $1.50 per bushel--or the farmer may find that such options were not even traded. If policymakers believe that farmers should be guaranteed a certain price, whatever market conditions are, then the option market will not satisfy that goal. But in this case, options could be used to stabilize revenues while explicit income transfer payments could be used to guarantee minimum incomes. Such income transfer payments would still misallocate resources because inefficient farmers, who would be forced out of business in a free market, would be subsidized to produce. Even so, such a system of payments would be preferable to current direct market intervention through price support programs, because it would allow the market to allocate the additional production rather than forcing the government to store it at the expense of tax-payers. The use of options and income transfer payments also would be preferable to acreage allotments or forced acreage set-asides, because these similarly do not cause an inefficient mix of inputs that is found when land is limited by government decree.

Exclusion of Certain Commodities: Agricultural options currently are traded on only a few commodities. Additional options will probably be listed for trading when the Commodity Futures Trading Commission-imposed restrictions on the agricultural options pilot program are lifted. Yet, options probably never will be listed for some commodities, such as rye, honey, or asparagus. The demand for such options probably will be too small to create a market. Agricultural options do, however, provide an attractive alternative to price support programs for such major U.S. farm commodities as wheat and feed grains.

Volume: At present, the agricultural options trading may not have sufficient volume and liquidity (that is, the price

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[20] A review of historical data shows that real loan rates have decreased as real market prices have declined. Thus, agricultural price support programs have not actually guaranteed farmers profits for future years. See Bruce L. Gardner, "Consequences of Farm Policies During the 1970s," in Food and Agricultural Policy for the 1980s, ed. by D. Gale Johnson (Wash-ington, D.C.: American Enterprise Institute for Public Policy Research, 1981).

might be significantly affected by orders to buy or sell) to
cover the hedging demands of all farmers without producers incur-
ring substantial price concessions. However, agricultural options
have traded for only a few months. Volume, the number of contracts
outstanding, and liquidity probably will increase as more people
learn about the options markets. Some of the agricultural options
surely will grow large enough to accommodate the total coverage
if required.

Contract Size: The size of current agricultural option
contracts may be too large for small farmers to use. Example:
one option on the soybean futures contract traded at the Chicago
Board of Trade represents 5,000 bushels. Farmers producing less
than 5,000 bushels or farmers producing an amount not divisible
by 5,000 may find the options too inflexible for their use. But
as the market develops, smaller contract units will become avail-
able if demand is sufficient--as has occurred in the case of
commodity futures markets.[21]

These practical problems must be solved before certain
agricultural programs can be replaced with agricultural options.
However, most of these are short-term difficulties, reflecting
the infancy of the market.[22]

The trading of agricultural options can make the transition
from a government-influenced agriculture sector to a market-based
system less difficult for U.S. farmers. Congress can further
reduce the transition costs for farmers by taking the following
steps:

1) gradually reduce the support prices as the Reagan Administra-
tion proposes, to give farmers time and increasing incentives
to learn how to use options instead of government programs;
and

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[21] The Mid-America Commodity Exchange currently trades numerous futures
contracts which are smaller in size than futures contracts traded in
other exchanges. For example, Mid-America trades a 1,000 bushel soybean
futures contract, whereas the Chicago Board of Trade soybean contract is
for 5,000 bushels. Just as Mid-America recognized the demand for small-
sized futures contracts, that exchange or another exchange will recognize
the demand for small-sized options contracts, if it is large enough to
justify the development of a market.

[22] Although the focus of this paper has been on the use of agricultural
options by farmers, options on feed grain futures contracts also could be
used by livestock producers to guarantee themselves a maximum price for
their feed. Livestock producers could buy call options on feed grain
futures and put options on livestock futures to lock in a minimum feeding
margin. In addition, agricultural options could be used by the government
to guarantee it a certain quantity of grain during emergencies. As
advocated by Professor Gardner, USDA could by call options to guarantee
it grain for emergency aid at predetermined prices, even in times of
short crops. See Bruce L. Gardner, The Governing of Agriculture (Lawrence,
Kansas: The Regents Press of Kansas, 1981).

2) allocate some of the savings from the reduced cost of agricultural programs for educating farmers on how to use agricultural options.

CONCLUSION

If the U.S. government would allow market forces to operate in agriculture, as the Reagan Administration proposes, resources would be allocated to their most profitable uses, surpluses would be eliminated, and the U.S. would become more competitive in world agricultural markets. In addition, government spending for agricultural programs would decline significantly.

Now that agricultural options are trading in the U.S., a mechanism is available through which farmers can obtain more effective price protection than is currently available through the government's agricultural programs--and at much less cost to the taxpayer. Farmers could use agricultural options to reduce the price variability that they face when they sell their commodities without disrupting market prices and thus market signals. There will be practical problems in replacing certain agricultural programs with agricultural options. However, if the transition is made gradually instead of abruptly, the adjustment problems will be substantially reduced.

The benefits of using agricultural options instead of price support programs will be better allocation of resources, increased exports and reduced government spending in agriculture. A comprehensive private options market could form the foundation of a transition from a government-influenced agricultural sector to the market-based agricultural industry that the Administration advocates.

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