

Agricultural Exports in Perspective

Clifford M. Hardin*

As we open this Symposium on World Agricultural Trade, food is under the economic spotlight, as it has been few times in history. There are two underlying considerations:

1. The continuing problem of creating and maintaining economic prosperity among the farmers of the country.
2. How to maximize exports of agricultural products in order to provide a still greater contribution to a worsening "balance of payments" deficit— or, if you please — how to expand dollar returns from exports to pay for growing imports of oil.

There are those who look at the increase in the size of the typical American farm and the shrinking number of farmers, and who, therefore, conclude that agriculture has lost some of its political muscle. While there is truth in this observation, to stop at this point is to ignore other significant happenings. World population continues to grow at a rapid rate as does individual affluence in more and more countries, developing as well as developed, creating a continuously rising worldwide demand for food.

The American farmer, with his high efficiency and total productivity, has made this country the breadbasket of the world. Agriculture is one economic area, and one of the few remaining, in which we can compete successfully with producers anywhere in the world.

These forces have come together to create a growing public interest in the food supply. Even as late as five years ago, it was hard to get a non-farm audience to sit still for a discussion on food. How times have changed! Concern for food, which at times has bordered on panic, is unprecedented in the history of this country.

We hatched a whole new flock of "instant food experts" — many of whom had never studied food before — and some unbelievably naive things were said and written. But out of all of this, some positive things are occurring. What happens to the weather in Middle United States is noted with concern by peoples on all con-

*Vice Chairman of the Board, **Ralston Purina** Company, St. Louis

tinents. This new interest in food, along with a new and unprecedented **pre-occupation** with human nutritional requirements, seems destined to continue for **several** years into the future. The critical issues have been surfaced, and there is a desire to discuss them openly.

In this paper, I am going to direct my comments primarily to three aspects of the world food picture which I hope will set the stage for the more specialized papers which are to follow. I will discuss first the commercial demand for U.S. farm products — that which is represented by countries with access to foreign exchange who can enter competitive world markets and buy what they want or need. Second, I will discuss the pattern represented by countries with huge nutritional needs and exploding populations who do not produce enough to feed themselves adequately nor generate sufficient foreign exchange to buy what they need.

Third, I will address the school of thought that advocates that we should do something deliberately to limit livestock production, and thereby, make grain available for the export market and for the hungry people of the world. This thesis is likely to be advanced with vigor the next time there is some kind of food crisis.

Now let us focus our attention on commercial demand. The commercial worldwide demand for U.S. farm products has been rising generally over the period of the past two decades and will continue to rise into the **decade** of the 1980's and beyond. When the peaks and valleys are averaged out, farm exports from the United States rose about 5 per cent per year over the 20-year period beginning in 1950.

It seems to me that the potential exists for farm exports to experience annual increases during the next decade that might average as much as **6** or **7** per cent, calculated in constant dollars.

Obviously one of the major forces lending strength to world demand is the growth in population. While most of the growth in number of people will be in the developing countries that are nearly always short of foreign exchange, there still will be some population growth in the developed world, perhaps as much as one per cent per year.

The major force in the growing commercial demand for food is rising affluence. In many countries, incomes of at least a portion of the population are rising and causing an almost automatic and immediate demand for more and better foods for those who have the money — whether they live in developed or developing countries, and whether they live in Europe, Africa, or Asia.

As income levels increase, people start climbing what has been termed the "food ladder." People with the lowest incomes live typically on diets that are high in starch — rice, corn, root crops. Such people crave vegetable oil in their diets, and they buy it when they can afford it. Next, they want protein, including meats.

And finally, they want some of the more luxury-type items — fruits and vegetables out of season, and many of the refined types of foods that exist in the modern supermarkets of the Western World.

This pattern of food preference seems to exist with peoples of all *ethnic and geographic backgrounds* and *all levels of economic development*.

Take, for example, Japan — whose staple food historically was rice. As the Japanese economy has grown and Japan has become one of the industrial giants, individual incomes have increased, and the Japanese people are climbing the rungs of the food ladder in a predictable pattern. First, following World War II when they were surviving on rice, they greatly increased their consumption of vegetable oils, partly through massive imports. Then they increased their consumption of vegetable proteins and began to develop a broiler and livestock industry. In the past few years, in order to support the expanding livestock industry, they have become the world's largest importers of soybeans and feed grains. More recently the Japanese have become interested in the use of soy proteins to extend their supply of fish paste products, such as the kamabokos, at a time when fish supplies are reduced due to the imposition of the 200-mile fishing limits.

We are seeing this same rising demand for animal protein in both Western and Eastern Europe and in Russia, and this lies behind the growing import demand for soybeans and feed grains. It also lies behind the recent interest of the Eastern Bloc countries in the importation of isolated or refined soy proteins to extend their sausage supply even further. Less developed countries, likewise, are changing their food patterns as incomes rise, and they are adding their weight to total world demand.

Further adding to the strengths of world markets is an apparent decision of Russia and some other countries to depart from their traditional pattern in short crop years — that of tightening their belts and toughing it out. Their pattern now seems to be to enter world markets and buy, rather than cut back in consumption.

The trade potential of the People's Republic of China remains an unknown. Their leaders have indicated that they expect China to be a "full participant" in the industrialized world by the year 2000. With that kind of objective vigorously pushed, China could also become a major importer of food.

We need to add to this demand the continuing purchases that will be made by the PL 480, Food for Peace Program, the purchases for food aid by other countries, and the purchases for relief feeding by various United Nations groups.

I have emphasized the positive forces. There clearly are some negatives. Countries with limited foreign exchange sometimes are forced to choose between food and oil. If oil prices should continue their steep climb, the total demand for food would be reduced. On the other hand, if the oil cartel should become less effective and oil prices were free to seek a competitive level, the demand for food would be further increased.

So long as non-recourse loans are used as part of the mechanism for supporting grain and cotton prices, there is risk that the program can interfere with maximizing exports. The level of price supports is the key. Whenever loan levels are above world prices for any extended period and ownership transfers to the Com-

modity Credit Corporation, there can be interference with export flow. This situation was a serious problem with cotton in the late 1960's.

I am sure that other speakers will deal with the possibility of trade restrictions, the impact of greater production of grains and soybeans in Brazil and Argentina, and the ready availability of export credit sources. I am sure also that other speakers will deal with the question of whether our technical assistance programs may succeed so well as to develop export competitors for U.S. producers. I will say only that if this should occur, total demand on balance will be further enhanced.

It is my judgment that the American farmer will be able during the 1980's to produce enough to satisfy at reasonable prices the rising worldwide commercial demand for the crops we grow for export — at least in most years. We must recognize, however, that because of the vagaries of weather, there will continue to be shortages of some crops in some years and surpluses in others.

It is possible that by the end of the 1980's, we will be straining our production capabilities. Much will depend on our ability to continue to increase yields, on whether price and profit opportunities will cause additional but less productive land to be utilized, on costs of energy and other production inputs, and on the general availability of water for irrigation purposes.

Now let us turn to the "Other World."

Two-thirds of the world's people live in developing countries with burgeoning populations. Malnutrition is still rampant and the gap between the "haves" and the "have-nots" is still large.

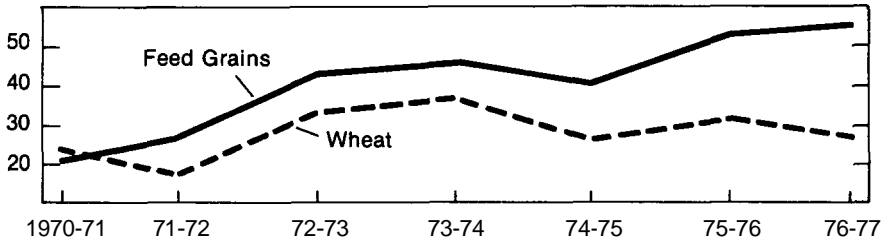
The United States and other developed countries simply cannot begin to produce enough to meet the real nutritional needs in the world. They could not produce that much food even assuming some magic way could be found to finance it. If starvation and malnutrition are to be stemmed, the developing countries simply have to learn how to produce more on their own soil. There is no other way.

But, wouldn't it help, really, if we in the United States were to reduce our consumption of meat and release grain for consumption in the developing world? The answer is, no! To the extent that we reduced the commercial demand for grain and lowered prices, we would be signaling to farmers to reduce output in future years.

I recall vividly in late 1971, when we still had large surpluses of grains as we do today, of discussing whether any way could be found to get those surplus stocks to people who needed them — and, beyond the PL 480, Food for Peace Program, and some of the special church programs, there was no way. There still is no way unless food aid can be expanded, even though today we have large surpluses and prices are low. Hopefully, either through some of the United Nation's sponsored programs or directly, other developed countries and some of the Organization of Petroleum Exporting Countries (OPEC) will increase their financial participation in relief feeding programs to the end that, collectively, we can be more effective in responding to famines and other catastrophes on an emergency basis. Hopefully,

Chart 1

U.S. EXPORTS OF FEED GRAINS AND WHEAT
(Marketing Year - Millions of Tons)



also, we will be able to convince some of our importing customers to build storage facilities on their own shores, fill their bins in years like this one, and even out their own demands to the end that pressure on the market in short crop years will be less severe.

It is technically correct to say that more people can be fed from crops grown on an acre of land when the crops are consumed directly than when the crops are fed to livestock. Even so, I am going to attempt to demonstrate that the existence of a strong livestock industry in 1974 actually helped to alleviate the world grain shortage in that period, and that in the future, the U.S. livestock feeding industry can itself be regarded appropriately as an effective part of a world grain reserve, and an aid to the maximizing of grain exports.

But let us go back to 1974 and examine what happened.

The first chart shows exports of feed grains and wheat between 1970 and the crop-marketing year that just ended. You will note that the increase in feed-grain exports has been dramatic — going from about 21 million tons in 1970-71 to 56 million tons last year. The growth in exports of wheat are not dramatic, but they are still up on a trend basis by about 5 per cent a year. You will note also the modest drop in exports of both feed grains and wheat in the year following the short crop in 1974.

Let us look now at Table 1. Total feed grain production in the United States in 1974 was down *17 per cent*. Now let us examine how the U.S. livestock industry responded to this shortfall. Between December 1974 and November 1975, the pig crop was reduced by *15 per cent* from the previous year. By January 1, following the short harvest, the number of beef cattle on feed was reduced by *26 per cent* from a year earlier and by April 1, 1975, further reduced by *31 per cent* from the preceding year. Total feed grain use in this country from harvest to harvest was actually reduced by *24 per cent*. Yet exports of feed grains were down by only *10 per cent*. Clearly our feeders did adjust quickly and effectively, and because they did, the impact on the rest of the world was less severe than it otherwise would have been. Incidentally, wheat exports were cut more severely than feed grains,

Table 1

**GRAIN & LIVESTOCK - PRODUCTION AND EXPORTS
1974-75 as Per Cent Change from Year Earlier**

Feed Grain Production, 1974	- 17%
Pig Crop (Dec.-Nov., 1974-75)	- 15%
Cattle on Feed	
January 1, 1975	- 26%
April 1, 1975	- 31%
Feed Grains Fed in U.S. *	- 24%
Exports of Feed Grains'	- 10%
Exports of Wheat*	- 16%

*Marketing Year, Tons

perhaps partly because there was little wheat being fed to livestock and there was, therefore, no livestock buffer to draw on.

"But," someone may say, "if you hadn't had all that livestock in the first place, we could have fed still less and helped the world more." Again the answer has to be, no! We expanded our grain producing base in this country in response to a growing consumer demand for meat and other animal products. In the absence of that kind of strong and continuous demand for grain to feed livestock, the acres devoted to feed grain production would have been much smaller, we would have had the same weather, and fewer livestock to take grain away from. Our contribution to the world grain shortage would have been significantly less.

Moreover, without our large livestock population, especially the ruminant animals, we would not be able to convert the tremendous quantities of pasture, forage, and other coarse materials that are available in this country into human food. Also, ruminants can be shifted quickly to roughage feeds in times of grain shortages or high grain prices. In other words, *they act as a "surge tank" in the food line.*

It works the same way in a developing country. Since Biblical times, animals have been used as a buffer against crop failure. Professor Donald Paarlberg¹ writing in 1968 on this subject states as follows: "A big adjuster is livestock — If the food supply is reduced, we eat the livestock and then eat the crops the livestock otherwise would have eaten. The potential of this adjuster is enormous. Not all countries have this shock-absorber in their food supply. The United States has it . . . some countries . . . have long been so near the margin of want that the livestock population is very small and there is little cushion to avert disaster."

There is evidence that more and more of the developing countries are adding some livestock to their economies. Over the period of the 1970's, feed grain use in the United States and the other developed exporter nations has actually dropped. (See Table 2.) In the same period, there have been significant increases in feed grain usage in Japan, Western Europe, and the Central Planned Countries. The lar-

Table 2
FEED USE OF GRAIN

Country/Region		1960/61- 62/63	1969/70- 71/72	1972/73	1973/74	1974/75	1975/76	1976/77	1977/78
In Millions of Metric Tons									
I.	Developed Countries	187.9	252.1	274.2	272.5	232.4	241.4	246.8	256.7
	United States	110.8	136.5	148.1	143.3	107.2	118.1	117.0	125.0
	Other Developed Exporters	13.0	20.7	22.5	22.8	19.5	20.3	20.7	20.9
	Western Europe	60.6	85.6	92.0	93.8	94.1	91.2	95.8	96.9
	Japan	3.5	9.3	11.6	12.6	11.6	11.8	13.3	13.9
II.	Central Planned Countries	77.5	143.8	164.4	168.8	176.6	157.9	177.0	182.5
	Eastern Europe	28.8	46.5	58.5	55.5	61.8	60.1	61.5	62.0
	U.S.S.R.	40.7	84.3	93.9	99.3	100.8	82.8	101.5	105.5
	People's Republic of China	8.0	13.0	12.0	14.0	14.0	15.0	14.0	15.0
III.	Developing Countries	17.3	29.5	32.0	35.8	36.0	39.9	41.8	42.5
	Mexico/Central America	.8	3.0	3.1	4.3	4.6	4.9	5.1	5.2
	South America	10.8	17.6	18.1	21.7	20.0	20.0	20.6	20.9
	Argentina	3.6	5.2	5.8	6.4	5.3	5.4	5.7	6.0
	North Africa/Middle East	4.5	5.9	6.1	5.3	6.6	9.1	10.2	10.0
	Other Developing Africa	.1		1	1	.1	.1	.1	
	South Asia	.4	.7	1.1	1.3	1.1	1.4	1.2	1.1
	India	.3	.6	.7	1.0	.7	1.0	.9	.8
	Southeast Asia	—	.1	.2	.2	.3	.4	.5	
	Thailand	—	.1	.2	.2	.3	.4	.5	
	East Asia	.7	2.1	3.3	2.9	3.3	4.0	4.1	4.5
IV.	Rest of World	—		—	—	—	—	—	
	Total Above								
V.	World Total (million metric tons)	282.7	425.4	470.6	477.1	445.0	439.2	465.6	481.7

