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THE SOVIET GRAIN EMBARGO

INTRODUCTION

On January 4, 1980, using his most potentially effective response to Soviet military action in Afghanistan, President Carter cancelled contracts for the sale of 17 million metric tons (mmt) of U.S. corn, wheat and soybeans to the Soviet Union. Nevertheless, he undermined the effectiveness of the embargo by allowing the delivery of another 8 mmt of U.S. grain which he felt were obligated to the Soviets under the 1975 U.S.-Soviet Grain Agreement. The objectives of such a policy were ambiguous from the outset. The restrictions could not accurately be described as an embargo, but the avowed aim was to strike a blow at Soviet agriculture by depriving the Soviets of grain and other feed for livestock.

This was the first time the United States had used its "food weapon" against the Soviet Union. In doing so, President Carter exercised his authority under the Export Administration Act of 1979, as amended, to curtail U.S. exports for foreign policy and national security reasons. According to that Act, the Executive must receive the consent of the Congress for foreign policy embargoes, but has authority independently to curtail trade when national security is at stake. In this case, he invoked authority for both reasons. In accordance with the Act, Congress had 30 days in which to veto the action, but did not do so, implicitly expressing its support of the "embargo." The policy is to continue indefinitely, or until the Soviets withdraw their troops from Afghanistan, or until the curtailment is rescinded by U.S. policy-makers.

On January 2, 1981, President Carter officially extended the embargo on grain shipments for another year. When asked about this action, President-elect Reagan stated that ending the embargo, as suggested during his campaign, "is something for a great deal

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of study." He noted that "You have to determine whether we're having as much effect on the Soviet Union or if that's being offset by a worse effect on our own agricultural community."

In light of the ambiguous nature of the embargo policy, many observers have questioned whether the cancelled grain sales represent a symbolic gesture of disfavor or a substantive policy designed to extract a price from the Soviets for their adventurism in Afghanistan. This question has plagued the Administration since the announcement of its restrictions and has been the focus of much political debate. Some observers hold that the embargo should never have been imposed at all. Others hold that it is an appropriate response to the invasion of Afghanistan, but that it has been ineptly handled. The uppermost question in most observers' minds is whether or not the grain and feed controls should be tightened and continued.

The evidence in this paper indicates that if the U.S. were to tighten its controls significantly and seriously seek cooperation from other suppliers in 1981, Soviet citizens would feel the effects and there would be noticeable repercussions in the Soviet economy. With severe grain shortages and increased prices for corn products forecast for the United States in 1981, the short-term domestic impact of bolstering reserves instead of selling to the Soviets would be generally favorable to the United States. Ultimately, the decision on controls should be based on whether or not this is an appropriate short-term policy for the United States to adopt in response to Soviet incursions into Afghanistan and potential Soviet intervention in Poland.

TERMS AND CONDITIONS OF THE EMBARGO: THE GRAIN AGREEMENT

U.S. grain sales to the Soviet Union are subject to the conditions of a five-year bilateral commercial grain agreement, extending from October 1976 to September 30, 1981. The agreement, which commits the Soviet Union to annual purchases of a minimum of 6 mmt of U.S. grain (half wheat, half corn), permits the U.S. grain exporters to sell 2 mmt over this amount without government approval, provided the total U.S. grain harvest in that year is over 225 mmt. All grain sold over the 8 mmt upper limit must be approved or denied by the U.S. government. On October 9, 1979, the U.S. Department of Agriculture (USDA) approved the sale of 17 mmt above this limit for the 1979/80 agreement year (October 1 - September 30).

The agreement was originally designed to protect U.S. consumers and farmers from the market effects of unexpected Soviet purchases of grain, such as those which drove up U.S. bread prices in 1972. In that year, so much grain was sold to the Soviet Union by separate grain companies that grain shortages developed on the U.S. market, driving up domestic prices for grain products.

During the 1979/80 agreement year, the Soviet Union contracted to purchase a greater amount of U.S. grain than ever before. During the first agreement year, which ended in September 1977, the Soviets imported only 6 mmt of wheat and corn. During the second, running from October 1977 to September 1978, they purchased 14.6 mmt (3.5 mmt of wheat and 11.1 mmt of corn). In the third year, Soviet purchases reached 15.3 mmt (11.5 mmt of corn and barley). In October 1979, however, the U.S. government approved the sale of 25 mmt in all, to be delivered during the fourth agreement year, ending October 1980.

Grain as a Weapon

Even though initially advocating the termination of the grain embargo, the incoming Secretary of Agriculture indicated that food can be used for geo-political purposes. In his confirmation hearings on January 5, John R. Block said:

I believe food is now the great weapon we have for keeping peace in the world. It will continue to be so for the next 20 years, as other countries become more dependent on American farm exports and become reluctant to upset us.

The rising trend in Soviet purchases of U.S. grain over the four-year period of the grain agreement explains why grain has become a potential bargaining lever for the United States in dealing with the Soviet Union. Such a lever theoretically gives U.S. policymakers the ability to affect Soviet behavior by threatening cutoffs of grain exports. For grain cutoffs to influence Soviet behavior, Soviet leaders must be made to believe in the seriousness of any U.S. threat to use its "food weapon," and they must strongly fear the consequences.

The grain weapon, besides being a potential bargaining lever, can be used unilaterally to extract an economic price for Soviet transgressions of international norms. The U.S. grain embargo was intended to do just this. It must be remembered, however, that such a weapon can probably be used only once: within two or three years, the Soviet Union will be able to diversify its grain imports. Thus, every advantage which can be gained from this weapon should be taken at this time.

By depriving the Soviet Union of feedgrains, U.S. policymakers have attempted to reduce the weight of Soviet livestock herds and, ultimately, the consumption of meat in the Soviet diet. (Shortages were expected to develop within six months to a year after imposing the embargo.) At the very least, the embargo is intended to slow down the increase in Soviet meat consumption. It is hoped that forcing the Soviets to pay such a price will make Soviet leaders refrain from further actions in the world community such as the one taken in Afghanistan.

Loopholes and Longshoremen

In addition to cancelling the 17 mmt of grain sales, the Administration also suspended the sale of: grain sorghum, seeds, soybeans and soybean meal, meat, poultry, dairy products, and some animal fats. . These products along with meat substitutes such as shrimp, meat extenders and tallow, were placed on a list requiring validated export licences to be approved jointly by the Departments of Commerce and Agriculture. Although technically these products could be licensed for export to the Soviet Union, there is no intention of doing so, and apparently no licenses have been granted.

At the same time, with the effect of undermining the impact of such controls, the Administration elected to allow shipment to the Soviet Union of 7 million tons of grain which had been ordered in previous agreement years, but had not yet been shipped. This decision was to develop a significant loophole in the embargo which partially neutralized its impact on the Soviet economy. While it did not totally negate the rationale for using the "food weapon," the growing number of loopholes allowed by the Administration strengthened and fueled demands to rescind the so-called grain embargo.

The embargo did strike a political chord of sympathy with many groups in the United States. The American Longshoremen's Union thought the policy should have been stricter, and tried to totally cease loading grain on ships bound for the Soviet Union. Their resistance was so strong that the U.S. government had to offer to purchase grain which was supposed to be shipped, but which was clogging traffic at the docks. On January 28, however, federal administrators ordered the International Longshoremen's Association (ILA) in New Orleans to load vessels with the remaining unembargoed grain, and the District Court upheld the decision. By the end of April, all unaffected grains had been shipped to the Soviet Union.

In total, according to the U.S. Department of Agriculture, the United States halted shipment to the Soviet Union of 13 mmt of corn, 4 mmt of wheat, and about 1.3-2 mmt of soybeans and meal between January 4 and June 30, 1980: The embargo had been set into motion, and it remained to be seen what the impact would be on the Soviet Union.

THE BROADER DIMENSION: SUSPENSION OF PHOSPHATE EXPORTS

In addition to the ban on grain and other livestock feed products, on February 25, Commerce Secretary Philip Klutznick announced the suspension of all U.S. sales to the Soviet Union of phosphate rock, concentrates of phosphoric acid, and concentrates of phosphatic fertilizers. These suspensions have been complementary to the grain embargo in that phosphates are important synthetic fertilizers which could reduce Soviet grain yields over the medium term of two-three years.

An embargo on phosphate concentrates could have an impact similar to restrictions on technology exports. Phosphates are synthetic fertilizers and directly affect agricultural productivity. The Soviet long-term goal is to develop a large synthetic fertilizer production capacity itself in order to increase its low grain yields. In the meantime, however, it imports phosphates from the United States, which is still the world's largest exporter of these products. Phosphates, therefore, afford the United States some leverage over the Soviet Union at this time and should be viewed as an important potential instrument of U.S. policy.

Before U.S. leaders decided to place an embargo on phosphate exports, they considered the potential impact on the U.S. economy. The primary U.S. exporter affected by such an embargo was the Occidental Petroleum Company, which holds a twenty-year bilateral agreement with the Soviet Union to sell phosphates in return for anhydrous ammonia. In addition, the U.S. Maritime Administration stood to lose the interest on \$160 million of loan guarantees being held for the construction of U.S. ships for transporting superphosphoric acid to the Soviet Union. In the end, it was decided that the economic price was acceptable in order to impress upon the Soviets how much they depend on the U.S. for these important products.

Another important consideration when evaluating the general impact of the embargo on the Soviet Union is the existence of alternate suppliers. Certain Third World countries are sources for phosphate rock. To close these channels, the Administration negotiated with those states for cooperation in denying the Soviet Union replacements for the embargoed U.S. products. So far, these negotiations have been partially effective.

The East European countries are also potential conduits for transfer of embargoed products to the Soviet Union. The Administration did not place restrictions on U.S. exports of phosphates to these countries in conjunction with its ban on Soviet purchases, which occasioned an exhortation from Senator James McClure (R-Idaho) on February 26, 1980 for the Administration to discontinue exports of superphosphoric acid to Poland and Romania. These exports, however, have not been terminated.

U.S. GOVERNMENT MEASURES TO ABSORB DOMESTIC REPERCUSSIONS

To offset the domestic impact of the embargo on businesses and farmers, the Administration immediately instituted measures to assume Soviet contracts and to take affected grain off the U.S. market so as not to lower grain prices by creating an oversupply. These measures, implemented by the Department of Agriculture to cushion the domestic market effects of the controls, were administered in an organized, effective manner. Although it is extremely difficult in this case to ascertain cause and effect in the grain market, and while the embargo certainly caused disrup-

tions and uncertainty, it does not appear to have lowered farm income below what it might have been without the embargo.

Economic Effects

The principal domestic economic repercussions of the embargo were felt by farmers. Short-term price effects from putting more grain into reserves, from government grain purchases, from the resale of grain company contracts, and from the loss of high-priced sales to the Soviet Union were the principal market effects feared as a result of the controls. Nevertheless, U.S. intelligence sources and the U.S. Department of Agriculture have obtained price data which show that corn, wheat, and soybean prices fell briefly for a few days after the embargo announcement, but quickly regained pre-embargo levels. Although there was disruption in farm activities which should not be overlooked, the basic programs instituted by the Administration to offset adverse price and income effects from the embargo were able to stabilize and even raise farm prices in some instances.

In brief, the Administration program consisted of four measures designed to insulate grain prices on the farm from the immediate and longer term impacts of the embargo:

1. It raised incentives for farmers to participate in the farmer-owned grain reserve program, into which eligible farmers deliver their grain, and from which they sell it, in order to obtain a better price;
2. It permitted the Commodity Credit Corporation (CCC) to assume the contractual obligations of U.S. grain companies to the Soviet Union for wheat, corn, and soybeans affected by the embargo;
3. It instructed the Commodity Credit Corporation to purchase wheat and corn for use in food assistance programs; and
4. It increased levels of federal financing and insurance for U.S. grain exports.

Farmer-Owned Reserves

Through the Food and Agriculture Act of 1977, the United States adopted the concept of holding a national grain reserve through the accumulation of buffer stocks. The Act authorizes the accumulation of privately-held as well as publicly-held buffer stocks. Buffer stocks are essentially synonymous with carryover stocks and constitute that part of the grain on hand at the end of a crop marketing year which exceeds the amount private interests are willing to hold. Both public and private buffer stocks are maintained in the United States.

Stocks owned by the government are purchased through a CCC loan program. A farmer acquires a loan and agrees to hold a

certain amount of grain off the market until the loan is repaid or matures. He can repay the loan plus interest and regain control of the grain, or he may default at maturity, turning the grain over to the CCC.

The producer-held domestic grain reserve program is different. It encompasses both feed grain reserves (corn, sorghum, oats, and barley) and wheat reserves. The Secretary of Agriculture decides when the program will be open and which crops will be eligible for entry. The program is available for farmers complying with voluntary requirements such as production controls. Participants agree to keep their grain off the market for three years, or until market prices go above designated trigger levels. Penalties discourage early withdrawal of grain. In return, the participants are paid the costs of storing the grain -- recently about \$.25 per bushel. Interest charges on CCC loans under the farmer-owned reserve program are terminated after the grain has been in reserve for one year.

Trigger prices occur at two levels. The lower level (called the release price) is the price at which farmers may begin voluntarily repaying loans and leave the program without penalty. The upper level (known as the call price) is the price at which farmers are required to repay their loans. Storage payments end when market prices stay above the release price for more than a month. If prices later fall, storage payments are resumed.

This year, Secretary Bergland opened the producer-held reserve program to all farmers affected by the 17 mmt embargo. There is a good chance that the 1979 over-production of grain may have required increased participation in this program anyway, but the Administration raised the release and call prices, as well as loan prices in order to encourage participation. The specific price actions put into effect by the Administration on January 8, four days following the embargo, included:

- o increasing the wheat loan price from \$2.35 to \$2.50/bu;
- o increasing the corn loan price from \$2.00 to \$2.10/bu;
- o increasing the corn release price for wheat from \$3.29 to \$3.75/bu., which is 150 percent of the new loan price;
- o increasing the call price for wheat from \$4.11 to \$4.63/bu., which is 185 percent of the new loan price;
- o increasing the release price for corn from \$2.50 to \$2.63/bu. which is 125 percent of the new loan price;
- o increasing the call price for corn from \$2.80 to \$3.05/bu., which is 145 percent of the new loan price;
- o increasing the reserve release and call prices for other feed grains comparable to corn;

- o waiving the first-year interest costs for the first 13 mmt of corn placed in reserve after October 22, 1979;
- o increasing the reserve storage payments from 25 to 26.5 cents/bu. for all reserve commodities except oats, which was increased from 19 to 20 cents/bu.

In addition, because corn comprises the greatest share of the embargoed grain, Secretary Bergland allowed corn farmers who had not been eligible previously to participate in the reserve program to participate on a first-come-first-serve basis until reserves reached 7.5 mmt, or May 15, whichever came first.

Farmers' Reactions

Farmers' reactions to the producer-held reserve program have been negative. There are two main objections. First, they feel a sense of humiliation in taking their grain off the market in return for a loan from the government. Second, they would rather simply sell the grain to the government at parity prices or prices that would provide the farm sector with purchasing power equivalent to that which existed prior to World War II.

While these may be valid complaints, they do not relate directly to the effects of the embargo. The debate with the government over parity prices has been in progress for years and farmers saw the embargo as an opportunity to renew this debate. However, the producer-held reserve program is relatively new and its use during the embargo to take great amounts of grain off the market has stirred resentment on the part of those who have never accepted or approved of the scheme.

The American Agriculture Movement (AAM) has been particularly outspoken in its objections to the embargo and to the reserve program. In the opinion of its members, the embargo has been a failure, even though it is regarded as a valid foreign policy tool if used properly. Testifying before the Senate Agriculture Committee on February 25, Pamela Frecks from AAM said in her prepared speech:

A partial embargo such as the one we have, improperly used as it has been, has one end result, and that is lower farm prices.¹

In response to grievances such as this, the Congress passed the Emergency Agriculture Act of 1980. This Act contains many technical provisions to raise loan prices and storage payments in order to help farmers. The Administration maintains that this

¹ Hearings, Senate Committee on Agriculture, Nutrition, and Forestry, "Emergency Agriculture Act of 1980," February 25, 26, 27 and March 6, 1980, p. 39.

Act was not required to reduce the effects of the embargo, but is a welcome boost for farmers.

CCC Assumptions of Contractual Obligations

As a result of the embargo, the U.S. Department of Agriculture negotiated an "exporters agreement" with fourteen exporting companies under which the CCC agreed to assume the contracts for grain sales to the Soviet Union if the companies would provide data showing that they were not profiting from the government's purchase of these contracts.

Under this agreement, the CCC assumed the contracts for all 4 mmt of wheat affected by the embargo and about 11 mmt of corn. The CCC originally had intended to place the wheat in a proposed emergency food security reserve, but this program is still awaiting enabling legislation. As an alternative, the contract rights to the wheat have largely been sold on the open domestic market. The corn, on the other hand, has either been delivered to the CCC, or the contracts have been resold on either the domestic or the world market. The CCC has resold the corn contracts only at the average pre-embargo price of \$2.40, or above. This has kept the price of corn on the market from falling below pre-embargo levels.²

Some observers, including most prominently the farm community, have viewed the resale on the domestic market of contractual rights for sales to the USSR as a price-depressing action. In point of fact, the CCC resold the rights to 8.8 mmt of corn at a weighted average price of \$3.10 per bushel, and the rights to 3.9 mmt of wheat at a weighted average price of \$4.63 per bushel. Soybean rights were almost all sold by May 28, at a weighted average price of \$6.25 per bushel.

These prices were, for the most part, well above pre-embargo levels. Nevertheless, the CCC has come under attack for selling soybean contracts during the period of April 4 - April 22 at lower than pre-embargo prices. In response, the CCC has promised to purchase on the open market an amount of soybeans equal to the rights sold between those two dates. However, as of October 1, this had not yet happened.

CCC Direct Purchases of Grain

Despite the fact that the CCC resold the contract rights to embargoed grain only at pre-embargo prices, or higher, USDA recognized the possible price-depressing effects of putting this grain back onto the domestic market. It was therefore arranged for the CCC to purchase certain amounts of grain directly from

² Penney Cate, Congressional Research Service, Issue Brief IB 80025, Update October 1, 1980.

farmers or county elevators, thereby taking grain off the market. This exerted a price-increasing effect in counterbalance to the possible price-depressing effects of adding to market supplies. The intention was to offset any adverse impact from retendering the rights to the contracts affected by the embargo.

By June 24, the CCC had purchased about 4 mmt of corn at an overall average price of \$2.48 per bushel, according to the U.S. Department of Agriculture. These purchases cost the CCC a total of \$396.3 million. By mid-April, the CCC had completed purchases of 4.2 mmt of wheat, which the government would like to put into a proposed strategic reserve for the country. The overall price of these purchases according to USDA statistics was \$3.68 per bushel, at a total cost to the government of \$569.3 million. Direct grain purchases therefore cost the government approximately \$1 billion.

Other Measures

In addition to the measures taken to stabilize market prices as discussed above, Secretary Bergland has promised that, if necessary, at any time during the course of the embargo, he will institute a paid crop acreage diversion program. This has not yet been found necessary.

The Department of Agriculture has also offered part of its loan budget for building new gasohol distilling capacity. Secretary Bergland has estimated that gasohol could provide a market for up to 3 mmt of grain by the end of 1980. Some feel this projection is far too optimistic, however, as gasohol facilities require from two to three years to become operable. Still, a number of pending legislative measures including tax incentives, loans, and loan guarantees could speed up the expansion of gasohol production by mid-1981 and take some excess grain off the market.

All the above programs, including payment for loans, contracts, interest waivers, storage payment and direct purchases are estimated to have cost the U.S. government about \$3 billion. According to Secretary Bergland as much as half of this could be refunded when loans are repaid and all assumed contracts have been resold.

IMPACT OF THE EMBARGO ON U.S. GRAIN TRADE

The ultimate effect of the embargo has been a restructuring of the world grain market which has also created new markets for the United States. Tempted by premium Soviet prices, other major grain suppliers partially abandoned traditional customers in order to fill Soviet orders.

As a result of these desertions, the U.S. sharply increased its grain exports to Spain, Italy, Colombia, and Japan -- all traditional markets of Argentina, which had decided not to cooper-

ate with the U.S. embargo. Japan purchased more grain than usual from the U.S. as a gesture of support for the U.S. stand against the invasion of Afghanistan. Ultimately, the United States may be able to develop these markets for permanent grain sales in the future.

One of the positive side-effects of the embargo on the U.S. economy may be a reduction in the potential dependency of the U.S. farm sector on its Soviet market. The redistribution of grain customers between the U.S. and other major grain suppliers in 1980 has given the U.S. possible long-term alternatives to the Soviet market. It remains to be decided by U.S. policymakers, however, whether U.S. grain sales to the Soviet Union ought to be permanently reduced. Likewise, other countries will have to decide whether they will continue to supply greater amounts of grain annually to the USSR.

Exports to other suppliers' traditional customers did not account for the entire increase in 1980 U.S. grain exports. Howard Hjort, chief economist at the U.S. Department of Agriculture, has pointed out that U.S. farmers actually experienced an absolute increase in exports during the embargo period. According to Hjort, world demand for grain was almost 10 million tons higher than expected in 1979/80. Drought in Mexico created one unexpected market for the U.S. In spite of the embargo, total U.S. grain exports for the July-June marketing year came to 107.7 million tons which set a new record and was 15.2 million metric tons over the previous year's total.

NEGATIVE IMPACTS OF MODIFICATIONS IN THE POLICY

As a result of the January 12 "exporter's agreement" referred to earlier, an understanding was reached between the Administration and U.S. grain companies that these companies' subsidiaries would voluntarily refrain from selling non-U.S. grain to the Soviet Union during the embargo.

After six months, President Carter made a decision which not only threatened to destroy the effect of the partial embargo on the Soviet economy, but also irremediably weakened the credibility of the Administration's objectives in the eyes of Congress and American farmers. On June 20 (without lifting the embargo), the President announced that the grain companies' subsidiaries would be allowed to sell non-U.S. grain to the Soviet Union. The decision produced the impression that the embargo was no longer a reality and that it should be terminated. In reaction to this decision, legislation was immediately introduced in Congress to rescind the embargo (H.R. 7632, H.R. 7635, H.R. 7731, and S. 2855).³

3 Penny Cate, "Impact of the Administration's Decision to Permit U.S. Grain Companies to Sell Non-U.S. Grain to the Soviet Union," Congressional Research Service Occasional Paper.

In testimony before the Senate Agriculture Committee on June 25, Under Secretary of Agriculture for International Affairs, Dale Hathaway, gave three basic reasons for the Administration's decision:

1. The uncommitted grains from the 1979 world crop had already been sold by June 20.
2. Other grain-supplying nations indicated that policies were in place to restrict their grain exports to the USSR to "normal and historic" levels in cooperation with U.S. requests.
3. These nations complained, however, that U.S. grain company subsidiaries, which normally ship much of the Canadian, European Community, and Argentinian grain to the Soviet Union, were not shipping even the permitted "normal" amounts of these countries' grain to the USSR.

The Administration decided that U.S. companies were being unfairly disadvantaged by being prevented from facilitating "normal" sales by other grain producing countries to the Soviet Union. The shortcoming with such rationale was the omission of a definition for what would constitute "normal" deliveries to the Soviet Union in any given year. Canada, for instance, says it would not be breaking its pledge to cooperate with the embargo if it were to decide on annual exports to the USSR of 5 million tons of grain. The only other year in which Canada sent this much grain to the Soviets was in 1972 when the Soviet grain crop was an unparalleled disaster.

By succumbing to the complaints of the other grain producers, the Administration opened up another large source of leakage in the embargo and confused its ultimate objectives even further. Although President Carter claimed the embargo was still in place, the Soviet Union secured substitute grain from many countries which might have been more restrictive had the United States been more steadfast in its policies. Once again, as with his Olympics policy and his embargo on high technologies to the Soviet Union, the President talked tough, but immediately softened his policy before it had a chance to work.

IMPACT OF THE EMBARGO ON THE SOVIET UNION

The Soviet Feedgrain-Livestock Complex

The specific impact of the U.S. grain embargo on the Soviet economy has been a matter of some dispute. The Department of Agriculture estimates that planned Soviet grain imports of 37-38 mmt fell short by 8-9 million tons in the October-September agreement year. USDA also estimates that the shortfall in projected purchases of grain during the July-June marketing year (an important period for the livestock economy) was 6 mmt.

It is highly possible that although a shortfall of 8-9 mmt of grain was not as great originally planned, it has had the effect of reducing animal liveweights, slowing down growth in the agricultural sector, and in general aggravating problems with the 1980 harvest. These effects are likely because agriculture is the most vulnerable sector of the Soviet economy. Although the Soviets have essentially solved their grain for food problem, they have not been able to organize and propel forward the grain for feed program announced by Party Secretary Leonid Brezhnev in 1965.

The lack of progress stems from a myriad of problems involving a lack of incentives, the competition of private plots for the energies and attention of workers, a chronic lack of agricultural machinery, an absence of efficiency and responsibility on the farms and a lack of know-how for running a modernized livestock complex.

In the first place, in view of the notorious inefficiencies of the Soviet livestock sector, and the drastic crop results of 1979, it is probable that the Soviets were forced to draw heavily on stocks. The Soviets had been able to build their stocks by adding an estimated 19 million tons following the successful 1978 harvest of 287 million tons of grain. This does not mean, however, that their reserves were ample to pull them through 1979. In the first place, livestock numbers had been increased, raising total feed requirements. Secondly, it is not known how much of the amount put in stocks in 1978 were necessary to replace previous drawdowns from 1977 and to re-establish minimum grain reserves.

The Soviet media reported a 1979 grain harvest of 179 mmt -- a 58 mmt drop from the 1978 level. To maintain livestock inventories and avoid forced slaughtering, the draw-down on stocks to compensate for such a large setback probably reduced reserves to "a bare-bones level" according to Under Secretary Dale Hathaway.⁴ Still, it is unlikely that this source would suffice to totally offset the shortage of feedgrain imports. A drawdown in stocks of this magnitude will definitely cause problems for maintaining livestock inventories in 1980 and 1981, in view of the very poor 1980 Soviet harvest, now being estimated at 181 mmt.

Furthermore, the decline in the 1979 harvest was probably even worse than that announced by the Soviets. The Soviets report harvest output in terms of "bunker weight," or gross weight including stones, dirt, moisture, and any rotten grain or other refuse picked up in harvesting, lacking the sophisticated sorting, drying, and weighing technologies used in the West. USDA, therefore, as a rule of thumb, always estimates that at least 10 percent of any Soviet harvest is unusable. In very wet, rainy years such as 1979, this estimate is raised to approximately

⁴ U.S. Senate Hearings, op. cit., p. 45.

13-15 percent. The extent of the disaster with this year's harvest could therefore have been far greater than Soviet officials will ever admit.

Discipline, motivation, and productivity are the greatest problems crippling Soviet agriculture. As long as shortcomings in these areas persist, the Soviet economy will remain vulnerable to disruptions in their grain trade with the West, whether these are partial or full-force.

Availability of Grain from Alternate Suppliers

One important question being asked in connection with the grain embargo is how much grain the Soviets have been able to procure from other major grain suppliers. The level of cooperation offered by these producers is perceived as being the key to the success or failure of the embargo. As with every control policy, however, although multilateral cooperation is definitely a factor in its success, success occurs in degrees.

The United States procured assurances from other grain suppliers that they would not replace U.S. orders, but would only deliver normal amounts of grain to the Soviets. One major point to remember is that the 1979 harvest was so poor in the USSR that the probability of obtaining enough substitute grain was low, even given the minimal cooperation with U.S. policy.

The United States negotiated with Canada, Australia, Argentina and the European Community for cooperation with its embargo. All of these countries were sorely tempted by premium prices offered by the Soviet Union to replace the grain denied by the U.S. To expand their exports, some of them drew down surplus stocks in 1980 to meet Soviet needs. In addition, they diverted grain from their traditional customers to the Soviet Union, restructuring world trade patterns in doing so.

Australia, whose sales to the Soviet Union had never before exceeded 2 million tons, has claimed it intends to sell approximately 4 million tons annually to the Soviets after 1980.

Canada, too, in expressing its resentment of the forfeit in profits which export restraints has cost them, have hinted at permanently exporting greater amounts of grain to the Soviets. Canadian exporting organizations estimate their losses this year to be about 50-57 cents per bushel, which makes their reasoning understandable. Nevertheless, the Canadians may have been willing to make tradeoffs if the grain embargo had been carried out in a more determined way.

Argentina, has redirected its normal pattern of trade to a greater extent than any of the other grain exporters in 1979. Pursuing an aggressive marketing strategy after abolishing its Grain Board some time before, the government allowed its companies to replace all the U.S. orders they could. It reduced customary

exports to Italy, Spain, Japan, Chile, and Peru, selling nearly all of its exportable corn and grain sorghum surplus to the Soviet Union. In return, it received prices of almost 25 cents over the American selling price from the desparate Soviet foreign trade organization responsible for grain imports, Export Khleb. In addition, Export Khleb wooed Argentina into an agreement to sell 20 million tons of corn and grain sorghum, and 2.5 million tons of soybeans to the Soviets over the next five years. The Soviet Vice Minister of Foreign Trade even predicted in April a tripling of total trade between the USSR and Argentina in the next few years, possibly to include cooperation in the trade of nuclear fuel.

The following table shows actual shipments of grain and soybeans received by the Soviet Union during the 1979/80 marketing year.

Table 1
Grain and Soybean Shipments to the Soviet Union
July 1979 - June 1980

(million metric tons)

Supplier	All Grains	Soybeans (estimated)
Argentina	5.1	.6-.7
Australia	3.9	
Canada	3.4	
European Community	.8	
Others*	2.0	
United States**	<u>15.3</u>	<u>.8 (pre-embargo)</u>
Total	30.5	1.2

*includes Eastern Europe, Finland, and others.

**8 mmt obligated in 1979/80 plus grain ordered in previous agreement years, but not shipped until 1980.

Source: USDA

The table shows clearly that, contrary to impressions given by some accounts, the United States itself has been most responsible for diluting the immediate short-term impact of the so-called "embargo." Other countries may be willing to rush in next year and thereafter, but they lacked the overall capacity to channel

much more than 12-13 mmt of grain to the Soviet Union in 1979. If U.S. restrictions had been stricter, the overall effect of the embargo would have been greatly enhanced.

It is true that in the future other exporters of corn to the Soviet Union, which may include South Africa, Thailand, Brazil, and even India, will have time to develop their resources to export more grain to the Soviets. A forfeit will still have been won from the Soviet Union, however, in terms of the high prices it will have to pay to evade the embargo. These prices have forced the Soviets to use scarce foreign currency earnings which it may have planned to spend on other Western goods and technologies. It is improbable, moreover, that substitute suppliers would have time to develop the resources to meet all Soviet import requirements in 1980-81. It is quite apparent that the United States could cause significant shortages and dislocations in the Soviet agricultural economy by extending the embargo for another year.

The Embargo's Impact on Soviet Meat Imports

Experts at the Department of Agriculture expect the grain embargo to have an effect on Soviet meat supplies in 1980 and 1981. In particular, the feedgrain shortage could make it impossible for the the Soviets to meet their overly-optimistic five-year plan for meat production. In 1975, Soviet economic planners called for per capita meat consumption (including poultry) to increase to 63 kilograms (138.6 pounds) by 1980. Actual per capita consumption for 1979 was only 58.9 kilograms (129.6 pounds). In comparison, per capita meat consumption in the United States was 111 kilograms (224.2 pounds) in 1979. Life is not unbearable in the Soviet Union because meat consumption is not as high as in the U.S., but the demand for meat has never been fully satisfied.

As a result of pressures to reduce animal liveweights, average Soviet per capita consumption of meat is not expected to rise, and could decline in 1980. This could have troublesome implications in the Soviet Union, where meat holds great political significance for its leadership. If meat is scarce and prices are high, the USSR could experience uprisings such as the ones which occurred recently in Poland. There have, in fact, been small uprisings in the Soviet Union during the past few years, but these have not received publicity.

A decline in meat consumption could force the Soviet government to import more meat from Western producers. This would significantly raise the cost of feeding the Soviet population. As indicated by the table below, USDA forecasts high Soviet meat imports in 1980.

Such purchases would require the expenditure of scarce foreign currencies (or "hard currency") earned by the Soviets on the world market. Because the ruble is not pegged to world prices and internal Soviet prices bear no relationship to supply

Table 2

Soviet Meat Imports 1971-1980

(thousand metric tons)

1971	1972	1973	1974	1975	1976	1977	1978	1979	1980 (est.)
224.6	130.6	128.5	515.1	515.2	361.5	616.9	182.7	611.3	650

Source: USDA, Update, "Impact of Agricultural Trade Restrictions on the Soviet Union," July 1980, p. 7.

and demand, the Soviets must earn reserves of foreign currency to pay for imports from the West. Hard currencies are usually spent according to carefully laid plans and anything which upsets these plans can affect the channeling of inputs from abroad to other sectors of the economy. The Soviet Union has difficulty producing goods needed by the West, which means foreign currency earnings are scarce. In fact, the Soviets are many billions of dollars in debt to the West at present, which forces them to weigh cautiously the allocations of hard currency earnings.

There could be far-reaching ramifications in the high prices the Soviets will have to pay for alternative grain supplies and greater imports of meat. U.S. intelligence sources, using price data not usually released by world grain companies, have testified that the Soviets were forced to spend at least \$1 billion more in premium-priced grain than they would have paid for American grain in 1979. Spending this additional hard currency on grain and meat could force the Soviets to forego imports of other goods and technologies, depending on the amounts of credit Western countries extend to the Soviet Union.

Soviet leaders have so far been spared the full force of a total cutoff of U.S. grains. A tough U.S. policy in 1980-81 with even minimal compensation would increase the probability of significant repercussions on the Soviet livestock economy. One of the intangibles is that the Soviets have now been warned and they will undoubtedly seek ways in which to diversify their feed imports and substitute other goods for meat consumption. It would require a few years, however, for such a process to produce stable market conditions.

Prospective 1980/81 Soviet Grain Imports

The USDA estimates that the Soviet grain harvest for 1980 will be approximately 181 mmt, bunker weight, with very high moisture content. It is probable that due to unusual amounts of rain over most of the Soviet Union during the harvest, 13 percent or more of the grain crop will be unusable. This will be the

second successive poor harvest for the Soviet Union. It all but guarantees the successful continuation of a U.S. embargo if effectively implemented and coordinated with other grain producers.

Soviet import needs in 1981 will be high because stocks have been drawn down so heavily in 1980, but USDA estimates that the Soviets will not be able to procure more than 20-25 mmt of grain from non-U.S. sources, if that much. Other grain exporters have experienced a wet harvest this year.

The expected Soviet crop of 181 mmt, after adjusting for waste, is possibly under the minimum required to maintain current livestock inventories. A crop this size will undoubtedly be inadequate to meet planned livestock weight increases, or to replenish declines in stocks.

Reports are that meat supplies have already dwindled in certain areas of the Soviet Union in 1980. In some places, beef is available only at very high prices on the kolkhoz or collective farm markets, and not at all in state stores. Observers report that meat appeared in state stores in January and February due to distress slaughtering on farms with very tight feed supplies. However, meat availability dropped again in March, and it now seems inevitable that per capita consumption will decline in 1980.

In sum, the U.S. grain embargo of 1980 was too lenient to have the immediate impact it could have had on the Soviet livestock economy. The Soviets undoubtedly paid a price in shortages of meat in state stores, and in higher prices for substitute grain. There were also inescapable disruptions on Soviet farms and in the grain distribution system.

LEGISLATIVE HISTORY AND POLICY RATIONALE

An embargo in peacetime is a non-military instrument of foreign policy which is only used when a country wishes to engage in limited economic warfare. Its major advantages are surprise and initiative. Its effects are short-term because the country against which the embargo is directed is left to regroup, reassess and respond to the initiative of the country imposing the embargo.

By rescinding some U.S. grain sales in 1980, President Carter attempted to deliver a sound blow to the Soviet livestock economy. Using his authority under the Export Administration Act, he utilized the partial embargo to express resolute displeasure and indirect opposition to the Soviet's brash invasion of Afghanistan. But the Carter Administration, clinging to the graduated response theory, did not use the instrument with full force and ended up causing domestic dissatisfaction, reducing U.S. credibility in the world community and severely retarding the usefulness of the embargo in reaching its objective. Because the U.S. ended up sending about 15 mmt of feedgrains to the

Soviet Union under the partial embargo, the result was a rather unclear signal to the Soviet Union that business simply would not be quite as usual for awhile.

There is little doubt that a total denial of U.S. grains and a determined effort to obtain multilateral cooperation could have made the Soviets pay a heavy price for their delinquency in the world community. The Carter Administration made it appear that the objective of the embargo was a heavy price, and Administration spokesmen have confirmed the fact that the aim of the embargo was not only to get the Soviets to pull their forces out of Afghanistan. Even the farm lobby thought this was a tougher policy than it turned out to be, and that the Administration ought to have done what was necessary to show the Soviet Union its appreciation of the dangers Afghanistan represents to national and international security.

Because U.S. objectives were never clearly defined, especially as other trade with the USSR was continued normally, those who were against the use of an embargo from the beginning saw their logic gradually adopted. These people held that the U.S. had only to raise the price of its grain to achieve the same effect as the diluted embargo. They argue that the "embargo" has been a failure and that the United States has merely deprived its grain producers of a good market. They point out that the embargo has only worsened U.S.-Soviet relations, and that the U.S. has received nothing in return.

The question arises whether the United States had the power to effectively use an embargo as a foreign policy tool, and to obtain cooperation from other grain suppliers. The answer to this question is yes. The United States would probably have had the storage capacity to take 25 million tons of grain off the market and put it in reserves, or redirect it to the marketplace. It also could have used economic means to persuade other countries not to trans-ship U.S. grain or send more than a limited tonnage of their own grain to the Soviet Union. Argentina, for example, could have been given a choice between IMF credits or exporting grain that year to the Soviet Union. Australia could have been given a chance to decide whether it would rather receive military spare parts from the U.S. or send more grain than usual to the USSR. Likewise, the Canadians are dependent on U.S. industrial imports. These countries would then have understood that the U.S. was serious about its policy.

The East European countries present a difficult problem. Some observers feel these countries have to be treated separately from the Soviet Union. In many instances in political and economic spheres of international activity, they are given more liberal treatment. Nevertheless, when imposing an embargo, with maximum surprise and initiative, the East European countries would have to be embargoed, too, because they act as conduits for trans-shipments to the Soviet Union. This fact has been observed and verified by intelligence organizations. Likewise, maximum efforts

would have to be made to obtain cooperation from other grain suppliers to keep grain deliveries restricted to East Europe's own use. The tonnage delivered would have to be strictly limited based on real need.

RATIONALE FOR AND AGAINST AN EMBARGO

In determining the rationale for the use of an embargo, a policymaker should consider essentially two things. First, he must decide whether the provocation has been sufficient. Second, he must calculate the possible response of the embargoed country.

The Afghan invasion offered a strong provocation. The incursion into Afghanistan is potentially the most serious indication of Soviet intentions toward the West since World War II. For the first time, the Soviets used their own military forces to suppress a nationalist movement outside the Warsaw Pact. Coming during a period of strained, but commercially cooperative relations with the West, Afghanistan carried a shock effect which some have compared to Pearl Harbor. The threat to U.S. oil supplies which transit the Strait of Hormuz daily, with Soviet troops 400 miles closer than before, is menacing to say the least. The national security rationale for a strong response was therefore strong.

Calculating the possible response to an embargo requires a long observation of the other country. A country engaging in economic warfare needs not only to know what capabilities the opponent has for reacting, but which ones he intends to use. The goal is to present the transgressor with a situation for which he is unprepared, for which he does not have the proper tradeoffs, thus giving the embargo a chance to work while he reassesses his position. The United States needs to develop greater capacities for determining the intentions of the Soviet Union in the use of its capabilities against the West.

A grain embargo appeared to be a rational policy instrument which did not require extensive long-term planning. Moreover, the Soviet Union had chosen a particularly poor agricultural year for its Afghan gambit, with crop conditions probably worse than Soviet leaders would admit. Even a partial embargo could be fairly certain to create some problems for the Soviets. In addition, grain is easier to isolate than computers or other high technology items because the U.S. is by far the largest supplier of grain to the Soviet Union, and cooperation is probably more easily obtained with an embargo than with multilateral restrictions on other goods and technologies.

One rationale against using the grain weapon focuses on its transgression of the ethics of international behavior. Nevertheless, given the obviously justified objections on humane principles, especially when speaking of an embargo against a starving nation, this rationale is unconvincing when applied to the Soviet

Union. The effects of a meat shortage in the USSR would be a great frustration on the part of all concerned, but would not be starvation.

For some, the overall economic effects of an embargo in peacetime offer a convincing rationale against its use as an instrument of foreign policy. Contrary to this view, the experience of 1980 has illustrated the flexible way in which the market may be restructured to absorb embargoed grain. Increasing demand for grain to meet rising consumption needs all over the world can even absorb the effects of a coordinated multilateral embargo, if necessary. Indeed, world demand for grain has been rising consistently during the 1970s, and shows no sign of stopping.

The vagaries of weather, of course, also play an important role in market distribution and price determination, as they did this year when the U.S. crop turned out to be lower than expected. This development has had a price-increasing effect on grain, which has largely cancelled out the depressing effects feared by farmers as a result of the 1980 embargo. Furthermore, a large portion of the price depressing effects attributed to the embargo by farmers during congressional hearings in June and July 1980 actually were being generated by expectations of a large U.S. grain crop in the fall. Combined with the embargo, a bumper crop possibly could have caused conditions of oversupply and lower prices. Even this train of logic, however, is tenuous and would be impossible to quantify. The great number of world events contributing to the psychological forces which affect prices on the world market are constantly changing and generating adjustment activities.

In sum, the possible humanitarian and economic arguments against using an embargo as an instrument of foreign policy, when there is adequate provocation, do not appear convincing in the case of the grain trade between the superpowers.

CONGRESSIONAL RESPONSE

On Capitol Hill, the 1980 grain embargo has fomented a flurry of foreign policy analysis and legislation to alleviate the perceived distress of the farm community. The general feeling has been one of frustration with the embargo, with pronounced support for lifting the embargo in the Senate.

Coloring perceptions of the embargo are a wide range of views on the subject of trading with the Soviets in general. Senator Strom Thurmond (R-S.C.), labeling the embargo a "halfway measure," has called for a halt to all trade and to the issuance of commercial credits. He has also expressed the opinion that American farmers are absorbing the full effect of the embargo, instead of sharing the sacrifices with manufacturers of high technology items, which supposedly were embargoed but soon were being licensed on a "case-by-case" basis. He pointed out, for

instance, that the Administration sent a high technology oil drilling rig to the Soviet Union in May 1980, during the height of the so-called embargo.

Senator Carl Levin (D-Mich.), on the other hand, has supported the effectiveness of the embargo. On September 26, 1980, he presented a speech in opposition to an amendment offered by Senator Larry Pressler (R-S.Dak.) which would limit funding for the embargo in FY 1981.

Senator Adlai Stevenson (D-Ill.), who from the outset did not agree with the need for an embargo because he believes trade with the Soviet Union is a source of normalcy in U.S.-Soviet relations, has offered a compromise policy. He would entrust the CCC with total authority to sell U.S. grains to the Soviets and to determine the sale price through government-to-government negotiations. Whenever the Soviets take an action which seriously endangers U.S. national security interests, the CCC could raise the price of U.S. grain, according to Senator Stevenson's system.

One problem with this suggestion would be the ability of the Soviet Union to circumvent high-priced grain in the same way it has circumvented the embargo, by purchasing grain from other nations. One of the only reasons the Soviets purchase so much feed grain and wheat from the U.S. is that American grain is cheaper than that on other markets. It is doubtful whether the control of pricing by the CCC would act as a "disincentive to irresponsible conduct," as Senator Stevenson surmises in his September 26 statement on the Senate floor.

Party politics have undoubtedly played a role in congressional assessment of the embargo. On July 3, 1980, Governor Ronald Reagan, then the Republican candidate for President, endorsed the efforts of a group of farm state congressmen and senators to lift the grain embargo. Governor Reagan has said in effect that farmers should not be forced to bear the entire burden of this response to the invasion of Afghanistan. He has pointed out how greatly the Administration weakened the effect of and the justification for the embargo by allowing U.S. subsidiaries to sell the Russians non-U.S. grain, and by delivering substantial amounts of U.S. grain purchased by the Soviets in previous embargo years.

The legislation that Governor Reagan endorsed in July was introduced on the Senate side by Senator Robert Dole (R-Kans.) (S. 2855). On the House side, Congressman James Abnor (R-S.Dak.) and others introduced H.R. 7632, a similar bill designed to rescind the embargo, on June 20, 1980. Since the introduction of this legislation, amendments were offered in both houses to the Appropriations bills for Departments of State, Commerce, and Justice, which would limit funding from any of these agencies for the embargo during FY 1981. The amendment was rejected by a wide margin in the House on July 23, 1980. On the Senate side, Senator Pressler introduced the amendment which was first narrowly defeat-

ed by a rollcall vote (41-40), only to pass subsequently in a voice vote. The measure was ultimately dropped in conference with the House.

CONCLUSION

Within the context of overall U.S.-Soviet commercial relations, the 1980 grain embargo has clearly caused harmful uncertainty and confusion. U.S. objectives were obscured by constantly changing policies during the first year of the embargo with regard to what was and was not allowed to be sold to the Soviet Union by U.S. companies. Vascillation may have also weakened the U.S. government's negotiating position for cooperation from other grain-producing nations. The message conveyed to the Soviet Union regarding the U.S. intentions was murky in that no clear statement of policy on the U.S.-Soviet Grain Agreement was ever made. Because use of the grain weapon clearly jeopardized renewal of the Agreement, U.S. intentions in this matter should have been indicated, rather than implied in a vague manner by honoring the 8 mmt obligation. Leaving the question of duration unclear also probably had a negative impact on the farm community by creating uncertainties about market conditions over the next year. Toward the end of the agreement year (September 1980), some clear indication of whether or not the embargo would be continued was probably in order.

While the embargo clearly had an impact on the Soviet livestock economy, the effects were hard to ascertain because of constant leakages of grain to the Soviets. However, by the end of October, it became clear that the Soviet grain harvest for 1980 would be very low for the second year in a row, making the negative impact of continuing the embargo a certainty. Ultimately, a decision on whether or not to extend the embargo must be made on the basis of whether or not the United States wishes to continue to extract a price from the Soviet Union in response to the invasion of Afghanistan and as leverage against anticipated Soviet actions in Poland.

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