

INSTABILITY IN GRAIN DEMAND AND PRICE:
WHAT ROLE FOR GRAIN AGREEMENTS?

By

E. Dean Baldwin
and
Ed Watkins

ESS 531

Department of Agricultural Economics and Rural Sociology
The Ohio State University
2120 Fyffe Road
Columbus, Ohio 43210

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Introduction

Between 1967 and 1974, rapid increases in farm commodity prices together with increases in food manufacturing and distribution costs have caused the consumer price index for food to increase by 61.7 percent. Consumer interest groups and others have argued that increases in the price of corn, wheat, and other grains cause inflation when higher grain prices result in higher retail meat, poultry, and processed grain prices. Livestock farmers and their suppliers also argue that erratic grain prices cause planning errors, unexpected losses, and increases in production costs. Because of these economic disadvantages, these and other groups have demanded trade agreement policies which might stabilize export demand and cash grain prices.

Although changes in export demand influence grain and retail prices in the United States, other economic and environmental factors are of equal importance. For example, unexpected changes in weather conditions and input prices (fertilizers, petroleum products, etc.) cause grain supplies and prices to change. Variations in domestic feed demands, accounting for about 70 percent of the total demand, have a major influence on grain prices, once the new marketing year commences. Finally, erratic changes in government policies such as the introduction of embargoes, import restrictions, and dollar devaluations also unexpectedly influence grain price changes. Because many factors influence grain and retail prices, some have argued that the introduction of trade agreements would not necessarily stabilize grain prices.

These groups further rationalized that trade agreements are but a form of trade restriction and that trade restrictions are neither desirable nor an

effective means of providing a least cost marketing alternative. Most trade restrictions have been initiated as a barrier to free and open trade rather than as an encouragement for more efficient price determination. Thus, these people view trade agreements as an innocent-looking device which will grow and mature into a complicated trade barrier mechanism.

Export Trends

To more fully understand the importance of changes in export demand on U.S. grain prices, the following factors are examined: the annual U.S. supply of corn and wheat, percent of corn and wheat exported, the volume of grain moving to each destination, and the annual variations in exports to each destination. Since the U.S. share of the world grain market has varied from 31% in 1950-54 to 52% in 1975, U.S. grain producers, livestock producers and consumers are affected by world supply and demand conditions. Changes in the U.S. corn and wheat export markets are highlighted in Tables 1 and 2. Export trends for these commodities characterize trends that are occurring for other types of feed and food grains.

U.S. corn exports more than doubled between 1969 and 1975. Exports as a percent of production increased steadily from 11.7 percent to 24 percent (Table 1). Relatively high income countries, which feed corn to livestock, have been the primary recipients of the corn exports. Approximately 50 percent of all corn shipments have moved to Western Europe. Since transshipments through Canada have not been deleted, corn exports to Western Europe are underestimated, and shipments to America are inflated. Japan was the major importer of corn in Asia. Countries located in Eastern Europe have received corn on a continual basis, while the USSR and mainland China have received corn only in recent years. Although annual exports to the USSR have varied, the major change occurred after the dollar devaluations in 1971 and 1973. Similarly, other importers also

increased their annual imports after the devaluations. For example, shipments to Europe, Asia, and to others increased by 46 percent, 120.6 percent and 172.7 percent respectively (Table 1). The initiation of shipments to China by the U.S. are a result of easing political tensions and the removal of embargoes.

The U.S. wheat exports have also more than doubled, and exports as a percent of production have varied from 38.4 percent to 77 percent (Table 2). Since wheat is a food grain and a relatively cheap source of protein, each year over 50 percent of the total exports moved to the Asian continent. Although Japan imported large quantities of wheat, very large quantities were also imported by low income countries. Wheat shipments to Western Europe were again understated, and were relatively small. Since 1970, countries in Eastern Europe received wheat from the U.S. on a continual basis. In order to meet its specified (planned) internal demands, the USSR has supplemented its domestic wheat supply by buying wheat from the U.S. on a sporadic basis. Again, the major change occurred after the 1971 and 1973 dollar devaluations. After the initiation of the 1972 grain trade agreement, it became politically acceptable to sell grain to the USSR. The political and economical environment also changed in 1973 permitting Mainland China to enter the wheat market.

Variation in exports obviously affect short-run price trends in the U.S. Rapid increases in export volumes result in higher farm and food prices, while export reductions dampen farm prices, in particular. Export volume fluctuations in the 1970's are the result of changes in both world supply and demand conditions. Most of the supply changes were caused by variations in weather. The demand changes were caused in part by the devaluation of the dollar. This policy change has the effect of reducing prices to foreign buyers who in turn bought larger volumes of U.S. grain.

Issues Leading to Trade Agreements

The discussion relating to grain exports is quite complex. Given fixed domestic grain supplies, it is no coincidence that a bulge during any one year in grain exports is closely tied to a similar period of food price increases. Exports will tend to increase rapidly when world food supplies become short. Since U.S. food prices are influenced in part by changes in export demands, consumer interest groups are most concerned about U.S. export policy.

Sporadic increases in demand may result in quite drastic price changes. This makes the farm management decisions more difficult because of price uncertainties. At the very least, rapid grain price changes affect the livestock and poultry feeders plan in a given period. In turn, these repercussions influence the decisions and plans of breeders, cow-calf operators, and suppliers of products used in the livestock industry.

Labor also feels impelled to influence grain trade policies in order to protect their jobs in loading and shipping grain from this country. This is much like farmers trying to protect their markets and income when trade export restrictions are enforced or import restrictions are lifted. Many Americans have serious reservations about any policy which may assist a major adversary in the world power struggle. Others believe that food exports may be used as a bargaining tool to achieve concessions from an adversary. Because of the short run economic and political effects, grain export policies have an impact on consumers, grain farmers, livestock farmers, labor and American shipping interests, marketing firms, and the political process.

Trade Agreements With the USSR

Perhaps a closer look at a negotiated trade agreement would be useful. The USSR grain trade agreement has numerous features:

1) The primary objective is to encourage a country, like Russia, which has an erratic record in grain produced from year to year, to bear some of the costs of stockpiling imports during years of good harvests to be used when weather extremes cause a short crop.

2) It is a "gentlemen's" agreement, not a sales contract. All sales must be consummated annually by private firms in the grain trade. Farmers' organizations do have the opportunity to become more directly involved in grain export sales.

3) There is an escape clause built into the agreement. The USSR has agreed to buy at least six million metric tons of U.S. corn and wheat from U.S. commercial firms in each of the five years beginning October 1, 1976 and ending September 30, 1981. In addition, the USSR has the option of buying an additional two million metric tons during each 12-month period.

The forecast for the 1975-76 year for U.S. grain supply is close to 263 million metric tons. The escape clause allows the U.S. government to reduce the quantity available for purchase in any year when supplies are forecast below the 225 million metric ton level. Should the U.S. want to export, or the USSR want to purchase more than eight million metric tons of wheat and corn in any one year, both governments must agree on the size of the additional shipments.

4) Cash sales for all grain purchases are at prevailing market prices. In addition, the transactions must be spaced as evenly as possible over the 12-month period to minimize grain price fluctuations.

5) The agreement forbids the USSR to re-export U.S. grain to other countries. However, there are not restrictions on export shipments of USSR grain to other countries.

6) The agreement is not legally binding.

7) In return for the Russian purchase agreement for wheat and corn, the U.S. has agreed not to impose any unexpected export controls on these negotiated exports to the USSR. Barley, oats, rye, rice, and soybeans are not covered by the agreement and can be sold to the USSR without advance notice.

8) The agreement provides for a portion of the Russian purchases to be transported in American ships at \$16 per metric ton. Although this shipping rate is above the world shipping rate, it is below the current U.S. shipping cost. Thus, the U.S. government is subsidizing the U.S. shipping industry--not the grain farmer or trade. It is estimated that subsidies to the shipping industry will average \$30 million per year for the next five years.

Consequences of Trade Agreements With the USSR

Trade agreements are not new to the USSR. Since the early 1950's, Soviets were signing trade agreements with their Communist bloc trading partners. This was deemed necessary for centralized planning. Without trade agreements, the economic planners were unable to coordinate domestic and foreign production and consumption patterns. Although the USSR may incur additional costs from storing grain from surplus years to deficit years, overall costs may decline as their economic planning errors are reduced.

With few exceptions (sugar and coffee agreements), the U.S. heretofore has not entered into bi-lateral trade agreements with other countries. The decentralized production and marketing system (private enterprise) has operated without such agreements. Since historic empirical evidence is limited, one can only theorize how the future economic consequences of these agreements may affect the U.S. economy.

Presently concluded trade agreements with the USSR, eastern European countries, and Japan account for one-third of the U.S. exports of corn and

wheat. The trade agreement with the USSR accounts for about only 25% of the total tonnage covered by all trade agreements. The trade agreement with Japan provides for the export of about 2-1/2 times the tonnage of crop products of the USSR agreement. Japan's year-to-year purchases have shown much more stability in tonnage of grain and soybeans purchased than has the USSR (Tables 1 and 2).

One objective of the grain agreement with countries with erratic purchases from year to year (like the USSR) is to encourage those countries to stockpile a reserve of grain during years when they have adequate grain harvests and draw on these stockpiles in years when their crops are limited.

The effect of these agreements on U.S. price of grain in any one year is difficult to predict. The effect on U.S. food prices is also difficult to determine. The total U.S. domestic demand for grain is fairly stable. World demand is growing. World grain reserves from one crop year to another are presently very low.

In this situation, if major production failures occur around the world, the price impact of such short crops is very significant, with or without trade agreements. Countries having trade agreements for U.S. grain in times of short supplies and rising prices will exercise all their options, probably early in the crop marketing year--providing price strength for the grain crops throughout the year. In turn, the U.S. may exercise its option to restrict the amount exported to protect domestic needs. In this instance, trade agreements may indeed restrict the quantity of grain that might be exported from that crop. Consequently, the grain farmer's incomes are reduced, the cost to livestock farmers is reduced, and consumers pay lower prices for food. However, such restrictions could be put into effect with or without grain agreements.

On the other hand, in years when world grain production is adequate for world needs, or in excess of world needs, trade agreements may act as a stabilizer for U.S. grain exports as importing nations exercise their minimum level of the grain agreements commitments and stockpile grain in that year for future lean periods. This action would increase the income to grain farmers, increase the cost to livestock farmers, and increase prices paid by consumers.

The long term effect of trade agreements on the average price of corn and wheat over a period of years is probably not great. However, if future trade agreements or other types of trade policies restrict grain exports, U.S. and world incomes and growth patterns will be reduced. For example, any policy which decreases export demand could temporarily dampen grain prices in the U.S. Initially, grain farmers will reduce production. If losses are occurring, the inefficient producer will go out of business. In short, resources once used to produce grain will become idle or will be used to produce other goods and services.

Because of the decrease in grain production and grain export, imports of relatively cheap goods and services will also decrease. Resources once used to produce grain may be used to produce these goods and services. Since world resources are not being allocated optimally or used to their best comparative advantage, prices of the goods will most likely increase above their previous levels.

The resulting shift of resources from grain production to other uses implies that fewer goods and services will be available to the U.S. consumer. Without a reduction in the money supply and with a smaller commodity bundle, inflation will exist. If the money supply is reduced, or if the appropriate fiscal policy is adopted, the number of unemployed will grow. Indeed, if future trade agreements restrict grain flows, inflation will occur, the number of unemployed will increase, and/or world resources will be misallocated.

On the other hand, it is difficult to empirically document that either the short run embargo last fall (a definite trade restriction) or the previous 1974 embargo had a detrimental effect on prices in the U.S. Grain prices are world prices, not U.S. prices. If, indeed, Russia purchased Brazilian soybeans instead of U.S. soybeans during the short embargo of last autumn, the price effect would be exactly the same. Thus, it is difficult to restrict trade with any type of trade policy.

Summary

An increase in grain exports, by itself, is not inflationary. To both the nation imposing the controls and to the world community, trade restrictions such as import levies, export subsidies, quotas, and licenses, usually have costs which exceed the benefits of the trade restrictions. Current grain trade agreements have not imposed substantial barriers to trade, but such trade policies could well interfere with the free flow of products between nation as these agreements are extended to other nations. The recent trade agreements should shift some of the risk (and costs) of holding grain reserves to nations with erratic production and weather records. Who will benefit from this shift of risk is an unknown.

Unanswered questions include: Do these present grain agreements establish a precedent for future political international commodity agreements?; Will these agreements tend to take on trade restrictive features over time as almost certain adjustments are made?; Will free trade strengthen the "hand" of our adversaries?; What are the "trade offs" that may come to pass as trade and political objectives collide in the international arenas?

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TABLE 1

U.S. CORN EXPORTS TO SELECTED REGIONS, 1969-1975

000 MT

Year	Exports									Export as A % of Production
	Western Europe	S.C. & N. America ³	Asia ⁴	Japan	China	Eastern Europe & USSR	USSR	Other	Total	
1974-75 ¹	14664.7	3083.3	1139.6	5088.6	23.4	2815.6	1164.6	1687.0	28502.2	24.0
1973-74 ¹	14430.6	3077.7	1239.1	6975.7	1758.6	4798.4	4045.6	2591.2	34871.3	20.0
1972-73 ¹	12882.2	2457.1	1588.7	5588.2	840.8	4399.4	3273.6	1158.8	28915.2	12.0
1971-72 ¹	8822.5	1465.0	1101.9	2533.2	--	2450.3	1603.2	424.9	16797.8	12.0
1971 ²	6961.2	1262.5	768.1	2420.0	--	1227.4	200.4	259.3	12898.5	12.0
1970 ²	7146.7	1972.8	546.5	4192.4	--	264.0	--	261.7	14384.1	13.0
1969 ²	6897.3	2131.1	445.3	3657.4	--	564.7	--	256.0	13951.8	11.7

SOURCE: U.S. Foreign Agricultural Trade Statistical Report, 1975-76. Economic Research Service, U.S.D.A.

¹Fiscal Year

²Calendar Year

³Transshipments not deleted

⁴Does not include Japan and China

TABLE 2

U.S. WHEAT EXPORTS TO SELECTED REGIONS, 1969-1975

000 MT

Year	Exports									Export as A % of Production
	Western Europe	S.C. & N. America ³	Asia ⁴	Japan	China	Eastern Europe & USSR	USSR	Other	Total	
1974-75 ¹	2451.7	4166.5	14898.9	3079.0	1495.8	1102.3	978	--	27194.2	67.0
1973-74 ¹	2283.1	5451.8	7868.3	3052.0	2993.8	3541.3	2716.4	4871.4	30061.7	77.0
1972-73 ¹	2882.0	4711.5	6977.6	3372.0	--	10564.6	9369.5	2324.6	30832.3	39.0
1971-72 ¹	1847.2	3545.4	6212.4	2186.7	--	33.7	2.8	1851.4	15676.0	47.0
1971 ²	2238.5	2828.1	4330.7	1987.6	--	576.3	2.1	1041.8	13003.0	54.0
1970 ²	3201.6	3365.4	6595.7	2758.6	--	151.8	--	1364.3	17437.4	42.0
1969 ²	1490.3	2979.9	4685.8	2030.1	--	--	--	901.7	12087.8	38.4

SOURCE: U.S. Foreign Agricultural Trade Statistical Report, 1970, 1972, 1974, and 1975. Economic Research Service, U.S.D.A.

¹Fiscal Year

²Calendar Year

³Transshipments not deleted

⁴Does not include Japan and China