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X THE LONGER-TERM PRODUCTION OUTLOOK X

Talk by Sherman E. Johnson, Director, Farm and Land Management Research, Agricultural Research Service, U. S. Department of Agriculture, at the 33rd Annual Agricultural Outlook Conference, Washington, D. C., November 29, 1955

The Outlook Approach in Farm and Home Development Work

I assume we all agree that outlook information is designed to guide farmers in their production and marketing decisions. Those decisions have different time spans. Some are of relatively short duration; for example, the question of whether to market hogs at light weights or feed them out to heavier weights. On the other hand, the question of how many sows to breed for spring or fall farrow, covers a production cycle of nearly a year, as do most decisions concerning annual crops. When a farmer makes a decision as to whether to go into or out of beef or dairy production, he is concerned with farm planning over a longer time span. But the effect of such a decision is of shorter duration than the one confronting the young man who is considering farming as a career. Such a decision covers a farming generation, and when a young farmer decides to buy a farm, he may also make a commitment that covers most of his active years on the farm.

As I recall the request for this part of the outlook program, it was in terms of providing an outlook framework for farm and home development work. In that activity you are called upon to provide outlook information for a longer time span than the year ahead. You are working with farmers in helping them to develop the most profitable systems of farming for their special situations over a period of years. This requires looking ahead for at least 4 to 5 years and sometimes much longer. But perhaps 4 to 5 years ahead, or what we might call the middle term outlook, is of most importance. It is also necessary to recognize that farmers start with their present farming systems and their current financial and family situations.

Because changes are likely to require extra time, money, and management, the roughest part of the road to be travelled will be the period of transition from the present farming system to the potentially more profitable one. Frequently, net income actually declines while the change-over is in process.

Although the middle term outlook is the most important in the farm and home development setting, it is also necessary to have in mind the longer term prospects, partly because a longer look ahead might indicate the desirable directions of adjustment that should be carried out in the next 4 to 5 years. At the present time, for example, we need to consider the most rapid growing points in the market for farm products, and try to determine what adjustments in farm production would achieve a better balance in relation to markets, say, 10 years from now.

There are at least five principal factors to consider in the outlook approach to farm and home development: (1) Market prospects, (2) the supply prospects in relation to prospective markets, (3) the farm programs in prospect, (4) the local production and marketing situation, and (5) the individual farm and family situation.

The middle and longer term market prospects have already been discussed by Mr. Wells and Mr. Cavin. Apparently, we can be more optimistic about the market outlook over the longer term than for the 4 or 5 years immediately ahead of us. But even for the middle term, they look for improvement in meat animals and in some of the fruits and vegetables. I also get the impression from the "Livestock and Meat Situation" that roughage consuming meat animals are likely to be in a relatively favorable position.

For a real "bright spot" in the market outlook from 1956 to 1960, however, we have to turn to timber. This product is a relative newcomer in our outlook discussions. But I suggest that we give it a more prominent place in the outlook programs. Those who have timber stands which can be harvested on a sustained yield basis are relatively fortunate. The longer term timber outlook indicates that we should undertake studies to determine whether some of the land now in crops might return a larger income over the longer term if planted to trees. Unfortunately, the long waiting period tends to retard such adjustments even when a long term income advantage seems apparent.

If my interpretation is correct, market prospects for products other than timber can be summarized as follows: Under favorable conditions we can expect a 9 to 10 percent increase in demand for farm products during the next 5 years. This is likely to have the greatest impact on the market for meat and other livestock products. If we look ahead for some 20 years, the market for farm products may increase about 40 percent from the level of the past 2 years. Again, the market expansion is likely to favor livestock, especially the roughage consuming animals.

When we turn to the production side of the picture, we also need to distinguish between the middle term and the longer term outlook. If we begin with the longer look ahead, a 40 percent increase in the market seems like a large order to fill in the next 20 years. But under peacetime conditions, I see no reason for worry about the ability of farmers to supply all the farm products that the market will take at profitable prices. For one thing, 1955 production is running much higher than utilization, even at present prices. The needed increase in output from present levels is closer to 30 percent rather than the 40 percent market projection. Barring unforeseen emergencies, and considering the potential capacity of the farm plant as well as the technical advances in prospect over the next 20 years, the question of "food enough" is not likely to arise. The principal question is much more likely to be how to produce the needed products efficiently, and with returns to farmers comparable with other sectors of the economy.

Market expansion, however, should provide an opportunity for achieving a better balance between production and markets than we now enjoy. But farmers have to survive the next few years in order to benefit from the more favorable long term prospects. And unless serious drought or international emergency intervenes, or unless new foreign markets are opened up, aggregate food and fiber supplies will continue to press heavily on available markets for the next 4 to 5 years. We are producing nearly enough now for the projected normal market of 1960. Farm output in 1955 is about 48 percent above the average of the years 1935-39 and 12 percent above 1947-49.

We are also badly unbalanced in production. We need to recognize that our farm plant is geared up to produce for war emergency and rehabilitation needs; that farmers made great strides in technical progress and invested large amounts of capital to meet those needs. The result is an overall productive capacity more than ample for today's markets, and with serious unbalance in wheat and cotton production.

Those who are not familiar with farming frequently ask why farmers don't gear their production more closely to prospective markets. Mostly because as relatively small individual producers they do not consider the effect of their output on the price of the product. But also because technical change is not reversible. Once investments have been made in improvements to increase output, they become imbedded in the cost structure as fixed costs. Unless prices drop precipitously, individual farmers cannot cut down on even the variable expenses for hybrid seed, pesticides and fertilizer without reducing gross income more than expenses. Moreover, nearly four-fifths of the farm work is done by the operator and members of his family. On most farms, therefore, a reduction in output will not reduce labor costs.

Once farmers have committed themselves and their investments to farming, their alternatives are limited. They can shift to other enterprises if other products have more favorable income prospects, and if their farms are located in areas where other crops or livestock can be produced. In some areas, the younger members of the family, and even the younger farm operators, can turn to nonfarm employment. If many operators give up farming, their land becomes available for purchase or lease by other farmers. This may provide an opportunity for farm consolidation with resulting lower unit costs and higher farm incomes for those who remain.

But giving up farming, or buying additional land, are major decisions. Most farmers require some time to work them out. Perhaps the first inclination when income drops is to weather the storm by maintaining total output, or even increasing it in an attempt to hold income at former levels. Consequently, much of the job of balancing production with peacetime markets is still ahead of us.

Farm price and production programs were developed to help balance production with markets. And I shall make one forecast with considerable confidence that it will prove to be correct. Farm price and production programs of some kind will continue in operation, at least for the next few years. It therefore behooves us to think about the function of farm programs, and how they should enter into our outlook analyses.

They are intended to achieve nationally desirable objectives -- both for farmers and in the public interest. If the changes in farming promoted by farm programs could provide the most profitable opportunities open to farmers, they would constitute powerful incentives in achieving program objectives.

In the outlook approach to farm and home development, the market and production prospects, as these may be modified by farm programs, become the framework within which farm families develop farm and home plans which seem most suitable and profitable in their special situations.

Although the local and community conditions may introduce important modifications, I shall go directly to a consideration of the adjustment problem on individual farms in the light of the farm and family situation.

The Adjustment Problem on Individual Farms

In view of the market outlook for the next five years, the probable cost structure, and the farm programs in prospect, what adjustments can farmers make to carry through the transition years, and to take advantage of the better opportunities that may follow? We have already said that production may continue to press heavily on available markets, but that the market outlook is better for most of the livestock products than for the price-supported crops. Apparently, no relief can be expected from lower cost rates. Prices of building and fencing materials, farm machinery and motor vehicles are edging up, and taxes may continue their upward march of the last 10 years.

No general prescription will fit the diverse situations in which farmers find themselves in different farming areas, on different types and sizes of farms and with varying tenure, financial, and family situations. You are all aware that the problem has to be analyzed separately for each type situation. All that I can do here is to illustrate by showing the ramifications in one farming area. Suppose we take a family-operated farm in the corn-hog-dairy area of the Corn Belt, where the recent drop in hog prices has caused sharp reductions in net income.

Table 1 gives the average results on owner-operated family farms in this area as well as in three other areas, for 1940, 1954, and 1955. Preliminary results indicate that, on the average, net cash income may drop about \$700 on hog-dairy farms in 1955. Suppose we try to illustrate what adjustments farmers with different financial and family situations could make in view of the prospects for the next 5 years. Perhaps the illustration will be clearer if we take two extreme situations with respect to financial and family conditions:

1. A young couple with children too small to help with the work. The operator, a war veteran, who started farming as a tenant after the war, and later bought a farm, say about 1951. His present real estate and short-term debts equal about 75 percent of the present value of his farm assets.
2. An older couple with no debts and some savings in addition to the farm investment. No children at home to help with the work; therefore, dependent on hired labor.

The young farmer will have interest and amortization payments of \$1,968 to subtract from his net cash income, leaving \$2,906 available for family living and for maintenance of the farm plant. He may actually have somewhat less than that because he would hire more labor than the average farm in the area.

Can farmers who find themselves in such circumstances increase the cash income available for family living and farm maintenance? Is it possible to reduce operating costs and maintain output? To reduce costs more than gross income by reducing output? Can net cash income be increased by increasing output? What are the elements of flexibility for a farmer in similar financial circumstances?

Debt service must be paid. This is also true of taxes, insurance, and electricity. These are fixed charges. Some machinery and building replacement can be postponed, but only temporarily. If hired labor is reduced, the operator will have to work even longer hours than he is now doing, and perhaps also sacrifice some of the output. It might be possible to buy less protein feed, but unless previous arrangements have been made to substitute home grown legumes, the output of dairy products and pork might be reduced by more than the reduction of the feed bill.

If a larger acreage is devoted to grasses and legumes, it might be desirable to fertilize the remaining feed grain acreage more heavily in order to maintain production. The eventual result then would be an increase in total output, and probably also an increase in net income to a farmer in such financial circumstances. But it would involve extra cost and risk.

Suppose we now consider the older family with no debts and no children to help with the work. We are assuming that they are not old enough for retirement and Social Security benefits. But they probably could afford to slacken the pace of farm operations even at considerable sacrifice in farm income. They might seed a rather large acreage to grasses and legumes, raise fewer hogs, keep fewer cows, or even shift from dairy cows to beef. They would buy less feed and hire less labor. The risk would be lessened. Net income would be reduced, but this would be compensated by the opportunity for partial retirement. The basic capacity of the farm would be maintained, but it would be held in a partial reserve status. Output could be stepped up whenever such action seemed desirable.

Perhaps there are not many farm families who find themselves in these circumstances, but under present conditions, those who work with farm families could render excellent services by pointing out opportunities for slackening the pace of production where income is not the decisive determinant.

The results shown for Piedmont cotton farms in Table 1 illustrate another problem. Incomes on cotton farms in this area were at relatively low levels even in more prosperous years. Growing local markets may furnish some further opportunities for production of Grade A milk, meat, and some fruits and vegetables. But there has been little opportunity to accumulate capital for needed changes in farming.

Because of limited income opportunities in farming, many farmers in this area have shifted to nonfarm employment, but they have continued to live on farms. Perhaps this shift creates an opportunity for farm consolidation, for changes in the farming system and for higher incomes to those who remain in full time farming. But how is this change to be financed and carried out? Unless better income opportunities are available in full-time farming, should young people be encouraged to enter farming with the prospect of continuing at the income levels shown in Table 1?

I recognize that these are extreme illustrations, but perhaps they portray the wide variety of adjustment opportunities and of problems that arise in the outlook approach to farm and home development.

Balancing Production with Potential Markets

How rapidly we can achieve a better balance of production with markets than we now have will depend upon how many farmers can afford to operate less intensively as illustrated by the debt-free elderly farmer; and how many will have to maintain or even increase output; also on how many will find nonfarm opportunities more attractive than farming. The last change is likely to result in farm consolidation and higher incomes per family for those who remain in farming, but may not reduce total output very much.

As a result of mechanization and other improvements there are many farmers who have equipment and family labor that is only partly utilized. If they cut total production they will reduce the part of their output that is produced at the lowest cost per unit. If they also have pressure for increasing net incomes they are more likely to increase output than to reduce it.

Let me emphasize that I am referring to total output rather than to output of a single commodity. Output of specific commodities may change in line with alternative income opportunities, farm programs and other factors. Assuming average weather conditions, I do not see much prospect of a reduction in total farm output in the next few years. Our current programs attempt to control specific commodities, but not total output. And, as already mentioned, technological advances are not reversible.

A continued cost-price squeeze undoubtedly discourages new investments in farming that would increase output. To some extent, technical progress also is retarded. Better income prospects in other employment tends to reduce the number of workers in agriculture. But these forces operate rather slowly. In the meantime, most farmers maintain their operations in the hope of better days ahead. If they see a margin over variable costs, they may actually increase output as previously indicated.

Increases in total farm output, despite unfavorable cost-price relationships, is not a new phenomenon. It happened in the 1920's. Farm output increased 10 percent from 1918-20 to 1929. It has increased 16 percent from 1945-47 to 1955. Although reasoning from historical analogy is always dangerous, there are a surprising number of similarities between the two periods, also some important differences.

Looking forward, perhaps there is more hope for the market to grow up to our productive capacity than for any shrinkage of farm productive capacity to fit the size of the market. It should be emphasized, however, that market prospects call for shifting of production rather than for much of any increase in output during the next few years. The shifts that seem to be called for -- away from surplus cash crops and into hay, pasture, and eventually roughage livestock -- are of truly heroic proportions. The longer term market outlook points in the same direction. In many areas of the Great Plains, the cotton South, and elsewhere, these shifts also may mean larger family farms and fewer workers in agriculture, but improved incomes to those who remain in full-time farming. How the needed shifts can be made profitable to all farm people is a challenge to researchers, to extension workers, and to farm program agencies.

In the midst of our present worries about surpluses, perhaps we should reflect on how fortunate we are that our concern is with overabundance rather than with shortage. After all, the margin between surpluses and deficits is rather small, as we learned after the invasion of Korea in 1950. A severe drought could reduce our large stocks of feed grains and wheat rather drastically. In the present state of world uncertainty, we need reserve capacity, but we do not need all-out current production. We should seek out ways of maintaining reserve capacity instead of large surplus stocks; ways of shifting farm resources in the direction of the fastest growing points in the market; and ways of achieving a more prosperous agriculture for the benefit of all farm people.

* * *

Table 1.- Investment, production, income, and expenses on four types of farms,
1940, 1954, and 1955

Item	Type of farm											
	Dairy			Hog - dairy			Wheat - small grain -			Cotton		
	Central	Northeast		Corn	Belt		Northern	livestock		Southern	Piedmont	
	1940	1954	1955 ^{1/}	1940	1954	1955 ^{1/}	1940	1954	1955 ^{1/}	1940	1954	1955 ^{1/}
Acres in farm	177	199	201	155	162	163	506	680	690	159	162	162
Total investment .. (Dollars):	9,600	26,300	25,690	15,440	42,500	43,740	10,830	42,640	41,480	4,760	13,970	13,620
Net farm production (Percent of 1947-49)	92	126	124	86	124	128	68	87	120	104	73	101
Production per unit of input (Percent of 1947-49)	99	115	112	92	113	116	87	91	117	106	85	116
Cash receipts (Dollars):	2,715	7,897	8,268	2,928	10,112	9,460	2,022	8,051	9,755	1,135	2,040	2,790
Cash operating expense " 2/:	1,933	4,951	4,953	1,441	4,547	4,586	1,220	3,795	4,047	773	1,413	1,526
Net cash income ...	782	2,946	3,315	1,487	5,565	4,874	802	4,256	5,708	362	627	1,264
Interest & amortization " 3/:	432	1,184	1,156	695	1,912	1,968	487	1,919	1,864	629	613	
Available for family living and farm maintenance	350	1,762	2,159	792	3,653	2,906	315	2,337	3,841	-2	651	

1/ Preliminary
2/ Excludes purchases of new machinery and buildings
3/ Assumes debts equal to 75 percent of investment, and interest and amortization payments equal to 6 percent of debt.

