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AMERICAN AGRICULTURE IN THE WORLD SETTING

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## AMERICAN AGRICULTURE IN THE WORLD SETTING\*

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American agriculture faces some complex adjustments, that have been precipitated by diverse influences far beyond the control of the individual farmer. In consequence, the challenge to management in our agriculture seldom or never has been greater.

For example, the costs of farm operation, which during the late 1960's and early 1970's were increasing at a rate of 4 to 5 percent annually, have risen to 14 percent and 15 percent respectively during 1973 and 1974. By contrast, prices received by farmers in the third quarter of 1974 (the latest available figures) averaged 7 percent below a year ago. Prices received for crops were up 17 percent, but prices for livestock and livestock products were down 21 percent.<sup>1/</sup>

If this relative pattern of costs and prices continues in the new crop year, as on an overall basis now seems likely, what adjustments should be made on any specific farm? What crops should be programmed for the new crop year, and in what proportion? To what new degree should opportunity costs among alternative uses of resources be cranked into the decisions? How intensively should expensive fertilizers be used? To what extent can various cost factors on the specific farm be reduced or postponed? Should the livestock enterprises on any given farm be maintained, or closed out, or expanded? What changes are indicated in livestock feeding programs, and in other aspects of livestock management?

You who are professional managers know better than I how individual the answers are when these questions are applied to specific farm units. I pose the questions only to emphasize that far-reaching adjustments are very much involved in the near future of continuing successful farming operations.

In the fall of 1972, there were two speakers on the annual meeting program of the American Meat Institute (with which I was then associated) who discussed the forward outlook for meat supplies. I shall not name the speakers because in no way do I want to appear critical of their interpretations. One was internationally oriented. He expounded at some length on "the critical inadequacy of world beef supplies" relative to the then vigorous international demand for beef. The other speaker was domestic in his orientation. A quick summary of his analysis was; "There is no low-price beef in sight for this decade."

Now, it seems to me we would say -- not in criticism, but in retrospect -- how amazingly fast things can change!

\* Presented at the 1974 Annual Meeting of the American Society of Farm Managers and Rural Appraisers, Omaha, Nebraska, December 3, 1974.

1. USDA, "National Food Situation (NSF-150)," November 1974, p. 6.

What neither of these speakers foresaw at the end of September 1972 (nor did any of the rest of us) was the energy crunch that a year later was so profoundly to change the economic outlook for so much of the world. Neither had they (or the rest of us) at that date grasped the significance of the world's grain-harvest short-fall of 1972; or the degree to which this caused several countries (including but not confined to USSR) to move into the world market for expanded grain imports; or the degree to which the enlarged import demands would pull down world carry-over stocks of grain, from the comparatively comfortable stocks prior to 1972, to the seriously depleted stocks that have since prevailed.

In the 1972-73 marketing year, world total wheat trade expanded by 16.3 million metric tons over the year before. Of this total, the U.S. supplied 92 percent (15.0 million tons). For feed grains, world total trade increased over the year before by 14.3 million metric tons, with the U.S. providing more than the net increase (a total of 14.5 million tons).

The 1973 harvests both for the U.S. and the world -- and both for wheat and feed grains -- improved significantly over those of 1972. But the increases were not sufficient to permit any rebuilding of carry-over stocks, especially in the U.S.

With the consequent tightened supply situation, we have learned all over again -- and perhaps we needed to -- how very small is the difference between a little too much and a little too little of essential agricultural commodities. Also, how very great is the price response when supplies become tight. For example:

#### Season Average Price to U.S. Producers

<u>Marketing Year</u>	<u>Wheat</u> (bu.)	<u>Corn</u> (bu.)	<u>Rice</u> (cwt.)	<u>Soybeans</u> (bu.)
1971-72	\$1.34	\$1.08	\$ 5.34	\$3.03
1972-73	1.76	1.57	6.73	4.37
1973-74	4.00	2.60	13.80	5.57
1974-75 (Nov.)	4.87	3.32	11.10	7.44

Throughout the years since World War II, economic growth and industrialization have advanced rapidly in such areas as Western Europe and Japan. Improved purchasing power of consumers has meant -- as it always does -- that they wanted to eat better. They wanted more sugar, more food fats and oils, and more animal-product foods. Domestic agriculture in these countries expanded toward meeting such demands, but in addition these industrially expanding areas were strongly in the world market to increase their imports. Quite a number of less-developed countries have been moving in the same direction, only to a lesser degree.

From the early 1960's to the present, U.S. wheat production has expanded about 50 percent. The proportion of our production that was exported has varied somewhat from year to year -- but over the past decade this country has furnished from as little as 30 percent to as much as 44 percent of the world's total wheat exports.

Similarly with feed grains: since the early 1960's our total production has expanded about one-third, but we have continued to provide 40 to 50 percent of the world's total exported quantities.

Even without taking time to look at our other important agricultural exports -- such as soybeans, rice, cotton, fruits and vegetables, etc. -- it is clear that any forward look at American agriculture cannot avoid the "world setting" in which, increasingly, we have been and will be involved. But, importantly at this point, there is no one -- no single -- "world setting."

The industrialized countries (the "developed world") will continue in the market for U.S. farm commodities, to the degree that the impact of the energy-crunch, the rampant world-wide inflation, and other aspects of their economic health permit.

In addition to the "developed world," there is the whole complex of food problems among less-developed countries. Again, even this part of the world is not a single entity nor a single set of problems. According to data from FAO, areas of Africa, Latin America, the Near East, and the Far East (excluding China) had total population of 1.75 billions in 1970, of which 25 percent -- or 435 million people -- have a normally insufficient diet. These are parts of the world desperately in need of agricultural and food-handling improvements. They need "Green Revolution" seed. They need fertilizer. They need some farm credit. They need transportation. They need some improved food handling and storage potentials.

But one thing is certain. Neither the U.S., nor the U.S.S.R. and all other developed countries combined, can take on the job of assuring food-adequacy to all of this part of the world. First and most importantly, if this were undertaken on a continuing basis it would be destructive of their own agriculture and its essential development.

Of course, within this part of the world are the areas where -- at wholly unpredictable times and from unpredictable causes -- the normal chronic food problems become the tragic acute occurrence of famine.

Famine is not a term to be used lightly. Famine is, obviously, not a normal circumstance. It is properly described as an unpredictable, localized, acute lack of food. Famine has disappeared from the "developed world," in proportion as agriculture is diversified and thus not all hit by the same adversity at the same time -- and even more, as food can be moved in and people can be moved out of a stricken locality.

But these are requirements that areas of the less-developed world have not yet achieved. And thus famine does at times hit regions such as Bangladesh or parts of India or the sub-Saharan area -- as we have seen in recent years.

These acute conditions do pose at least a humanitarian obligation on more fortunate peoples to help alleviate the acute suffering and otherwise inevitable loss of life that famine would precipitate. The American people should be proud that the U.S. has been the leader in such relief since the passage of P.L. 480 in 1954. Surely the great preponderance of our citizens will want the nation to stay in the lead for this purpose. Food aid to the world's

less fortunate people has cost our government in excess of a billion dollars in each recent year -- and over \$25 billion since the P.L. 480 program was inaugurated 20 years ago. Whether this annual amount is currently adequate is now being much investigated and analyzed. Only one point seems obvious -- that is that the annual amount of food relief is not a constant from one year to another.

With this obviously inadequate summary of the "world setting," let's return to some questions facing our domestic agriculture.

We mentioned above that in the last 12 months the domestic market price of crop products has risen and livestock and livestock products have sharply declined. What has hit our livestock industries is that consumers would not absorb our livestock output at the higher prices that would be required to cover the increases that have been experienced in feeding costs. For two full years, our cattle-feeding industry has absorbed losses -- losses that have left many feeders badly bent or broke. Now they have passed the problem back to the cow-calf industry in the form of as much as a 50 percent drop in feeder cattle prices. The dairy industry, egg industry, and the broiler and turkey business are either in red ink or on the ragged edge. Hog producers still can pencil out a narrow profit margin, but many have chosen to sell their feed crops and cut back on the number of pigs raised.

Export markets for our livestock products are not available, and domestic consumers with inflation-shrunk incomes are in no position or no mood to become vigorous buyers at higher prices.

This combination of factors caused me to look critically at our U.S. production and utilization of major feed-grains -- the reason being a belief that our livestock industries will not return to a more rewarding basis until feed supplies increase and feed costs come down off the moon.

Note Tables I and II, which present the record of production and utilization of corn and milo (grain sorghum) over the past two decades. Note particularly the steadily rising yields -- an aggregate increase of almost 2.5 times since 1950. These yield increases are the consequence of: (a) progressively improved hybrids; (b) increased use of fertilizers; (c) improved control of weeds and insects; and (d) improved timeliness of field operations.

It is hard to believe that long-continued yield improvements will now turn off at the peak levels achieved for both crops in 1972.

Note Table III, entitled "1975 Crop Possibilities." We are not saying these figures represent what will be achieved, but they very well may turn out. The acreage figures are in line with what farmers planted in 1974 (corn) and in 1973 (grain sorghums). Likewise, the yields per acre are not out of line with achievements prior to 1974.

The production figures in Table III would make possible:

- (a) exports at the peak rate of our highest annual level to date;
- (b) food and industrial use, again at the peak yearly rate that we have ever had;
- (c) amounts left for livestock feed, again at the historical high of annual usage.

Let me repeat -- this is not a forecast. It is very much what might happen in a single year of rebound from the weather-induced feed-crop shortfalls of 1974. If this rebound does not happen in 1975, it certainly could in 1976, or in a combination of the two years.

What will such a rebound -- when it happens -- do to feed prices?

How much stimulus will result for our livestock industries?

Would the grain prices become discouraging to crop producers?

There are many "ifs" in the equation. But each "if" and each of the above questions is very much in the near-future of each farm manager.

Table I

U.S. Corn Crop and Utilization

<u>3-year averages centered on:</u>	<u>Acres harvested for grain</u> (mil. acres)	<u>Yield per acre</u> (bu.)	<u>Production</u> -- (million bushels) --	<u>Exports</u> -- (million bushels) --	<u>Fed to livestock</u> -- (million bushels) --	<u>Season average price to producers</u> \$
1950	73.6	37.8	2,780	97	2,827	1.47
1955	67.4	42.9	2,885	122	2,329	1.36
1960	67.4	59.8	3,786	301	3,138	1.04
1965	55.9	70.0	3,918	581	3,215	1.19
1970	58.7	82.1	4,827	642	3,785	1.19
1973 (prelim)	61.0	87.0	5,279	1,134	3,994	2.50
<u>Annual data:</u>						
1969	54.6	85.9	4,687	612	3,795	1.16
1970	57.4	72.4	4,152	517	3,581	1.33
1971	64.0	88.1	5,641	796	3,978	1.08
1972	57.4	97.1	5,573	1,258	4,310	1.57
1973	61.8	91.4	5,643	1,243	4,194	2.60
1974 (prelim)	63.7	72.5	4,621	900	3,478	(Nov.) 3.32

SOURCE: Recent annual data from ERS:USDA, "Feed Situation, FDS-255," Nov. 1974, p 2.  
Earlier data from USDA, "Agricultural Statistics," various issues.



Table II

U.S. Grain Sorghum Crop and Utilization

<u>3-year averages centered on:</u>	<u>Acres harvested for grain (mil. acres)</u>	<u>Yield per acre (bu.)</u>	<u>Production</u>	<u>Exports</u>	<u>Fed to livestock</u>	<u>Season average price to producers</u>
			--	(million bushels)	--	\$
1950	8.5	21.4	182	49	107	1.16
1955	11.3	20.2	228	45	152	1.13
1960	14.0	39.4	552	89	398	.90
1965	12.5	50.0	626	221	527	1.03
1970	14.4	52.8	763	131	672	1.09
1973 (prelim)	14.3	54.8	785	199	620	2.26
<u>Annual data:</u>						
1969	13.4	54.3	730	126	638	1.07
1970	13.6	50.4	684	144	684	1.14
1971	16.3	53.7	876	123	692	1.05
1972	13.4	60.5	809	212	660	1.37
1973	15.9	58.8	937	234	708	2.13
1974 (prelim)	13.6	44.9	609	150	493	(Nov.) 3.27

SOURCE: Recent annual data from ERS:USDA, "Feed Situation, FDS-255," Nov. 1974, p. 14. Earlier data from USDA, "Agricultural Statistics," various issues.

Table III

1975 Crop Possibilities

	<u>Corn</u>	<u>Grain Sorghum</u>
Acres planted (millions)	78	19
Acres harvested for grain (millions)	68	16
Grain yield per acre (bushels)	93	60
Production (millions of bushels)	6,325	960
Exports -- peak-year rate	<u>1,258</u>	<u>234</u>
Remainder	5,067	726
Food, industrial, and seed use -- peak-year rate	<u>450</u>	<u>10</u>
Remainder	4,617	716
Feed use -- peak-year rate	<u>4,310</u>	<u>708</u>
Remainder -- after covering <u>all uses</u> at the level of the peak historical year!	307	8