



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

Production and Consumption of Food; Toward a Better Balance

By Don Paarlberg

Since I propose to venture some tentative speculations, let me first lay out the ground rules and indicate my assumptions. These are assumptions, of course, not predictions. I am dealing primarily with the next five or six years, and will indicate prospective conditions for the year 1960.

1. International tensions are assumed to continue much as at present.
2. Economic growth is assumed to continue at about its normal rate of 2-3 percent per year. The percentage of the population which is employed is assumed to remain much as at present. The general level of wholesale prices is assumed to fluctuate within a narrow range, with perhaps some softness.
3. Population is expected to increase about 10 percent to about 180 million, by 1960.
4. The farm legislation under which we operate is assumed to be the Agricultural Act of 1954.
5. Normal weather, similar to what we have had in recent years, is contemplated.

I know some of you are thinking that what is left after all these assumptions is a sterile and unlikely situation in which serious problems are not likely to emerge and could easily be resolved. In short, I may be accused of solving problems by excluding them from consideration. But it is necessary to make assumptions in order to deal with the subject assigned, and I have made the assumptions which seem to me reasonably probable. Undoubtedly they are the easiest ones with which to work. If a discussion follows this paper, we can re-examine the analysis in the light of other assumptions.

In 1953 the excess of production over consumption was about 3 percent. In other words, with exports and imports of farm products as they were, a 3 percent increase in consumption or a corresponding decrease in marketings would have brought the average annual supply in balance with annual utilization.¹ Stocks on hand are large and will affect market outlets for farm production in the next year or two.

Under the assumed conditions, what over-all supply of farm products would be anticipated by 1960? At least three views prevail as to likely

¹Christensen, R. P., "Needed Adjustments in Farming," *Journal of Farm Economics*, Vol. XXXVI, No. 3 (August 1954), p. 387.

trends in over-all farm production during the next five or six years. One view is that new and more efficient production techniques are likely to be developed and put into use so rapidly that total farm production will tend constantly to increase more rapidly than total population. Another view is that our stockpile of improved production techniques that remain to be applied is much less than it was some years ago. A third view, to which I subscribe, is that figures on total agricultural production are not particularly meaningful, and that the composition of the supply is far more important than its sum. Insofar as one might hazard the totaling of production, I would expect it to increase gradually at a rate of about 1-2 percent per year.

The effect of acreage reductions now under way will be such as to change the pattern of production rather than reduce over-all volume appreciably if past experience is a reasonable guide. I would expect supplies of feed grains and livestock products to increase relative to 1953 in the years ahead, and supplies of wheat and cotton to decrease for reasons that I will give later. If these changes can be made, there is reason to believe that production and consumption will be in reasonably good balance in 1960 under the assumed conditions. If these production changes are not possible, then over-all supplies of farm products during the next several years would exceed the amount the market would take at stable or slightly lower prices by about 3 to 5 percent.² Prices would fall and farm incomes would be reduced.

There is, thus, the prospect that food supplies will be abundant during the years ahead, and the question arises as to how these heavy supplies might be utilized to the advantage of both farmers and consumers.

INCREASED PER CAPITA CONSUMPTION

One possibility, which I will dismiss very quickly as improbable, is that per capita food consumption would be appreciably increased, assuming the same composition of the diet as at present. The reasons are that food is now abundant and relatively low in cost and that income is high and broadly distributed. If the assumptions hold, people will be able to afford a higher level of living in the years ahead than at present. But the share of that added income which would be spent for added total food would be very small. If the aggregate index of farm prices were to decline, this would not be expected to set the stage for an appreciable increase in total food consumption.

From time to time there is talk of food stamp plans and a national food allotment program to meet the unfilled food needs of low-income

²Wilcox, Walter W., "Methods of Increasing Domestic Consumption of Farm Products," *Journal of Farm Economics*, Vol. XXXVI, No. 3 (August 1954), p. 509.

people. The likelihood that plans of this kind would be inaugurated and would reach such a magnitude as appreciably to affect total food consumption appears to me unlikely within the time span and the assumptions that have been indicated.

EXPORTS

There are, in the world outside the United States, a large number of people who, on the basis of common measurements, have tremendous unfilled needs for food. It is sometimes suggested that, because of this need, there should be an indefinite continuation of give-away programs on the part of the United States.

Assistance to meet acute emergency needs can be a constructive form of aid, and does provide a limited and erratic export outlet. Three hundred million dollars has been made available by the Congress over the next three years to meet needs of this kind. Continued gifts, however, are a doubtful kind of help. They tend to displace normal trade, both our own and that of friendly foreign nations. They lower prices and inhibit the production of food in the recipient countries, making these countries dependent upon our continued and increased gifts. In this strange world at least as much skill is required to give products away as to sell them.

Normal export outlets, utilizing the conventional trade channels, are not likely to increase appreciably from present levels during the years ahead. World agriculture has largely recovered from the effects of war. Last year's agricultural production in the world as a whole was estimated at 15 percent above prewar.³ Production of cotton, wool, tobacco, rice, sugar, meat, animal fats, and citrus was at record levels. Production was high, though not at record levels, for wheat, potatoes, beans and peas, edible vegetable oils, and dairy products.

This year, in Public Law No. 480, Congress has provided a new and broad basis for the sale of agricultural surpluses against foreign currencies. Over the next three years, a total of 700 million dollars will be available for local currency sales. Sales are to be made at prices which will not disrupt world prices, and are to be in addition to usual dollar purchases. Foreign currencies acquired under this program will be utilized in a variety of ways, generally intended to build up the economy of the country of origin. Steps have been taken to make effective use of this new authority. Every effort will be made to use this authority to expand foreign trade. The degree of success cannot now be anticipated with accuracy.

While exports are of vital importance for a few crops, they represent

³Burmeister, G., "The Current and Prospective Foreign Trade Situation With Respect to Farm Products," Paper given at the annual meeting of the American Farm Economic Association, State College, Pennsylvania, August 25, 1954.

less than 10 percent of our total production. Such increases as can be attained will be helpful, but our main opportunities for increasing the consumption of farm products are here at home.

SHIFTS IN THE DIET

The various proposals considered up to this time have, in general, been evaluated as holding relatively little promise for increased consumption of American food. We come now to the one type of adjustment which many, including myself, hold in high regard. It is a shift in the composition of the diet, toward more livestock products. Does this type of shift provide an opportunity during the years ahead to keep our agricultural resources largely in use, to consume the production of these resources, and to do this without sharply depressing farm prices and incomes? I believe it does, if we can make the needful changes.

Livestock condense about 7 pounds of dry matter in the form of grain and other feed to about 1 pound of dry matter in the form of meat, milk, and eggs. The other 6 pounds are used for heat and energy or are wasted and cannot be recovered by man. Thus, far more agricultural resources are needed to provide a diet which contains a high percentage of livestock products. Increasing and decreasing livestock numbers is the time-honored method of adjusting the food supply to changing needs. The amount of flexibility provided by this system is tremendous.

Europe normally imports about one-fourth of her food supply. During World War II these imports were cut off, while men, steel, and chemicals normally used in agriculture went to war. Mass starvation might have been expected. But Europe reduced her livestock population. She ate the livestock and then ate the grain and potatoes which the livestock otherwise would have eaten. Thus, she stretched her food supply and avoided starvation.

From 1940 to 1953, crop production in the United States increased rapidly, faster than population growth. Per capita meat consumption increased 12 percent, while per capita consumption of wheat and potatoes declined. Thus, the slack was taken up. There is every reason to believe that per capita consumption of livestock products in the United States could be increased from present levels, if prices were such as to permit it. New Zealand, Australia, Uruguay, and Argentina exceed the United States in per capita consumption of livestock products.

Much concern is expressed regarding current stocks of feed grains. If stocks were reduced to the 1946-50 levels by moving them into consumption in the form of livestock products, they would provide the equivalent of about 5 percent more poultry, eggs, and red meat at current annual consumption rates. Of course, time would be required

to convert feed grains into animal products; liquidation of stocks to the 1946-50 levels spread over a five-year period would provide about 1 percent more poultry, eggs, and red meat per year. In their present form these stocks bulk large. Converted to livestock products, they would be manageable. If all the 25 million acres diverted from corn, wheat, and cotton during 1954 were used for feed grains, hay, and pasture, they would provide about a billion pounds of beef and veal each year, or about 4 percent more red meat than was produced in 1953.

There are numerous advantages to shifting more in the direction of an animal agriculture. There is the obvious advantage to farmers that by this method we could more easily find a market for the production from our entire acreage. There is likewise this unique advantage to the farmer: If production of crops is increased, the price in most cases is depressed much more than proportionately, so that gross income is diminished. For livestock products, a given increase in production also depresses price but not nearly so much as in the case of crops. The gross income from livestock products is slightly diminished by a production increase, whereas the gross income from crops is sharply diminished as production rises. One would not expect livestock farmers to be enthusiastic about the price and income effects of increasing supplies of livestock products. But, undeniably, with a given increase in production, such increase could be handled in the form of livestock products with much less disturbance than in any other manner.

Consumers, of course, would be enthusiastic about an increased supply of livestock products. Considerations of wise land use would also argue for increased livestock production.

Some real difficulties would be encountered in shifting to more livestock products, and they should not be glossed over. A change from cash crops to livestock requires time to get grass established. It requires money to purchase stock. During the interim, which will range from a year to three or four years depending on the area and the type of livestock, income is sharply reduced. This is the reason that out in the Great Plains a shift from wheat to livestock occurs slowly, while the opposite shift can come rapidly. Livestock farming requires special skills which can be acquired only over time, and for some people, not at all.

We could hardly recommend an over-all increase in dairy production under present circumstances. And we can readily understand the reluctance of present beef, pork, and poultry producers to welcome the entry of new producers into the market. But the shift need not be large, as previously indicated, and it undoubtedly would be gradual.

How might resources be shifted from crops like wheat and cotton, which are in excess supply, to livestock products, in order that a better

balance might be struck between the supply and consumption of farm products? Relative prices, if favorable to livestock products, would induce such a shift. This would come slowly, on a selective basis, and in circumstances with reasonable prospect of success. Acreage reductions for wheat and cotton will have the effect of inducing the shift. Cross compliance and compliance with a total acreage allotment, with provision that the diverted acres may be used for forage crops, will encourage a shift. Even here, however, the shift would come gradually and the full effect would not be felt for a period of years.

I have the feeling that within the assumptions specified at the outset, livestock production is almost certain to increase gradually from present levels. Adjustments, if they conform in general to the over-all best interests of producers and consumers, have a subtle way of occurring regardless of how we may wish to guide them.

I have endeavored to evaluate the promise, or lack of promise, associated with various ways of achieving a better balance of production and consumption. I may be wrong. Maybe the one that looks good to me will turn out to be the least promising, and some other proposal which I have discounted will prove to be best. Maybe none of them hold promise. Maybe my assumptions will prove wrong, in which case what I have said will not be relevant.

But this is one thing of which I am sure: Changes of some sort are certain for both production and consumption of food during the years ahead. Nothing remains static. Whatever these changes may prove to be, they can be accomplished more easily within a price structure that embodies some flexibility. Prices can help allocate resources, guide distribution, and influence consumption. The more of this we can do in the market place, in accordance with the economic balloting of individuals, the less we shall have to do with government programs.

As we face the uncertainties which lie ahead, both farmers and administrators can tackle the problems with more freedom than would have been possible prior to August 28, when President Eisenhower signed the Agricultural Act of 1954.

PART II

*Alternative Methods of Stabilizing
Farm Income*

