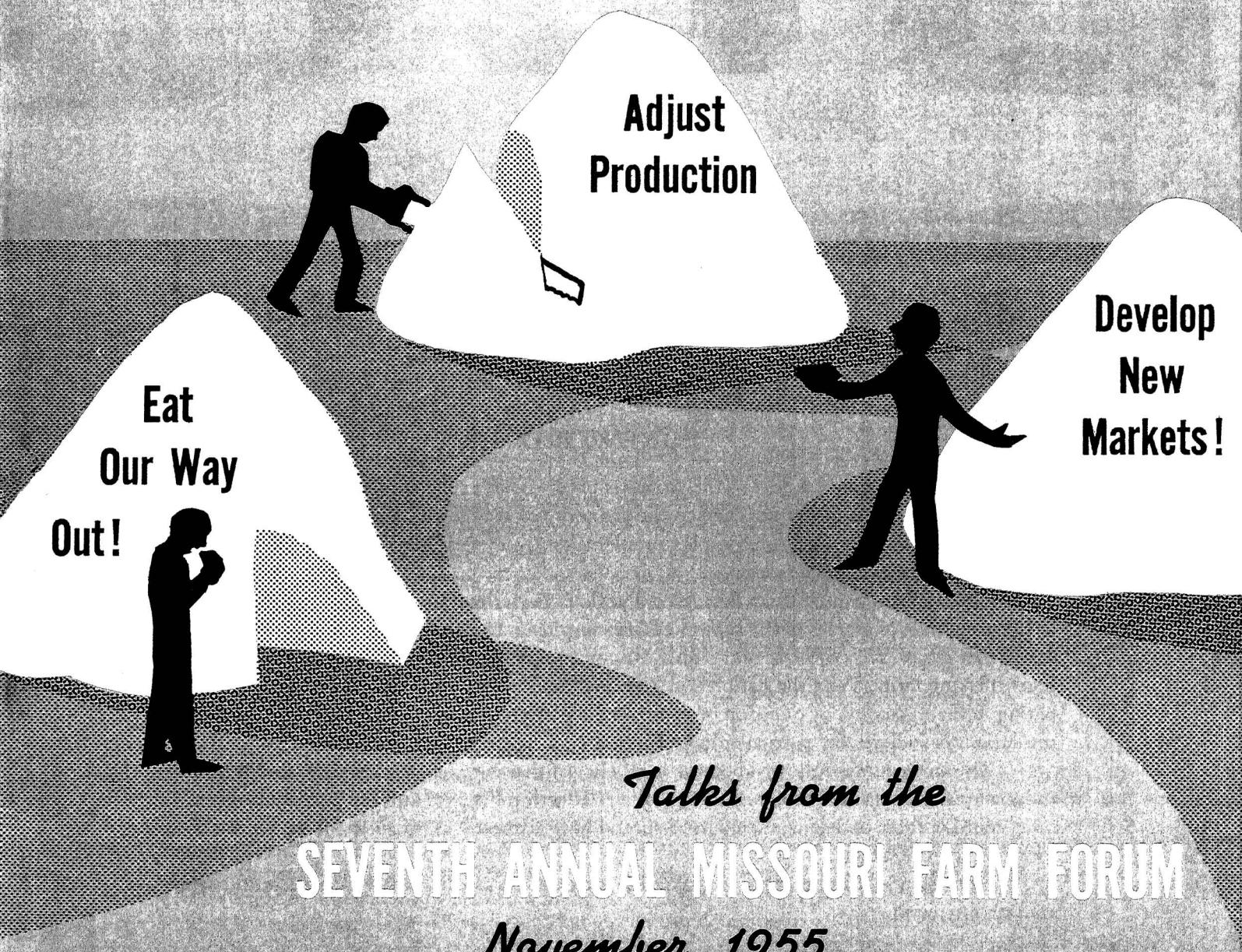


What to do about — FARM SURPLUSES





Setting for 1955 Farm Forum—Jesse Hall Auditorium at the University of Missouri. This event, open to all citizens interested, has been held annually by the University for seven years to present information on policies and problems affecting farmers. A total of 625 Missourians attended this year's Forum on Farm Surpluses.

FOREWORD

Surpluses of farm products—the amounts produced in excess of their use—are matters of primary importance to all farmers and to the economy of the nation. Existence of surpluses in numerous farm products and the complex problems resulting therefrom make the present an appropriate time to discuss the subject.

This seventh annual Farm Forum on Public Policy offers to participants the opportunity to hear a number of aspects of the subject of farm surpluses discussed and to enter into the discussion if they desire. The objective of the Farm Forum is to present information on policies and problems affecting farmers and the nation and give anyone in attendance the opportunity of participating in the discussion by question or comment. No attempt is made to draw conclusions, pass resolutions or indicate any particular line of action.

This procedure is followed because it is believed that every citizen should exercise his own judgment in making decisions regarding policies affecting his own and the public's welfare. In order to make these decisions, each person should have, as nearly as possible, all the pertinent information on the subject.

The Farm Forum attempts to make this information available to participants and others who are interested.

J. H. Longwell
J. H. Longwell
Dean
College of Agriculture

THE SITUATION

FARM SURPLUSES— WHAT, WHERE AND WHY

J. WENDELL MCKINSEY
PROFESSOR OF AGRICULTURAL ECONOMICS
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The topic of this Forum—"Farm Surpluses," has been advertised rather widely across the state of Missouri and even beyond. I doubt if anyone who read that title had any question in his mind regarding what this program is about. Yet I wonder how many people in other countries of the world would believe that "Farm Surpluses" could be a public problem sufficiently important that we would lay aside all our other important business for two days to discuss its possible solution. Would they have any idea that our concern is about substantial quantities of food and fiber with which we do not know what to do?

Since this topic was chosen for discussion at this Farm Forum, a great many people have told me that in their judgment this was the big question in agriculture today. Recent issues of every major farm magazine that I have seen have made some reference to the severity of the problem. Officers and leaders in all the major farm organizations have spoken or written of the importance of the problem. It has become the subject of discussion, not only of farm groups, but of almost all of the consuming public. It has recently become a favorite topic of discussion for feature writers for our newspapers and magazines. We are told that there are few issues that will receive so much attention in the coming election.

Frequently when a term gets such wide usage and adoption its specific meaning gets pretty fuzzy. It seems wise at the outset of our discussion here that we take some time to carefully define exactly what it is we are talking about.

Definition of the term itself might be a good place to start. What is a surplus? The simplest definition is that a surplus is "more than you need." Webster defines surplus as "That which remains when use or need is satisfied."

At this point we are very little better off than we were when we set out, since now we are forced to make some kind of evaluation of this word "need." I am sure that anyone of you, by driving only a little out of your way as you came to Columbia, could have found evidence of need for, or a use to which we could put, any product grown on our farms here in America. So this definition takes on meaning only when we relate to each other such questions as: How much do we need? How much would we like to have? How much can we afford to have?

I imagine these questions will come up for consideration later in our program, so let's not pursue them further at this time. Perhaps at this time we can make our definition sufficiently explicit by noting that we do have a substantial volume of agricultural products for which we cannot find a use at the *price* which would have to be paid to get them out of storage and into some use.

So price becomes the central issue. It becomes necessary for us to say something about price and its relationship to this situation.

Goals regarding price are not always the same for one group as they are for another. In fact, they frequently are quite contradictory. On the one hand we would like the price of things to be sufficiently low that all our people could enjoy them in generous measure. Henry Ford is given credit for getting cars cheap enough so that all of us could have them. One of the biggest boons to our present standard of living is the production of mass quantities of electrical energy at prices low enough that most of us can afford to use it rather generously. And so it goes from the consumers side—we strive to get the price of the material goods of life sufficiently low that virtually everyone can participate in their consumption.

On the other hand, to the producer, price is an important component of income. And from this standpoint we are interested in the highest possible price. Specifically, in agriculture, we want prices sufficiently high that those of us who farm receive sufficient income when we sell our products in the market place that we can participate in the good things of life along with members of other segments of our economy.

We have had enough experience in agriculture in this country during the past 40 years wherein prices of farm products have not been sufficiently high to grant this purchasing power to those engaged in agriculture, that we have come to believe it necessary to exercise some regulation or control over prices of farm products to assure this last objective.

Briefly, all of our efforts to so regulate the price of farm products have resulted in a quantity of agricultural products which we have been unable to use at the price so regulated. In other words, under the price support programs as we have known them in recent years, American farmers have been willing to produce, and indeed have produced, more agricultural products than consumers in this country and other parts of the world have been willing to use at the prices which they would have to pay.

So we resolve this difficulty of definition by noting that we have surpluses of any goods only at some particular price. Almost any conceivable quantity of a given commodity can be used at some price, and at any higher price, less will be used. I suppose that we could say that an ideal situation prevails for a particular commodity when the price is sufficiently high to reward fairly those who help produce it, and at the same time low enough to allow generous participation in its consumption by all of our people. Apparently, we have been unable to reach this ideal situation insofar as several important agricultural products are concerned. We have, through our price support programs, established a minimum price purported to be the price which meets our goal for the producer—in this case the farmer. But at that price consumers have been unwilling to take all of the product that farmers have been willing to produce. In our attempt to assure this so-called satisfactory price, agencies of the federal government have offered to buy all of the product (within certain limits of qualifications) which farmers cannot sell to consumers at the established price. Our so-called surpluses have accumulated because of the particular kind of price support programs which we have been employing.

So what we are discussing under this title of Farm Surpluses is that store of individual commodities that

has come into existence because farmers were willing to produce them for the price at which they could be sold to the CCC, but consumers were not willing to take them at the price which they would have to pay.

What Are the Commodities Involved?

The number of individual commodities involved is not large. We can almost count them on the fingers of our two hands.

Measured in terms of dollar value, on July 31st of this year, three-fourths (77%) of these surpluses were wheat, cotton, and corn, ranked in that order. In addition, there are tobacco; dairy products consisting of butter, cheese and dried milk; rice; wool; cotton-seed; oats; barley; rye and grain sorghums. Then there are a few others which add up to several hundred thousand dollars but are relatively insignificant compared to these. All together they represent an investment of about $7\frac{1}{4}$ billion dollars. And if that kind of figure is difficult for you to comprehend, it means \$36.30 worth for each member of your family and of all other families in the United States. Almost every grain storage elevator in the United States is full of them. Because of them; some 15,000 commercial elevators have government storage contracts. The CCC owns some 185,000 steel bins of its own, which cost about 200 million dollars to erect and some \$200,000 per day to operate. Retired ocean-going ships have been parked in strategic bays and rivers and filled with wheat. Dairy products, food fats and oils, and the like must be kept in cold storage warehouses. Some of these commodities can be found in almost every kind of commercial storage facility that we have.

Let us look at them one at a time.

Wheat seems to be the biggest problem and in largest surplus. Total wheat supplies for the current year are at a record level of 1,935,000,000 bushels. During the last five years we have used, on the average 984,000,000 bushels, a little bit more than one-half the amount of wheat we now have on hand. Those five years included some years of rather heavy exports due to world situations which no longer exist. The last year we used only 585,000,000 bushels in the United States and the domestic use for 1955-56 is estimated at 609,000,000 bushels. If in this coming year we export about the same amount that we have exported in the past year, which was 273,000,000 bushels, our total disappearance will be 880,000,000 bushels, still 100 million bushels less than the average of the past five years, and only 45 percent of our total supply. Of this 1,935,000,000 bushels in our total supply,

1,051,000,000 bushels are owned or pledged to the Commodity Credit Corporation, and constitute what we are herein classifying as the surplus of wheat. The CCC has \$2,227,000,000 invested in this wheat or in loans to farmers on wheat pledged to the CCC.

Of these total stocks of over one billion bushels owned by the Commodity Credit Corporation or pledged to it, the CCC owns 927,000,000 bushels. These 927,000,000 are stored by Commodity Credit as follows: 54,000,000 bushels in Commodity Credit Corporation bins, the kind you see over the country close to county seats and sometimes at other strategic locations in the county, 307,000,000 bushels in country warehouses, 457,000,000 bushels in terminal elevators, 87,000,000 bushels in 312 retired cargo ships, a part of the so-called "mothball fleet," in the Hudson River in N. Y., in the James River, Virginia, and a couple of points on the Pacific Coast. (See Table.)

So in summary we could say of wheat that the government owns more than enough wheat to last us one entire year, and our total supply at the moment is sufficient to last two years if we have a complete failure in our wheat crop. And I might point out that the worst wheat crop we have ever had, during the

dustbowl thirties, was considerably more than half a crop. Since that time variations in production seldom have been larger than 10%.

The next commodity in importance insofar as dollar volume is concerned is *cotton*. Our average annual production in the past 5 years of 14 million bales has not been vastly greater than our average annual disappearance of 13½ million bales. However, as of October 1, we had on hand and in the field waiting to be picked almost 24 million bales. Commodity Credit Corporation has slightly over 8 million bales in hand, representing an investment in inventory and loans of \$1,622,000,000. Which means that we would have on hand three-fourths enough cotton to last us a year if we had a complete crop failure, two-thirds of a year's supply in the hands of the Commodity Credit Corporation.

Rather drastic production controls on cotton plus rather attractive alternative opportunities in much of the cotton country, in soybeans, corn, grass and some other crops using less labor, have resulted in a marked reduction in our carryover of cotton, compared to the late 30's and first half of the 40's.

Now let's look at *corn*. When the corn is all in

GOVERNMENT STOCKS OF MAJOR AGRICULTURAL COMMODITIES AVERAGE ANNUAL PRODUCTION,
AVERAGE ANNUAL DISAPPEARANCE, AND TOTAL SUPPLY OCTOBER 1, 1955

Commodity	Average Annual Production 1950-54	Average Annual Disappearance 1950-54	Total Supply Oct. 1, '55	CCC Stocks Owned & Pledged	Approx. Dollar Value (million dollars)
Wheat (million bu.)	1,087	984	1,930	1,051	2,227
Cotton (million bales)	14.1	13.4	23.7	8.1	1,622
Corn (million bu.)	2,887	3,074	4,137	970	1,518
Barley (million bu.)	279	281	537	77.4	72.7
Oats (million bu.)	1,340	1,355	1,971	70.1	42.8
Sorghum Grains (mill. cwt.)	144	121	297	75.0	133.5
Rye (million bu.)	20.1	24.1	48	8.6	10.15
Tobacco (million lbs.)	2,181.6	2,009.1	6,205	851.7	430.9
Wool (million lbs.)	135	135	203	68	72
Milk Equivalent (bill. lbs.)	119.9	111.8	11.13	7.087	223.24
Non-fat Dry Milk Solids (million lbs.)	1,121.2	713.6		86.3	
Butter (million lbs.)	1,345.7	1,406	295.8	211.7	
Cheese (million lbs.)	954	1,212.8	555.6	302.4	
Total value for these commodities, October 1, 1955			\$6,129,050,000		
Total value of these commodities on July 31, 1955			6,505,728,876		
Total of "other" commodities on July 31, 1955			505,093,954		

C.C.C. STOCKS OF GRAIN AS OF OCTOBER 1, 1955 BY POSITION (1000 bushels)

Grain	C.C.C. Bins	Country Elevators	Sub-terminal Elevators	Terminal Elevators	In Transit	Total Stocks	Pledged as Collateral on Loans
Corn	550,999	83,996	9,265	22,334	14,706	681,300	288,706
Barley	2,340	25,992	441	21,908	6,702	57,383	20,018
Oats	13,557	15,041	267	12,237	4,436	45,538	24,559
Rye	1,651	1,774	31	1,835	1,746	7,037	2,800
Flaxseed	4	234	8	360	1,015	1,621	764
Soybean	50	85	603	1,790	2,289	4,817	2
Grain Sorghums (1000 cwt.)	8	33,604	22,602	7,549	4,230	67,993	4,413
Wheat	53,830	307,435	224,131	232,957	108,536	926,889	124,100

this fall we will have approximately 4,137,000,000 bushels. Note column 3 in the table. In the last five years, we have produced on the average 2,887,000,000 bushels per year as shown in column 1 of the table. This four billion plus bushels of total supply will be on hand to meet needs that have averaged just over three billion bushels in the last five years, as shown in column 2. This means that we will have about one-third of a year's supply above our needs. Commodity Credit Corporation owned 970,000,000 of these bushels on October 1, constituting an investment of \$1,518,000,000 as shown in the last two columns of the table. Slightly more than one-fourth of the three billion bushels being produced this year will be eligible for price-support. As a result of the price support program now in effect, much of it will move into Commodity Credit hands as the season progresses. By spring Commodity Credit likely will own or have pledged at least one-third of an average year's needs of corn.

You will note on the second table that more than half of these government owned or controlled stocks, 550,999,000 bushels to be exact, are stored in the bin sites with which you are familiar—almost 84,000,000 bushels in country elevators, 31,000,000 bushels in sub-terminal and terminal elevators, and almost 15,000,000 in transit from some spot to some other spot. In the last column note 239 million bushels are pledged as collateral for loans. Practically all of this corn is still sealed in cribs on farms in the commercial corn belt.

While we are thinking of corn we should look at the other four feed grains because there is a great deal of substitution of one of these grains for another, especially in our feed uses. If we add government stocks of barley, oats, sorghum grains and rye as shown in column 4 to government stocks of corn we increase the total amount of feed grains owned by the government almost one-fourth, making our total 1,200,000,000 bushels. Our carryover, that is the amount of grain left at the end of each year, has been increasing each of the last four years. Our carryover on October 1 this year was just about twice the 20 million tons on hand in October 1952. This points to another facet of our surplus problem which we have not explored, namely the consistent tendency for ever increasing supplies and carryover in those price supported products for which there are no production controls, or relatively ineffective ones.

For tobacco, total supply equals almost three times our average annual production and need. But this is a situation which is not uncommon for tobacco.

Commodity Credit stocks account for a little more than two-fifths of a year's consumption.

Wool, on the next line, presents a less striking situation than some of these other commodities. Since the support price program has shifted to a payment plan rather than a loan program which results in acquiring stocks, the government has been working itself out of the wool business, and as of October 1 owned a relatively small amount as indicated in the last two columns of the table.

Likewise, investment in dairy products has decreased markedly in the last couple of years. The government owns dairy products in the form of butter, cheese and dry milk solids. In terms of the pounds of milk that it takes to make these products which the government owns, they own less than 7 percent of an average year's needs as indicated in column 2 and 4 of our table opposite milk equivalent. The investment therein is over 2 million dollars. Again this represents a rather sharp reduction over recent years.

There are a number of other commodities involved in our price support government storage program. In total value and in importance to us as farmers they are much less significant than the ones we have just mentioned. Total investment in these stocks at the present time is approximately 7 1/4 billion dollars.

Effects of Farm Surpluses

Now what is the effect of having these surplus commodities around?

First, we can say that they do provide insurance of a plentiful food supply, come any misfortune in production as serious as our country has ever known. Similar stocks proved extremely valuable in the early stages of World War II and at the time of the Korean incident. The larger our population grows and the smaller the world becomes in terms of striking power of an enemy, the more important it is that we insure a food supply that will last through whatever adversity may strike. Most of these commodities can be converted rather quickly to food stuffs, and our supplies of wheat, corn and other feed grains are sufficient that mere lack of feed would not restrict our expansion of livestock production. Certainly a stockpile of food and feed products is as important as stock piles of any other strategic materials. But note that our stock pile of agricultural commodities resulted wholly from our efforts to maintain support prices, and is in no way the result of careful consideration of how much we need for safe reserves.

So far as I know, no one has ever determined what adequate reserves of these commodities would

be. Reserves would be held without any government action as firms in the industry are anxious to maintain stocks which will insure their continued operations through lean years or other bad times. The quantities of wheat, cotton, and corn now in government hands are in excess of the amounts traditionally held by industry for this purpose. John D. Black voices the opinion of many competent observers when he says that prewar standards are not sufficient to use now, and suggests at least one "full year with poor crops" supply on hand at all times. Some of our stocks are more than a "full year with no crop" supply. But at any rate, I believe that we can say that our present stocks which we term surpluses constitute adequate insurance of a plentiful food supply.

Perhaps our greatest concern at the moment about the effect of these surplus commodities is: "*What effect will they have on farm prices?*" Remember that we acquired these surpluses as a result of programs designed to raise or hold up farm prices. Once these stocks are acquired, however, their only effect can be to depress farm prices. There is a theory about the use of such procedures to stabilize farm prices which calls for the buying of these commodities when prices and business activity are low, thereby keeping farm prices above what might be termed a disastrously low level. When economic activity is restored and prices are again at an acceptable level, the commodities can be sold with a net gain to farmers.

However, the stocks of these goods about which we now speak were purchased when business activity was at or near an all time high, and prices themselves were high. It seems hardly possible to have opportunity to move them under conditions where prices are higher. Rather, it seems that the mere existence of these stocks is contributing to a lower and lower level of farm prices.

There has been much talk, and some action, to so insulate these surpluses from the market that they cannot affect price. No such scheme has yet been developed. So long as they are in existence and available for sale at some price, that price becomes the ceiling price for that commodity.

If we try to divert these commodities to some other uses we reduce the demand for the commodities that were formerly used for those purposes, and undesirable results follow. If we attempt to sell them overseas at markedly reduced prices, the government standing the difference, we get objections from producers and exporters of other commodities and from other countries, because we are replacing a market that some other group had depended upon. If we try

to just give them away so that they can have no effect upon the price, we find that they, in fact, do affect price. Almost all such gifts are used to substitute for quantities of the same commodity which otherwise might have been purchased, or for other commodities which might be used for the same purpose. In either case, some demand is destroyed and prices are lowered. The effect of an increased quantity of a product available for sale, all other things being equal, always will be to lower the price of that commodity. Present farm surpluses offer no exception.

Thirdly, we must not overlook *the cost of keeping these products around*. They cannot be held at no cost. These commodities are in government warehouses, which represent capital investment and have maintenance costs, or they are in some kind of commercial storage which is leased or otherwise rented by the Commodity Credit Corporation from private industry. It is estimated that this cost now is in excess of \$350,000,000 a year. In terms of government cost figures, that doesn't sound so large until we note that that is about \$1,000,000 a day, and that's more than \$40,000 every hour.

These storage charges, within themselves, are not unduly high for the service performed. They are within the same range of rates that would be paid for any grain storage. But in other cases, grain would be held for a purpose, and its value would be increased by storage enough to pay this additional cost. No such opportunity is in sight for most of our CCC held commodities.

The dollars spent for storage do not represent the entire dollar cost. Some deterioration in quality will take place in any commodity held in storage long enough. Quality deterioration has meant selling portions of these products at prices materially lower than the price at which they were acquired, and that has added several million dollars per year to the cost of storage.

A fourth effect worthy of mention is *the social and political effect* that these surpluses may have on farmers as a group. Perhaps the most burdensome part of the burdensome surplus is the incessant talk about it—hurting farmers in the eyes of the rest of the country. It isn't difficult for the feature writer to so picture these surpluses as to make the amounts, the costs, and the situations in which they are created extremely objectionable to Mr. & Mrs. Average Consumer who are not farmers and who constitute more than three-fourths of our total population. Such objection on their part could easily lead to great difficulty; indeed it might make impossible the establishment and main-

tenance of a government sponsored farm program which many of us believe is necessary for agriculture, both from the standpoint of agriculture itself and from the standpoint of the entire economy.

So in summary of the effects of these farm surpluses we have said: (1) They do constitute insurance of an adequate food supply in the event of any anticipated adversity. (2) They exert a depressing or downward influence on farm prices. (3) They account for a considerable government expense which must be provided through taxes or other government financing measures and might be used for alternative uses. (4) They stand in danger of promoting social and political influences that might be detrimental to agriculture.

Why Are They?

The remaining question to ask ourselves is: "What are the reasons for the existence of these surpluses?" Certainly there is no *one* reason; it is a complex of reasons. Let us look briefly at a few of them.

One of the most revolutionary experiences in the history of mankind has been the revolution in agriculture that has occurred since 1900. Much of it has come in the past 25 years. The result has been a tremendous increase in the supply of agricultural products from given acres of land and from given numbers of farmers. The introduction of machinery and machine power to substitute for animal and manpower has increased the productivity of individual farmers fourfold and more. You can remember when 40 acres of corn per man was a reasonable allotment of that crop for planting, tending and harvesting. For then, with two mules and a cultivator, 6 to 8 acres of corn cultivated per day was a good day's work. Now, 40 acres of corn represents less than one day's work for a man on a tractor and four-row cultivator. Corn pickers harvest an acre of corn in just one-tenth the time that it took with husking peg and bang board. Forty years ago it required 135 man-hours to produce 100 bushels of corn. Now the same amount can be produced in 26 man-hours. Similar reductions have been made in wheat from 106 to 26; for cotton—from 276 to 110.

In addition, the introduction of improved varieties, notably hybrid corns, and the increased availability and use of fertilizers have increased the productivity of each of those acres which one man farms. The net result has been a tremendous increase in the potential production from agriculture. Whereas the average farm worker produced food and fiber for himself and about eight other persons in 1910, he can today provide for 25 others. Besides the increase in efficiency which I have just mentioned, much of the

production of farms that once was used for feeding horses and mules is now used for human consumption. Everybody eats better today because there are fewer horses. Someone has suggested that if there were several hundred fewer race horses, several million persons might still eat better.

If this tremendous increase in the supply of agricultural products is not to have a depressing influence on price, it must be met by equal or greater expansion in the demand for agricultural products.

It appears that the demand for agricultural products has not had the capacity to expand at nearly the same rate as has agricultural supply in recent years. We do not have unlimited capacity as individuals to consume food products. Apparently, our limited capacity is and has been fairly well filled in the aggregate over the years. For example, per capita consumption of all foods increased 7 percent during the five year period 1939-43, while agricultural production increased 26 percent. The extra production was needed then to feed our army and our allies. Much of that need no longer exists.

Increases in demand come primarily from three sources, (1) increases in population, (2) increases in income, and (3) changes in consumers' habits and tastes.

When we note that population increases at the rate of several thousand per day, it would seem that our problem would be to expand agricultural production rapidly enough to provide food for them. Yet the facts are that, even with this kind of increase in population, with ever-increasing incomes, and with trends in consumption toward the more expensive foods, demand has not been sufficient to move through the market, at prices acceptable to agriculture, all that agriculture can produce. A strong downward pressure on prices of all agricultural products has resulted, and there have been strong forces for adjustments in agriculture which tend to result in fewer people engaged in the business, each farming more land and reaping more bountiful harvests from each acre of land.

Adjustment to this condition is rather slow and oftentimes painful. People decide to leave agriculture as a business only because their earnings are not satisfactory, or, are less satisfactory than they can find in another business. But while they are resisting this movement out, total agricultural production continues to increase in excess of the increased demand. The resultant low prices are sufficiently low that we, through government, establish a minimum price through the price-support program in order to protect farmers from the ravages of unduly low prices. With

the establishment of this minimum price, some are encouraged to remain in agriculture. Others are encouraged to expand their agricultural production. And to make our price programs effective it is necessary for an agency of government to stand ready to provide at all times a market for that portion of the product which cannot be moved to the consumer at the prevailing price.

Technological developments of industry add to the effect of a rapidly increasing supply against a slowly increasing demand. Industrial products have been developed that take the place of agricultural products in some instances. Notable in such cases is the use of synthetic fibers—rayon, nylon, orlon—in substitution for cotton.

The very nature of our social economic organization in the United States contributes to the complexity of the problem. We strive for economic progress; economic progress measured in terms of an ever-increasing level of living. And that means that we are constantly striving to produce more and more goods to be made available for our people to enjoy. Economic progress is based on ever-increasing productivity. The marvel of American business ingenuity is its ability to ever find new ways for producing more per hour, more per machine, more per acre, and so on down the line. True it is that most individuals and most firms strive to attain this increased productivity for the immediate purpose of enhancing their own profits. Agriculture is no exception. The net result is that each individual within the industry increases his own productivity, the productivity of the entire industry as it is increased, and more goods are made available for consumption.

Each individual farmer strives to produce more per farm, more per acre, and more per man. As a result we get marked increase in total agricultural production and surpluses become a paradox—a trap into which agriculture is led. For the reasons described above, agriculture has been unable to sell at satisfactory prices all that it can produce. But recognition of this basic characteristic of our economic organization, namely a high desire for economic progress based on increasing productivity forces some kind of a compromise when we accept solutions which limit productivity from given resources rather than contribute to ever expanding productivity. Production of commodities which find no use, or must be diverted to less than their best use is not consistent with this American economic tradition.

I am sure that some of you do not agree completely with the evaluation of the situation that I have

just made. There likely is less unanimity of opinion regarding the desirability and feasibility of the various proposals to alleviate the situation. It is our purpose here the remainder of today and tomorrow to get as many facts as we can relative to the situation, and to share with these several people on the program, all of them well qualified because of their training and experience, their judgment of the merit and shortcomings of these major proposals.

Why the Good Lord has blessed this nation of ours with such freedom from war and pestilence as we have known; such abundance of natural resources; such creative, energetic, and resourceful people as live here; to result in such abundance of the material things of life that what to do with them becomes a problem is more than I can fully explain. My earnest prayer is that His mercy shall continue and our wisdom shall increase, that we will forever concern ourselves with how to make the best use of our abundant productive resources, rather than how to squeeze from extremely scarce resources a bare existence for our people. I believe that to do less than our best in managing this portion of our material wealth which I have this morning termed "surpluses" is completely unacceptable.

WHAT WE ARE DOING ABOUT FARM SURPLUSES

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The surplus problem is usually measured in terms of how much money the Commodity Credit Corporation has invested in commodities owned, or still under loan. About one year ago the inventory and price support loan obligations of the Corporation totalled approximately \$6.2 billion. As of August 31 of this year, the Corporation's investment had increased to \$7.1 billion.

We are also familiar with the fact that as of August 31, 1955, price support inventories and outstanding loans accounted for 1 billion bushels of wheat, 13 million bags of rice, 866 million bushels of

corn, 8 million bales of cotton and 366 million pounds of cheese. These all represent substantial increases over a year ago.

These stocks weigh heavily on markets abroad as well as at home. Their simple existence cannot help but depress prices.

One fact is crystal clear. There is no magic method by which we can go to bed one night and awaken the next morning to find the problem no longer with us. The surpluses did not arise overnight. It will take time and long hard work to liquidate them.

The first problem is to halt the further accumulation of surpluses. With the help of the production adjustment program and an all-out surplus disposal effort, it appears that this year total production and consumption will be more in balance than they have been in recent years. Cotton and rice constitute major difficult problems in this area.

The adjustment in production has been difficult—a reduction of 30 percent in wheat acreage—almost as large a cut in cotton acreages—and an acreages cut of 22 percent in rice from the levels prior to the imposition of controls.

What is the Government doing to promote and hasten the liquidation of surpluses?

First, every possible effort is being made to encourage consumers in the United States to eat their way out of the surplus. Examples of this effort are the increase in consumption of dairy products and beef. As consumption of livestock and dairy products increases, large quantities of grain are also consumed. The stepped-up Plentiful Foods Program helps in this effort.

Second, if the production of the qualities of food and fiber which are most in market demand can be encouraged, the surplus disposal effort will be strengthened. The recently announced discounts on several varieties of low quality wheat are a step in this direction.

Third, programs for the distribution of surpluses to school children and needy persons have been expanded. Last year more than a billion pounds of commodities were used for this purpose. The Department has just announced a pork purchase program which should be good news to Missouri farmers.

Fourth, surpluses are being used to alleviate hardship conditions among our farmers. Already more than \$100 million worth of government grain has moved to farmers in drouth areas at reduced prices.

Fifth, an aggressive foreign sales policy has been adopted and it is paying off. In 1954-55 exports were up 7 percent in dollar value over 1953-54 and 11 percent over 1952-53. On a quantitative basis, the in-

crease is even more significant—12 percent above 1953-54 and 18 percent over 1952-53.

Sixth, special foreign disposal programs have been strengthened, including barter and sales for foreign currency. In these two categories, exports were three times as large last year as they were the previous year.

Seventh, we are seeking to eliminate discriminatory restrictions against U. S. Agricultural trade and are making progress.

And, eighth, we are pursuing and supporting a liberal foreign trade policy in order to make foreign countries better customers for the products of our farms.

What, then, does it all add up to?

Probably the best overall barometer of the disposal effort is our monthly CCC disposal report. The report covering the first nine months of 1955—that is January through September—indicates that CCC disposals under all programs totalled about \$1.3 billion. This is an increase of nearly one-third over a similar period the year earlier.

Another indicator is the export statistics for the first three months of this fiscal year. They are up 20 percent over July, August, and September of 1954. Although we do not expect this rate of increase to continue for the year as a whole, we are optimistic about export prospects.

Now let's take a closer look at these programs, particularly those which are contributing most strongly to the disposal effort.

Price Incentives

The two primary programs for stimulating disposals through price incentives are Commodity Credit sales to commercial U. S. buyers for domestic use and/or export and so-called Section 32 incentive payments. Under Section 32 of PL 320 of the 74th Congress, 30 percent of the gross customs receipts may be used, among other purposes, to encourage the exportation of agricultural commodities through subsidies or indemnities. The CCC program which is concerned with the disposal of price support stocks is the more important volume-wise. However, the Section 32 program is particularly helpful in connection with exports of perishable commodities such as fruit and fruit products.

Generally, CCC-owned stocks are not offered for domestic use unless they can be sold without interfering with current price support programs. With certain exceptions, storage commodities by law may not be sold for domestic use at prices less than 105

percent of current support plus reasonable carrying charges. These stocks may be made available for export at reduced prices.

During the first 9 months of calendar year 1955, CCC sales to commercial buyers totalled \$621 million, a decrease from the comparable nine-month total for 1954 of about 14 percent. However, it should be noted that a considerable portion of this decrease is attributable to a decline in unit prices.

CCC export sales for the past nine months were up 17 percent while domestic sales were down almost 40 percent. In the latter case it should be pointed out that in addition to the price decline mentioned previously, the larger domestic disposals in 1954 included sales of about \$90 million more feed grain which was needed because of the drouth situation that year.

The Commodity Credit Corporation is pursuing an aggressive export sales policy. Recent examples of this policy are the sale of over a billion and a half pounds of cottonseed and linseed oil, more than a billion pounds of cottonseed meal, and about 10 million bushels of soybeans. In addition to these inventories that have been liquidated, it is expected that the following inventories will also be liquidated in an orderly manner: barley, oats, rye, grain sorghums, tung oil and most varieties of dry edible beans.

The second price incentive program is provided through export payments under Section 32. At present, such payments are being made on only two commodities—citrus fruit and raisins. These were the only items on which Section 32 payments were made last year, reflecting the fact that marketing conditions have been relatively favorable for most of our fruit crops.

Payments in the 1954 season amounting to about \$3.5 million were made on exports of 4½ million boxes of oranges and 825,000 boxes of grapefruit on a fresh fruit equivalent basis. This year payments have been reduced to 50 cents per box for both oranges and grapefruit from a somewhat higher level paid last year.

Last marketing season export payments in the sum of \$976,000 were made on 60 million pounds shipped to European countries. These payments are being made to producers not to exporters.

Credit

Currently, two principal sources of U. S. Government credit are available to finance agricultural exports.

The most important source of credit is financing by the Export-Import Bank. Medium term credits aggregating about \$740 million have been made available by the Bank on agricultural commodities in the

last seven years with cotton loans to Japan accounting for \$315 million.

Government financing has been especially helpful in the case of cotton. The low interest rates charged on cotton loans have helped to make our terms at least as attractive as those offered by other exporting countries. Recently a new line of credit was extended to Japan for the financing of cotton exports.

Export-Import Bank financing was also utilized effectively in mid-1954 to enable the United States to meet credit terms on wheat exports which had been made available to Brazil by a foreign exporter. In this instance a \$15 million Export-Import Bank loan assisted in reopening the Brazilian market for U.S. wheat farmers.

The other principal source of government credit is the Commodity Credit Corporation. This source of export financing to date has been used only to a limited extent. Shortly after the close of World War II, \$10 million worth of cotton from CCC stocks was exported to Western Germany and Japan on a credit basis. Repayments for this cotton were to be made in full.

No further commodity loans or credit sales were made by the Commodity Credit Corporation until 1954 when a 6-month credit guaranteed by a U.S. bank was granted to Chile to finance the export of 8,000 tons of cottonseed oil and a one-year credit extended to Brazil for 100,000 tons of wheat. In the latter case, the credit is to be liquidated through the delivery of materials needed by other agencies of the U.S. Government.

The loans made by the Commodity Credit Corporation differ from those made by the Export-Import Bank. CCC loans are tied in with disposals of stocks already owned by the Corporation, whereas Export-Import Bank loans are dollar loans that can be used to make purchases in the open market. An intensive study is now underway within CCC to determine whether wider use of the CCC export credit authority is needed to supplement export incentives offered under other authorities.

Barter

The Commodity Credit Corporation was first authorized to barter agricultural commodities for strategic and other foreign-produced materials under the Corporation's Charter Act, as amended and the Agricultural Act of 1949. However, the substantial increase which took place in barter activity during 1954-55 stemmed largely from the emphasis and strengthening of the barter authority contained in Title III of

Public Law 480.

During that year barter contracts were made totaling almost \$282 million. Most of these contracts involved the exchange of agricultural commodities for strategic materials and some of them provide for forward delivery periods as long as two years. The \$282 million contract total for 1954-55 is almost two and one-half times as large as all barter activity previously undertaken since the program was initiated in 1949. Since last June 30, additional barter commitments have been made amounting to approximately \$44 million.

Exports of agricultural commodities under the barter program in 1954-55 reached \$125 million almost four times as large as the preceding year. Further, the sizeable unshipped carryover from last year's program together with the new contracts this year should result in even larger exports under this program in 1955-56. It is of interest to note that approximately 46 million bushels of wheat were exported under this program last year. This represented almost 80 percent of the value of all barter exports.

All barter operations are conducted through U.S. private trade channels and the commodities made available are priced at prevailing CCC export prices on an equivalent exchange basis.

Foreign Currency Sales

Beginning in 1953-54 the Congress authorized export sales of surplus agricultural commodities for currencies of other countries. In that year exports of commodities totalled \$116 million with funds made available under Section 550 of the Mutual Security Act. In effect, U. S. agricultural commodities were made available to foreign aid program. The Congress provided that such sales were to be in addition to usual marketings of the United States and friendly countries.

Mutual Security legislation for last year continued to provide for the sale of agricultural surpluses for foreign currencies, in an amount not less than \$350 million. However, the requirement that such sales must supplement usual marketings was eliminated.

Congress also authorized additional foreign currency sales under Title I of Public Law 480, initially in an amount not in excess of \$700 million at Commodity Credit costs. Subsequently, the authorization was increased to \$1.5 billion.

Title I sales are made through U.S. private trade channels under agreements negotiated with friendly foreign governments. The agreements provide: for the protection of usual United States marketings when appropriate through a firm commitment on purchases

with other resources from the foreign government; for a prohibition against transshipments except under specific authorization; assurances against increased agricultural trade with unfriendly countries; and provision for payment of foreign currencies.

In addition the agreements specify the kinds and amounts of commodities to be financed, and the uses to be made of the foreign currency payments. There are eight different currency uses authorized under Title I.

The agreements signed last year provide for total foreign currency payments of about \$361 million. These currencies will be used in the eight authorized categories in the following percentages:

(a) agricultural market development	2.3
(b) purchase of strategic materials	.8
(c) uses for common defense purposes	20.4
(d) purchase of goods for other countries	3.7
(e) grants for economic development	2.1
(f) payment of U.S. expenses	27.5
(g) loans for economic development	42.4
(h) international educational exchange	.8
	100.0%

Although agreements were signed in 1954-55 with 17 different countries totalling about \$361 million at export market value and \$469 million at Commodity Credit Corporation cost, most of the agreements were signed late in the year and shipments during the last year totalled only \$63 million at market value. However, since June 30 we have had a rapid movement and by the end of the year shipments will be completed for practically the full amount of last year's program with the exception of cotton. The lag in cotton movement in recent months stems from two factors: traditionally cotton moves slowly during the summer months, and, second, price-wise the U.S. is at a disadvantage. Despite this lag 330,000 bales have already been purchased under the program, over half of the total quantity authorized.

It appears that more agreements will be signed with more countries this year. There are many uncertainties in the situation, but this year's new agreements could total about \$700 million at CCC cost and include as many as 25 countries. It is also expected that negotiations will not be as extended this year as they were last and for this reason we estimate that about 60 percent of the value of this year's program will be exported by the end of the fiscal year. When the carryover from last year is taken into account, it could mean that exports under Title I for the current year may total as much as \$550 to \$600 million at market value. This total and foreign currency sales under

the MSA program, add up to exports in this category totalling 100 to 150 percent more than the amount moved last year for such payments.

What do these values mean in terms of quantities of commodities? Last year's programs included about 2 million tons of grain, 28,000 tons of tobacco, 68,000 tons of fats and oils and 647,000 bales of cotton. For this year the figures may very well increase to 3.5 million tons of grain, 39,000 tons of tobacco, 150,000 tons of fats and oils, and 860,000 bales of cotton. At this early date I should hasten to add that there must necessarily be a lot of "guesstimating" in these forward estimates, but we are confident that the trend is upward. I should also hasten to add that I hope we can do a better job of inducing foreign customers to take U.S. cotton.

Sometimes the comment is made that foreign currency sales largely replace dollar sales. Such a view fails to take into consideration the increasingly tough competition faced in foreign trade from other exporting countries, and the foreign exchange difficulties still confronting many countries. We do not believe that the grain supplied to Yugoslavia and Turkey could have been purchased by those countries for dollars or any other hard currency. The tobacco purchased by the United Kingdom for sterling which they added to existing stock levels would not have been purchased for dollars. The same is true of the cotton purchased by Finland and Korea. In these programs, care is exercised in establishing the usual marketing conditions in order to provide reasonable assurance that Title I sales represent a net increase in U.S. exports.

We have also heard that the United States is not only selling for foreign currencies but is also giving the currencies back to the buying country. Actually, grants constitute a very small percentage of planned foreign currency uses. Some examples of beneficial uses of interest to taxpayers include the use of about \$60 million to construct housing for our military personnel and dependents stationed abroad, the construction of U.S. air bases in Spain, and the payment of U.S. Embassy expenses in many countries of the world. The amounts made available for loans for economic development represent the single largest use of foreign currency. We expect that as borrowing countries use this credit to expand their production, thereby improving the consumption base, they will become better customers for our farm products.

School Lunch and School Milk

Two domestic programs especially worthy of mention are the National School Lunch and Special

School Milk Programs. These programs are aimed at expanding current and future markets by improving the diets and food habits of our school children.

In 1954-55 the school lunch program reached 11 million school children, a new record level. Participating schools spent \$323 million in local markets throughout the country for food used in the program compared with the Federal cash contribution of \$69 million. Thus, each Federal dollar contributed resulted in expenditures of more than 4 additional dollars from State and local funds for food purchases. In addition, a large volume of surplus food was utilized which was donated by the Department of Agriculture under Section 32 and Section 416 programs.

Another significant development last year was the establishment of the Special School Milk Program. Milk that otherwise might be processed into manufactured products and sold to CCC under the price support program is being consumed in fluid form by school children.

This program was undertaken last year under authority contained in the Agricultural Act of 1954 which provided for the use of CCC funds in the amount of \$50 million annually during last year and this year to increase consumption of fluid milk. Schools are encouraged to serve additional milk to children and are aided in so doing through reimbursement payments which help to reduce the cost of the milk to the child.

Last year over 41,000 schools participated in the program of which more than 7,000 were schools which did not previously serve milk. Almost 9 million children received milk under the new program and consumption was increased by over 450 million half-pints.

There is increasing interest in this program. Already this school year the number of schools participating has increased by 41 percent over last year.

It is universally agreed that these two school programs represent most desirable and effective means of using current surpluses and at the same time build markets for the future.

Donations and Grants

There are three basic authorities under which agricultural surpluses are being donated to improve consumption of school children and needy persons at home and needy persons abroad.

Under Section 32 of Public Law 320, 74th Congress, as amended, 30 percent of customs revenues are available each year to aid, among other things, in widening domestic markets for surplus commodities. These funds may be used to finance donation of such

commodities to school children and low income groups at home.

Under Section 416 of the Agricultural Act of 1954, as amended, and liberalized in Title III of Public Law 480, surplus price support commodities may be donated for use both in the United States and abroad.

Under Title II of Public Law 480, the President is authorized to furnish surplus agricultural commodities from Commodity Credit Corporation stocks, to friendly foreign governments or people to help meet famine or other urgent relief needs abroad. CCC costs incurred under the program may not exceed \$300 million.

Distribution of commodities for use in our schools and by needy persons at home and abroad totaled over a billion pounds in Fiscal Year 1955, an increase of more than 70 percent over 1954. These are the combined totals for Section 32 and Section 416 programs.

Included in these donations were almost 800 million pounds of dairy products and 38 million pounds of canned beef and gravy. The large distribution of beef and dairy products in the last two years has been of great usefulness in stabilizing market conditions for beef and dairy producers.

Under the Title II program which is administered by the International Cooperation Administration, commitments were made totaling \$102 million. Since that time additional commitments in the amount of \$30 million have been made. Shipments since the program first started have reached almost \$100 million.

The commodities made available under Title II are furnished free of charge to recipients overseas. In most cases the programs are undertaken to meet specific relief needs in foreign countries resulting from earthquakes, floods, and other natural disasters.

Market Promotion

Three market promotion activities of the Department are worthy of mention. The first, the Plentiful Foods Program, is concerned with domestic market promotion. The other two involving participation in foreign trade fairs and foreign market promotion received their impetus from Title I of Public Law 480.

Anyone who reads newspapers or magazines or listens to radio and television broadcasts knows about the Department's Plentiful Foods Program. It is a program in which the Department teams with the interested distributive trade to encourage movement of plentiful foods to consumers through normal channels of trade.

The food trades help by making special mer-

chandising efforts. The help of the Nation's food editors is obtained so that their efforts are added to the promotional drive. In some cases different food industries have been brought together to promote consumption.

In last year's program emphasis was placed on special merchandising drives where the full force of advertising and merchandising media was concentrated on a single food item in particularly heavy supply during peak marketing periods. In 1954-55 such special national drives included beef and vegetables, pork, dairy products, canned sweet corn and canned beans, and eggs. Perhaps you recall "January Egg Month", or "June Dairy Month".

The special merchandising program on canned sweet corn and canned snap beans was an outstanding success. The program undertaken last Spring assisted in the movement of nearly 15 million cases of these products out of canner's hands during March, April and May, a movement exceeding that of the previous five year average about 2 million cases for each item. And we are, of course, joining forces with the trade to push consumption of pork. A tremendous promotional campaign is underway and we are adding our full weight to the drive.

One of the newest activities in the field of market development is our International Trade Fair Program. All of us know that in merchandising any product effectively, one of the first rules is to get your product out where people can see it . . . feel it . . . and taste it. Our International Trade Fair Program is one of the ways by which we are bringing our agricultural products to the attention of foreign buyers.

International trade fairs play an important role in the business activities of many foreign countries. They bring together a large concentration of buyers and sellers in a relatively small space and period of time. Attendance at some of the larger trade fairs abroad runs into the millions. We have now begun to take advantage of these opportunities by establishing promotional exhibits of our agricultural products at a number of these international trade fairs.

Our first exhibit was held in connection with the International Food Fair in Cologne, Germany, last month. Sixteen private food firms and agricultural organizations participated in this exhibit. Western Germany, as you know, is one of our most important agricultural markets in Europe. And more than 300,000 people from Germany and surrounding countries attended the fair.

Our second exhibit will open late this month at the International Industries Fair in Bogota, Colombia.

Additional exhibits will be held at other trade fairs during the year. In most instances these exhibits will be financed from local currencies accruing under the Public Law 480 Program.

Another tool for expanding commercial exports of U.S. agricultural commodities is the new foreign currency market development program. The program involves the use of part of the PL 480 local currencies for export promotion. This activity is carried on in close cooperation with the U.S. private trade. It may include many kinds of projects: Sales promotion, advertising and general publicity, visits of specialists and businessmen, participation in trade fairs and exhibits, education and demonstrations, market analysis, and projects for model plants and distribution systems.

Although the program is just getting underway, two projects can be mentioned: a project to expand the use of cotton in Italy and the agricultural exhibit at the International Fair at Bogota, Colombia.

The Italian cotton project clearly illustrates a key element of the program—close cooperation with the private trade. In this case the National Cotton Council, representing the U.S. cotton industry has set up a headquarters in Europe. This group, in cooperation with the Italian industry, will assemble and train an Italian staff to plan and carry out the necessary market analyses and a variety of sales promotion campaigns and general publicity activities all designed to increase the use of cotton. The costs of this program will be met by contributions of the National Cotton Council and the Italian cotton trade, and like accruing from the sale of surplus agricultural commodities.

We anticipate that in the next two years something over \$18,000,000 worth of foreign currencies will be available in more than 25 different countries. We believe that with the close cooperation of the U.S. trade we can successfully contribute to the development and expansion of normal commercial foreign markets for U.S. agricultural commodities.

The surplus disposal operations which I have described above are being conducted in a way which gives full recognition to our long-range objectives for American agriculture and the role that farming should play in our economy.

We have in these United States the capacity to produce agricultural commodities at levels which would provide a higher standard of living. However, due to large surpluses American farmers cannot use their productive resources to full capacity.

The job ahead thus is obvious. We must redouble our efforts to find better ways and means of utilizing this capacity through a further expansion of market

outlets and the development of wider uses for our farm products.

RELATION OF UNITED STATES SURPLUSES TO OTHER COUNTRIES

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It is somewhat ironical that the topic for consideration this year is the farm surplus problem, with its various ramifications. I say this because during 60 centuries of recorded history man has suffered hunger and millions have starved. Empires of old broke up in crop failures and famines. In Bengal, less than two centuries ago, 10 million persons were said to have perished. In Ireland, not so long ago, failure of the potato crop caused widespread starvation. In Russia, millions starved in the famines of 1921 and the early 1930's. Here in this choice land we have never had a general famine. Our people, relatively speaking, have always had plenty to eat. May God give us the wisdom to carry this heritage forward. Over the face of this earth roughly two-thirds of the people are living from the lands and the forests, but each night, despite their labors, two out of three members of the human race go to bed hungry. It is a shocking indictment of man's intelligence that this should be so—that some nations should struggle with problems of abundance while others suffer in abject poverty.

Your Chairman has asked me to explain the significance of our surpluses upon other countries of the world. Let me state at the outset that ours has been a fortunate past. Ever since the Revolutionary War, we have almost always raised surplus crops and until recently had no difficulty in disposing of them. It was only during the drouth years (1933-37) that wheat production in the U. S. was smaller than consumption, and as a result we imported some of our requirements from Canada. Contrast this situation with the life of those on other parts of the globe. Half the people of the world live in Asia; eight persons out of ten are peasants, few of them farm as much as four acres. Their tools are primitive, their farms are so small that they would have no use for modern machinery, even if they had it. Few Asian peasants own the land on

which they toil, and few have any hope of ever owning the land.

The production and distribution of food is the world's largest industry, and likewise in recent years it has become for many countries the world's greatest economic headache. Even in the United States, which is the wealthiest nation on earth, about one-fourth of all the economic effort is devoted to this basic want, while elsewhere and particularly in the poorer half of the world, a larger part of the peoples' time is engaged in a futile effort to maintain an adequate diet. As evidence that the food industry has no equal, we need only to review the various proposals and programs that have been tried everywhere in order to deal with these economic ills, both real and imaginary.

Until about 1914, we really never had any serious problems of overproduction. As a matter of fact if you remember your history, you will undoubtedly recall that in the wake of every war, following destruction of manpower and property and devastation of farm lands, there came the usual period of agricultural neglect. This state of affairs prevailed at the end of the Napoleonic Wars, in consequence of which prices of foodstuffs and many other allied products rose to unprecedented heights. Naturally, new theories found expression from various sources; and in 1816, four years after the end of these wars, Thomas Robert Malthus, an English economist, issued his last revised book. He had developed a theory that the realization of a happy society would always be hindered by the miseries caused by the tendency of the population to increase faster than the means of subsistence. He went so far as to state that population increased in geometric, and food, in arithmetic ratio. His theories were accepted by the world during his lifetime and became more widespread in the years 1846-48, preceding the Revolution, when Europe had to contend with a number of crop failures and when it was a generally accepted supposition that the world could not produce enough food to ward off starvation.

Just about this time gold was discovered in California, and the United States made great strides in settling the West. Railroad building opened vast areas of virgin territory, and the United States soon developed into the breadbasket of the world. The nations of Europe one by one transferred their endeavors from agricultural to industrial channels. They were perfectly content to let America furnish them with the needed food supplies in exchange for the products of their manufacture.

Until recently our surpluses were always regarded as one of our great assets. This country, like every new

nation, depended upon foreign capital. It would have been impossible in the early pioneer days to have built our railroads or to have developed our industries without large loans from abroad. The interest on these loans was paid through our excess of exports over imports. We succeeded in doing this to such an extent that gradually it enabled us to pay off some of our indebtedness, and finally we were not only able to pay off the largest share of our obligations, but we even had funds left over with which to make investments abroad. Gradually tables were turned and from a debtor nation we became a creditor nation. The growth of our export business made it possible to import large quantities of articles that we ourselves could not produce, and both of these exports and imports furnished a great deal of employment. We kept our railroads and our steamship companies busy. Without this trade it probably would have taken much longer to develop our country to its present position of preeminence.

Preceding the outbreak of World War I, I would say that agricultural conditions were normal, and just about ideal. This was true not only in the United States, but in the rest of the world as well. On an average the world produced very nearly its annual requirements. In years when one or two countries had short crops, stocks at the end of the season were very largely depleted; and in years of plenty, they were moderately increased. Wheat brought a fair price in every country, and yet not high enough to stimulate production to an extraordinary extent. At that time the United States and Russia were the largest exporters, each competing with the other for predominance.

When World War I was declared and the Dardanelles were closed, of course, everything was changed. Russia was at once removed as an exporter, and this was a very important factor. After a while waste on the battlefields became very great. Consumption by the armies increased, ships were torpedoed to the extent that about every tenth hull carrying food-stuffs which started to cross the ocean never reached its destination. When France was invaded, her territory occupied, and all her manpower engaged either in fighting or in manufacturing munitions, wheat production generally decreased. Grain prices started to skyrocket, and this gave great encouragement to countries like Canada, Argentina, and Australia to raise more wheat. They had been relatively unimportant before that time, but new lands were opened up and they have been strong competitors of ours ever since.

Russia on the other hand is no longer a rival, and as a matter of fact she has hardly exported any grain

to speak of since 1914. It is rather difficult to get authentic information from that country, but we have reason to believe that with the dismissal of Malenkov in February of this year, the deficiency of food was an important factor in his downfall. Certain press articles from Pravda have even admitted that political changes were due largely to the shortcomings of agriculture under the collective farm system. Russia had not only failed to keep pace with farm progress in the free world, but she lagged far behind. Governmental mismanagement of her national resources brought famine at worst, and a diet of bread and potatoes at best, for many of its citizens.

There are reportedly some 50 million farm workers on the 94,000 collective farms in Russia. They provide what by our standards is a low level of nutrition for a nation of more than 200 million people. Thus the Russian farm worker produces enough food and fiber only for himself and possibly three or four other people. Here in the United States we have approximately 8½ million farm workers. Each of them turns out enough produce to meet his own needs and those of 17 or possibly 18 additional persons. The population of Russia has increased about one-third since 1928. Yet over the same period Russian cattle numbers have declined by about 8 percent.

Here at home our annual consumption has reached a level of about 154 pounds of red meat per person. In addition the average citizen here is eating more than 28 pounds of chicken and turkey each year. For the Russian it is a different story. If he happened to be in the right line at the right time, he might have been lucky enough to get nearly a pound of meat each week. Consequently, I say again that while Russia was a very important competitor of ours in times past, it may be many years, if ever, before this will happen again.

I shall not detail in this paper the shortcomings of the Federal Farm Board, which was created under Mr. Hoover's administration, nor the beginning of the parity concept formula during Mr. Roosevelt's tenure of office intended to stabilize and support agricultural products. Undoubtedly this will be mentioned by one of the other speakers on this Forum in discussing the magnitude of our surpluses. Needless to say, however, we had plenty of worries during the late 1930's, when prices of various agricultural commodities were held above their commercial value, and we were not only deprived of our export outlets, but were prevented from cutting into our accumulations, so that political factors played an important role during that period.

Nevertheless, when World War II started, our government again appealed to farmers to raise as much as possible in order to take care of our Allies, although much of the material sent abroad was in the form of concentrated food. This was quite different from shipments made during World War I, when we were sending mostly wheat and flour to take care of our friends abroad. Russia during the last war wanted meat, and they needed it badly. We were also sending it to Britain and to France, and it might be stated here that it takes about 7 pounds of grain and forage to produce a pound of meat. Therefore, there was a big demand at home for all types of protein feeds and for corn, with the result that our farmers were again very busy, and apparently content, as prices rose to extraordinary heights and finally OPA ceilings were imposed for the protection of consumers.

All this occurred in spite of the fact that our production was going forward at top levels. To indicate how quickly we have gone from periods of scarcity to plenty, it is well to point out that in 1946, when our representatives attended the London Conference, they found a tired, war-torn, and hungry world, which was just beginning to make the difficult conversion from all-out production of guns, planes, tanks, and ships to rebuilding their shattered cities; thus fulfilling long postponed demands for consumer goods, and making every effort to rehabilitate the agricultural economy. It was truly a deplorable situation that faced us at that time.

We, together with Canada, and other major exporting nations, but with the exception of Argentina, virtually emptied our elevators and warehouses to supply the millions of tons of wheat and other grains that were so desperately needed by hungry people throughout the world. A prodigious movement of food strained shipping facilities of all nations. Today, many of those same U. S. ships that transported grain are part of the so-called "mothball fleet" which are immobilized in various ports both at the Atlantic and Pacific coasts with their holds filled with government-stored wheat. Moreover, the commercial warehouses and granaries, as well as cribs on American farms, bulge with a large inventory of grain.

Our farmers had responded well to the call of duty, and for several years were furnishing tremendous quantities of wheat to our brethren in other lands. In the crop-year ended June 30, 1949, we actually cleared more than 500 million bushels of wheat and flour, which was more than any nation of the world had ever shipped in a similar period. Even though our population at that time was increasing at the rate of about

2½ million persons per year, we were able to furnish more grain for hungry mouths in foreign lands than ever before in our national history.

Many of you may comprehend dimly or imperfectly what such a quantity of wheat constitutes. Let me say, however, that it is as much grain as is consumed in the form of bread by every man, woman, and child in this country during a year's time. It is likewise more than the combined production of Argentina and Australia—two of our greatest competitors in normal times. Looking at it in another way, 500 million bushels is about five times the average annual shipments during the years 1930 to 1947.

Bread still constitutes over one-half the daily average diet of Europeans; just think how different their situation is from our own, where our varied diet is improving right along. For example, we consume about three times the amount of oranges per person as we did 30 years ago, about twice as much ice cream, about twice as many tomatoes, about two-thirds more chicken, about one-third more beef, and about one-fourth more eggs. We drink more milk and eat more cheese, vegetables, and fruits. At the same time our diets contain more calcium, protein, iron, and vitamins A and C, as well as many others. Formerly, our food used to change with the season, and all perishables had to come from nearby regions, but today we have fresh food the year around, and some of it travels thousands of miles to our tables. For the past two years, Americans have spent an average of \$395 annually per person for food.

When we meet in this auditorium at the same time tomorrow, there will be 7,000 more babies in this country than there are at present. For a period, these infants will be on a milk diet, but as they grow up to adult age, each one of them will eat 68 pounds of beef and veal per year, 72 pounds of pork, 4 pounds of lamb and mutton; they will drink 186 quarts of milk and cream, consume 8 pounds of cheese, 17 pounds condensed and evaporated milk, and 16 pounds of ice cream. We eat, on the average, about 1,600 pounds of food per person a year—four-fifths of a ton. Just to provide for our annual increase in population at present rates of consumption, it requires an increase in food supply equal to the present output of all the farms in New Jersey, Maryland, and Delaware combined.

This is based on 1952 data, but I doubt if there has been much change in the eating habits of our people since then. It merely demonstrates that because our population increases at such a rapid rate, the necessity for export will lessen unless we surge ahead with our

technological developments and produce more and more food each year, as we have in the past. For example, we are raising 44 percent more today than we did before World War II, and this has resulted from better farming techniques, increased uses of fertilizer, and general improvement in our research methods. To be more specific, hybrid seed alone has raised the level of living more than all of the subsidies that corn belt farmers have received in the past 20 years. We spent a mere \$15 million for research on hybrid corn, while its annual value is close to \$1 billion.

In a general way we must admit that agricultural development has kept full pace with our progress in industry, and certainly the latter has made tremendous strides. In this country, with only 6 percent of the world's population and land, we possess about half the world's radios, three-fourths of its telephones, and four-fifths of its autos. We have three-fifths of the railways and close to half the electric power. In cultural values we have also gone ahead, and we have a larger proportion of our youth in high schools and colleges than any other country.

When it comes to exports, we generally have in mind the goods which are sent overseas. However, it is rather thought-provoking to realize that the Canadian market is the best outlet for our agricultural products. We ship them citrus and other fruits and fresh vegetables, as well as vegetable oils and fats, soybeans, corn and cotton. We in turn are a good customer for Canadian live cattle, meat, and meat products, as well as feed grains and mill feeds, besides seeds, malting barley, and seed potatoes. Last year the trade in agricultural commodities between our two countries totaled about \$600 million. In other words, we sold them \$300 million worth of agriculture, and they sold us about the same amount. We are each other's best customer, and there is more trade between our two countries than between any other two countries in the world. In a complementary fashion, and in spite of economic nationalism, Canada and the U.S.A. have created the largest, and perhaps the most significant, bilateral international exchange of money and commodities in the history of the world.

In considering our agricultural problems, my thoughts coincide fully with those of Mr. Benson—that wheat and cotton are our two greatest headaches. Someone else will have to discuss the cotton situation, as this is out of my field, but as for wheat, even with heavy curtailment of acreage we have not yet reached a point to halt the increases in the carryover reserves year after year. We have about four times as much wheat in this reserve stock as we had four years ago:

namely, about a billion bushels, and it is about twice as much as our home consumption during a year's time. The troubles started to pile up when the export demand dropped off a few years ago. For a period, as I stated earlier, we were able to find foreign outlets for over a third of the wheat we produced. In other words, the equivalent of all that was raised in Texas, Oklahoma, Kansas and Nebraska was shipped abroad. That seems to be no longer possible.

Coming next to the feed grain situation, it should be recognized that even though we have expanded the production of corn, oats, barley, sorghums, etc., we can better take care of these surpluses than wheat, owing to the fact that annual consumption has increased at such a rapid rate. We must, however, realize that domestic usage is our greatest outlet, and that over the years we have not been large shippers of oats and barley. As a matter of fact, in most years we imported more of these two cereals from Canada than we sent abroad.

As for corn, our annual average exports were only 87.6 million bushels during the last ten years, or in other words, since the end of the World War II. During that period the average production amounted to 3 billion and 66 million bushels; thus the percentage of exports has been very small. Nevertheless, our people are eating much better now than they were before the war, when our annual corn crop averaged only 2,339 million bushels.

I would consider it almost a catastrophe if production ever fell back to that low figure. It takes nearly 20 bushels of corn for every man, woman, and child in order that we have all the meat, poultry, eggs, butter, ice cream, milk, etc. that is needed. On the other hand, we are beginning to pile up surpluses of corn, and this year the reserve stock amounts to about a billion bushels, which is the largest we have ever had on hand. The trouble seems to be that as acreage is taken out of wheat or cotton, some of it is diverted to feed grains; therefore, we are beginning to feel the secondary consequences of these artificial aspects. Just recently our government placed some restrictions on imports of oats and barley from Canada, but that failed to do much good, as the quantities were rather small in comparison with the greatly enlarged production with which we have had to cope.

I appreciate that storage alone on the vast accumulation of agricultural products is running at the rate of about \$25,000 to \$30,000 per hour. This does not take into account further losses occasioned by spoilage for the many perishable commodities that are being carried, such as eggs, butter, corn, etc. On the

other hand, we must not be too severe in our condemnation of a program that was fostered, not only with the idea of helping the farmer, but which more recently was also intended as a program that would win the war and write the peace. Throughout the 1940's, American farmers responded magnificently to the plea of our government that agricultural output should be increased. Year after year this occurred and their answer came again when the Korean War placed new and heavy demands upon U.S. farm production.

Many of our current difficulties stem directly from these all-out production efforts, and the amazing job performed by our agricultural people, which were dedicated in the national interest for freedom and human need everywhere. As the Secretary of Agriculture has pointed out: "I believe it is a literal truth that millions of people now living on this earth would have perished—and other millions would never have been born—except for the vast program of food distribution undertaken through the years by the United States."

I repeat this with all the humility at my command, although I am fully mindful of the problems that will yet arise in trying to get our house in order. We must still face the fact that under-consumption is acute among large segments of the agricultural population. Global population is increasing at the rate of 23 million per year. Unless nations learn to trade on a mutually profitable basis, the problem of agricultural surpluses in some countries and shortages in others will never be resolved.

FARM SURPLUSES—A BLESSING, NOT A BURDEN

GEORGE D. YOUNG
STATE REPRESENTATIVE HOWARD COUNTY
MISSOURI GENERAL ASSEMBLY

I think all of us realize that there is a need for some stability in Agriculture. This stability should be aimed at as income stability for the individual farmer through some sort of price stability. By banding together into companies and corporations, industries have learned to gain at least some measure of control over the markets because each produces enough to influence it. But each farmer, and I want to remind you that

farmers are about the only segment of our economy who operate under conditions of classic free enterprise in which no one producer has much control over the market, each farmer is but a tiny fraction of the nation's food producing business.

A wheat farmer, even if he had one million acres of grain, could not control the wheat market. That one million acres would produce less than 2 percent of the nation's wheat crop. Realizing this, American farmers from Colonial days forward have sought means of compensating for their lack of market power. They have sought means to stabilize agricultural prices and thereby stabilize their own situation within agriculture. In the last 50 or 60 years, we have seen many proposals suggested and many adopted which would provide the farmers some measure of control over the forces with which he has to deal. Out of these suggestions came laws regulating freight rates, commodity exchanges, and the like and more recently have come price supports.

And while nearly everyone has a different idea upon a farm program, almost everybody admits that there is need for some sort of program to provide stability for agriculture. One person might be for flexible price supports, and another be for price supports at 90 percent of parity but there is hardly any disagreement that some sort of program, either price supports or a substitute program, should be provided the farmer.

But I would like to say, and everyone would agree with this, that this stability in agriculture is not to provide a condition in which nothing would change at all. Income could not be guaranteed every farmer in a set amount. We must not prevent new crops or products being produced for a new market or prevent old ones from being produced with no regard to changes in demand for them. In fact, we need this stability only in order to enable agriculture to adjust smoothly and effectively to changing conditions. We need to do something to even out fluctuations in production and price even though we don't wish to completely alter the trend.

If no program were in effect we could go too far in adjusting to new conditions. For instance a good crop year for wheat coupled with a little lower demand might produce so much wheat that the price would be lowered sharply. Production the next year could then fall sharply to the point that it was less than the demand for it in which case we would see sharp price and production fluctuations until stability was reached. A situation such as this would be unfortunate for and hard to explain to the consumer and it would make farm planning and living difficult.

The adjustment could cause farm families great pain and grief until made. By then a new situation might be in effect calling for more painful adjustments. Wars have created vast changes necessitating increases or decreases in production. Technology has, of course, had a tremendous impact upon agriculture. Population shifts and increases have been something that agriculture has needed to adjust to. Foreign demand has changed. Weather, of course, is a big variable in agriculture. The purpose of price supports or any farm program should be to allow agriculture to adjust to these changing conditions with as little difficulty as possible.

And agriculture is adjusting to these great new conditions, and rapidly, despite talk that we should let farm people realize that they have to face the facts of economic life and other chatter of little help in solving the problem. For instance it is often said that we have too many people on the farms and that some would be better off in town. That seems to be about the only solution being offered to the question posed in agriculture today by some people in high positions. They tell us that getting people off the farm is the answer to the farm price situation while at the same time they tell us that the marginal farmers who should go, produce little—leading us to believe what they produce would have little effect on agricultural prices anyway. But what is the actual situation in regard to movement off the farm?

In the last ten years, we can show that the impact of technology and these other things has had a big influence upon the percentage of the total population of our country in agriculture. In 1945, 18.4 percent of our population was in agriculture. In 1950, 16.1 percent. In 1955, today, only a little over 12 percent. This would seem to indicate that even in the dream years which have been referred to by an official of the agriculture department that population has been adjusting on the farms to the new situation, and that some people felt that farm conditions even then weren't good enough to cause them to flock into the business. Adjustments couldn't be expected much faster. The farm population can't be halved over-night. It is very painful for a farm family to move out of their home in a community they know into an environment that is new. And it is hard to develop new skills and trades needed somewhere else.

And of course, the farm size has adjusted to these new conditions because the farm size in Missouri in 1935 was 126 acres and in 1950 it was 133 acres and it is still rising. Farm size can't be jumped overnight even if it is shown that it would be more efficient. So present farm families are trying to get hold of land

enough to use effectively the new machines developed. Just think of the tremendous capital investment farmers have made in machinery and fertilizer recently and all the other things they can find to invest money in, in an effort to meet a new challenge. Agriculture is trying very hard to meet new conditions and from your own knowledge of the big change in farm life over the past 10 or 20 years it is evident they are doing it with success. They should be commended for doing so rather than being criticized.

No one can deny that the cost of providing this stability to agriculture of easing the transition, has been great. It has involved the expenditure of millions of dollars. But, it seems to me, that if they do have the effect intended that these expenditures are small in relation to the good accomplished. If they prevent the farm economy from extreme ups and downs, they will help not only it but the whole economy as well for the farm market is an important prop to general industrial markets.

It is a very important market and though some say it isn't as important relatively as it was formerly, simply because farm population doesn't comprise as large a percentage of the total as it did, I wonder. Certainly farmers buy gasoline, oil, machinery and many other things they didn't buy formerly, because they produced so much of what they needed themselves. But being only 12 percent of the total market would mean a lot to industry to have. It would help farm surpluses if we had a 12 percent larger market for farm products.

Price supports have probably had the effect of keeping the consumer supplied with agricultural products at a relatively stable price. And they have certainly assured the consumer of more dependable farm market for his own articles.

It would be a more desirable situation if no subsidies were needed. But it is necessary that we realize that the farmers do help themselves and that the nation has a stake in helping them solve their unique and hazardous problems.

To give you an idea of how farm subsidies compare with subsidies given to other groups, here are the figures showing subsidies granted by the government to various groups during the year ending June 30, 1953, as printed in a news release on the federal budget. Agriculture subsidies including price supports, soil conservation, and other help during the fiscal year ending June 30, 1953, totalled \$523,000,000. Business subsidies were \$1,216,000,000, well over twice as much. To Veterans—\$4,178,000,000 were granted. These would be small in relation to the good accomplished if they could help agriculture make this transi-

tion to new conditions and if they insured that farm people would have a decent level of income that enabled them to be effective consumers of the products that the industrial segment of the economy produced. I am not citing these figures to prove that agricultural subsidies are too low or too high or that they should be left as they are now, but I do cite these figures to show that agriculture still is not subsidized to the extent of some other segments of the economy and it doesn't seem morally wrong for agriculture to be entitled to some sort of help when it is undergoing economic difficulties.

Surpluses represent productivity, and we have a tremendous productive capacity in agriculture today. It seems sometimes that agriculture is the only segment of the economy which is penalized for its productiveness rather than being rewarded. American farmers, only 12 percent of the total population are able to supply the rest of the American people with one of the highest quality diets of the world. But the Soviet Union has from 45 to 55 percent of its population engaged in agriculture and they are still unable to supply their citizens with as much food as they desire and need according to the admission of the Soviet delegation that toured the United States only this past summer. China has from 65 to 75 percent of its population engaged in agriculture. The United Kingdom has only 5 percent but we have to realize that Great Britain imports a large percentage of their foods stuffs, especially from Canada and Australia, so that this 5 percent figure is not comparable with the figure that we have for the percentage of the American population engaged in agriculture.

It may be that this productivity that we have in American agriculture today might come in handy later on in view of the possibility of war, of the possibility of shooting a blank one year in crop production, and because we have for the past several years been in a population explosion in the United States. And the population has increased at a tremendous rate. Just last night on the TV show, Prof. Schruben said the forecast now is that we will likely have approximately 220 million people in our country in 1975. Even if total agricultural population doesn't increase, decrease or change at all from where it is today, it will still mean that less than 10 percent of our population will be engaged in agriculture. If the farm population from 1955 to 1975 decreases at the same rate that it decreased from 1945 to 1955, we would be able to forecast that the farm population would be only approximately 6 percent of the total population of our country in 1975.

And it is still too soon to say that this percentage,

6 percent, is too much to be engaged in agriculture at that time because we will not be sure of the stage of applied technology in agriculture at that time or of the extent of foreign and domestic demand. And it may be that the farm population will decrease faster than it has been because the farm population is ageing. The percentage of the farm population between 20 and 35 in 1940 was 21 percent and in 1950 was 17 percent while the ages over 35 showed an increase. Some of this would be explained by the nationwide trend to live longer. However, the difficulties of getting started in farming, of obtaining enough capital, along with the price difficulties today are something to be reckoned with.

So it seems that surpluses may not be the unmitigated evil that they seem to be. They have provided some stability for the farm economy, through periods of change and they provide a backlog for consumption for the rest of the population. They represent the productivity that American agriculture is going to have to feed the population of the country for the next 25 years. It seems to me that if we recognize our surpluses for what they are, and if we take wise steps to see that agriculture does adjust to the new conditions of demand with as little harm to farm income and farm living as possible, that the farm surpluses we have accumulated and the expense that they represent will be well justified.

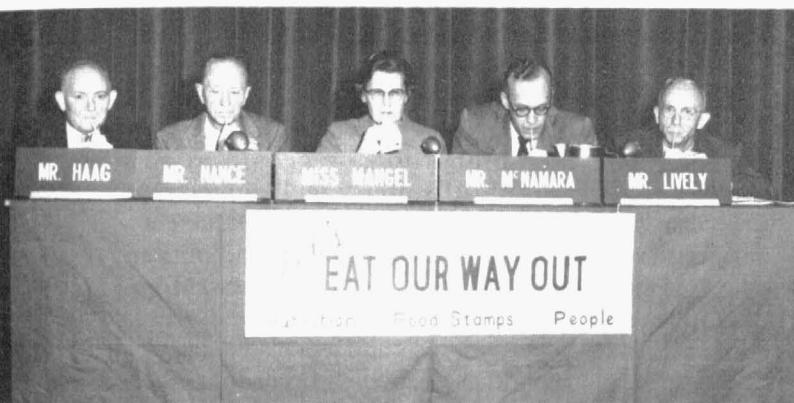
But this will be true only if we have a well co-ordinated program aimed at the solution of the problem. For even if we can condone some or all surpluses on the grounds of future anticipated need, we cannot accumulate them indefinitely. The magnitude of surpluses is something we have to take into consideration. Accordingly, we should examine the proposals

that will be presented tomorrow on the forum to the end of going beyond our inadequate reliance on price supports and to developing an aggressive forum program.

In conclusion, we could say that there is need for some farm programs to prevent sharp fluctuations in farm production and price and to ease the transition to new conditions in agriculture. Surpluses represent the effort of farm programs to do that. Agriculture is moving as fast as it can to meet these new conditions as testified by population shifts and changes, increased size of farms, and increased capital investment in farms. Costs of farm programs are large but they are small in relation to the good accomplished if they meet the objectives of keeping agriculture in balance and prevent the farm economy from collapsing and farm income from going through the floor. It would seem that the surpluses accumulated under price supports have tended to prevent complete price demoralization and an even greater shrinking of farm income than has occurred.

Furthermore, surpluses represent farm productivity that may be needed later on in the event of war, crop failure and for the tremendous increase in population the United States will have. Surpluses have provided some stability in the past few years. If we will recognize them as an outgrowth of a tool used to help solve our farm difficulties and will build on them expanded farm programs to raise dietary standards to develop new markets, to adjust production, then we can say that the accumulation of surpluses will have helped to keep farm income and the farm economy at an adequate level and they will have served their purpose.

WHAT CAN BE DONE



Panel, l. to r., Herman Haag, Gordon Nance, Margaret Mangel, R. L. McNamara, and C. E. Lively.

CAN NUTRITION HELP REMOVE FARM SURPLUSES

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You have probably heard someone say, "If every person in this country would only eat this much more of such and such a food, we wouldn't have any surpluses." Or you may have heard the generalization, "The American people are the best fed people in the World. You can't feed them any surpluses." While there may be some truth in each of these statements, both present a challenge to the nutritionist.

Let us look first at the average consumption of food per person in this country in relation to amounts recommended on the basis of present nutrition knowledge. It should be emphasized that the consumption figures represent retail weights and that we have very little information as to what proportion of these foods is lost from the time they are purchased until they are actually eaten. We know we do have the biggest na-

tional garbage pail in the world and we feed a great deal of food to pets. It should be noted, too, that recommended food consumption is based on knowledge of foods generally acceptable to people in this country.

Over the past 45 years the pattern has been changing in the direction of increased food consumption of all food groups except flour and other cereal products and potatoes. We are consuming more meat, milk, eggs, fats, sugars, fruits and vegetables than formerly. Consumption of all of these foods is equal to or above recommended levels except in the case of milk, green leafy and yellow vegetables and potatoes. Flour is still being consumed at about the recommended levels but potato consumption has dropped to considerably less than recommended. On the basis of current recommendations, then, we could encourage the use of more non-fat milk solids and green leafy and yellow vegetables and potatoes. But these foods do not represent our major surplus problems.

The usual recommendation of the proponents of the "Let's eat up our surplus" plans is that we feed more grain to livestock and encourage people to eat more animal products. From the point of view of food surpluses, this may be a practical solution since the food value we get from the animal is much lower than that of the feed these animals consume. Such animal products are high in acceptance and nutritive value. The production of meat, milk and eggs is more or less profitable to the producer. The nutritionist would not, however, be willing to recommend increased use of these foods without some proof that the result would be beneficial or at least not actually harmful.

As I stated earlier, recommended consumption of food is based on present nutrition knowledge. In nutrition, as in many other fields, the more we know, the more we realize we don't know. It is true that the food faddist and some other people "know all the answers." The worker in the field, however, understands that we have at present a very incomplete picture of the relation between food, nutrition, and health under the many real life conditions existing today. We know quite a lot about the effects of undernutrition which

is the problem most of the world has been faced with for most of the time recorded by history. We have considerable research on minimum amounts of foods necessary for good health in terms of food patterns for most regions of the world.

We have very little research on food intakes more than a little higher than minimum levels. This problem of having too much food on a national scale is a new one. We know very little about the long term over-all effect of our changing food consumption patterns. We do know that deficiency diseases are less prevalent in this country than formerly. At the same time, however, alarming evidences of conditions which may be due to so-called overnutrition can be found if we look at food consumption levels in relation to health and mortality statistics in this country. We must remember, however, that this kind of comparison gives clues but not proof. We need to verify assumptions made from such comparisons by extensive, expensive long-term controlled research.

Guilt by association is as dangerous in nutrition as in politics. Suppose we note that use of canned citrus products and the rate of crime in this country have both increased in the past decades. It would be unreasonable to assume either that increased use of citrus juices was responsible for the increase in crime or that people of the country had taken to citrus juices because of the crime situation. Dangerous and just as false cause-and-effect assumptions may be made when relationships seem reasonable and believable. We have to remember that many factors other than food intake are working to produce effects on health. Among these are decreased activity. We sit at a desk, tractor, or machine all day and then get into a car to ride a quarter of a mile. We take our entertainment sitting down watching or listening to someone else's activity. Moreover, we are apparently living under greater strain, many of us in smoggy atmosphere.

With these words of warning about drawing conclusions without proof, let us look at some of the changes in health and physical condition of people in this country which have occurred along with changes in food habits.

Every generation of men and women in this country is taller on the average than the previous one. Improvement in nutrition is usually accompanied by improvement in growth. This is undoubtedly good when there has been a record of under-nutrition. We might well ask ourselves, however, whether it will be a good thing for the human race to continue to grow taller with each generation. There was a time when bigger meant better to many people in this country.

It is possible, however, that we might grow so big that we cease to be efficient and that our organs cannot perform the functions of our bodies for a lifetime. We need to know whether the human race will stop increasing in size in spite of intake of more protein foods such as meat, milk, eggs or fortified cereals; whether the fastest growth is best or safest; and what long term effects increase in intake of such foods will have on health, vitality, and length of life before we can consider recommending higher intakes. Moreover, with increasing population, surpluses are probably a temporary problem and we want to know whether a population accustomed to high food intake can meet periods of food shortage as well as those accustomed to restricted food intake.

An increasing proportion of people in this country is overweight. It is pretty well agreed that this condition is undesirable. It lowers the efficiency and sense of well-being of the individual and puts an increased strain on body organs in time of stress. Moreover, obesity is associated with many of the diseases, such as diabetes, atherosclerosis and associated diseases of the heart and blood vessels, which occur in middle-aged and older people in this country. Again food habits and obesity may not be primary causes of these diseases, but surveys show increase in levels of fat or carbohydrate intake to be very closely associated with them.

Life expectancy at birth has gone up very rapidly during the past few decades, due chiefly to improvements in medicine and sanitation practices. The life expectancy of men and women of 50 years of age, has gone up but slowly. This would indicate that we are not controlling the causes of death in older groups as well as we are in younger groups. Again most of the major causes of death in this age group, (diabetes, cancer, nephritis and diseases of the circulatory system) are those closely related to diet and obesity. Formation of kidney stones, an important problem among veterans, might be related to high intakes of animal proteins. On the other hand, we have evidence which shows that the consistent habitual intake of recommended quantities of proteins is associated with improved health and ability to work in later years.

Dental caries (decay) has increased alarmingly in this country and is considered to be related to some extent to our high intake of refined sugars.

I have spent a considerable proportion of the time allotted me in explaining why, from the nutritional point of view, we cannot promote or back nutrition programs which urge higher levels of food intake than are recommended at present without further study of

UNITED STATES CIVILIAN PER CAPITA CONSUMPTION OF FOODS¹ IN RELATION TO RECOMMENDED CONSUMPTION²
BASED ON PRESENT KNOWLEDGE OF NUTRITIONAL NEEDS AND FOOD HABITS.²

Food Group	Consumption in pounds - retail weight			
	Apparent	1954	Recommended	Moderate Income
Meat, Poultry, Fish	150	168	104	143
Eggs (number)	293	402	260	365
Milk and products except butter - (in terms of milk equivalent)	398	537	559	559
Flour, cereals	292	156	170	130
Potatoes and Sweet potatoes	213	107	156	130
Dry beans, peas, nuts	16	17	13	6.5
Leafy green and yellow vegetables	63	102	117	182
Citrus fruit and tomatoes	59	108	104	130
Other fruit and vegetables	246	218	91	182
Fats and oils including butter	59	65	39	45
Sugars and syrups	87	104	39	45

1. Based on data from: Consumption of Food in the United States 1909-52; Agricultural Handbook 62; Bureau of Agricultural Economics; U.S.D.A.; September, 1953. The National Food Situation; N.F.S. 73; Agricultural Marketing Service U.S.D.A.; August, 1955.

2. Computed from: Helping Families plan food budgets; Miscellaneous publication No. 662; Agricultural Research Administration; U.S.D.A.; October, 1952. Recommended Dietary Allowances; Publication 302; Food and Nutrition Board; National Research Council; 1953.

the effects of such programs. We would not want to get rid of surpluses at the expense of the health of the people.

We have looked at the average consumption of foods per person in this country, and have found it to be equal to or above recommendations in most respects. We have reason to believe that average consumption figures for 1954 are more representative of more people than in 1910. Some of the factors responsible for the greater uniformity of diet pattern in this country today are improved year round production, transportation and distribution, improved communications with advertising and educational programs reaching more people, higher income levels and the elimination of nationality and regional differences with time and increased mobility of the population. New convenient forms of foods also play a role in unifying our food habits.

In spite of this trend toward more uniform food habits, the limited dietary surveys which have been made show that we still have large numbers of people in this country who, through ignorance, habit, prejudice or inability to buy sufficient food, are not getting diets adequate by present standards. It is possible that we can reach groups who are unable to buy sufficient food by some of the types of distribution of surpluses to be discussed by later speakers. It is possible, too, that we can improve the nutrition of groups by distributing surplus foods to school children and adults in institutions if we are certain that we are not increasing intakes beyond recommended levels and are not merely substituting surplus foods for foods which would otherwise be purchased.

The problem of improving the nutrition of people who have poor food habits in spite of sufficient income is much more difficult. The food faddist who is not inhibited by the truth can be much more spectacular and persuasive in his arguments than the educator. The manufacturer who has a product to sell, often presents biased and misleading information every day, sometimes every hour, by means of magazines, newspapers, radio and television.

Moreover, food habits are in general very difficult to change, particularly in older people. We found during World War II that undernourished people often would not eat food to which they were not accustomed and we had to send red beans to the Mediterranean and navy beans to Scandinavia. Probably there isn't a person in this room, myself included, who has not refused to try a new food which did not appeal to him. We have too much freedom of choice between foods we need and those we want.

The situation might be summed up as follows:

1. The average consumption is already up to recommended standards. Surplus foods in storage are less of a problem to the nation than surplus pounds on the population.

2. Many people in this country are undernourished. Surveys of school children and of families on farms and in cities in different parts of this country show that many people are not getting recommended amounts of food. Percent of poor diets varies depending on age, income, education and region studied. Some of these people can be reached by surplus programs and others can be educated.

3. At the same time, the percentage of overweight

in this country indicates need for more moderate food consumption by perhaps 25 percent of our population. This would add to our surpluses.

4. The overall contribution of nutrition to removal of surpluses would probably be insignificant in relation to that of other measures.

MEASURES TO SUBSIDIZE FOOD CONSUMPTION

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A wide range of measures for increasing food consumption through subsidies to consumers have either been proposed or used over the past 20 years. Distribution of surplus commodities to general relief or public assistance agencies and to the school lunch program has involved large quantities of farm products. Distribution of surplus commodities to welfare agencies and institutions was at its peak in the late 1930's when more than 10 million persons were receiving surplus foods and the annual value was near 70 million dollars. Thus, at its peak it amounted to less than \$7 per person per year, too little to be of much value in reduction of surpluses. In 1953-54, the latest year statistics are available, about 2.3 million persons received about \$61 million worth of products through this outlet.

The school lunch program in recent years reached 10 million pupils and about \$110 million worth of products in 1953-54. Thus, school lunches were twice as important as welfare programs for reducing surpluses in this most recent year.

In 1939, a food stamp plan was set up to provide for increased consumption of foods by persons on relief. Two types of stamps were used. Persons on relief who would buy a minimum amount of orange stamps, usually \$1 to \$1.50 a week, received free blue stamps equal to 50 percent of their orange stamp purchases. The orange stamps could be used for any kind of food purchases, except tobacco and liquor, but the blue stamps were limited to purchases of surplus commodities on a list designated by the Secretary of Agriculture.

The food stamp program was in effect from May

1939 to February 1943. Participation and cost were as follows:

Year ending June 30	Participants (Millions)	Value of food distributed, millions
1940	1.5	16.4
1941	4.0	82.8
1942	3.8	111.6
1943	2.6	49.1

About 345 cities or areas were served at the peak of the program.

During the period the stamp plan was in effect, the blue stamp purchases were largely livestock products, fruits and vegetables. Only 10 to 20 percent went for flour and cereals.

Although the stamps served to identify persons on relief, participation was high. In most areas, 75 percent of the eligible families participated and in some areas, 80 to 85 percent.

In one area, Shawnee, Okla., an experimental program permitted participation by any family with an income of less than \$1,000 a year whether on relief or not. In this case, the amount of orange stamps the family was required to purchase varied with income but in no case was the family required to spend more than 40 percent of its income for orange stamps.

The food stamp plan was effective as a surplus removal scheme. Significant conclusions listed by Schickele* are:

1. More than 75 percent of the blue stamps were used for surplus foods and many families spent more for orange stamps than they previously spent for food in order to get blue stamps.

2. The program was most effective when the number of foods on the surplus list was small.

3. The program was most effective for the perishable products such as meats, fruits, and vegetables on the surplus list.

4. Costs of marketing were not increased by the program so farmers received most of the benefit from the blue-stamp subsidy.

5. Non-participating higher income families had to spend more for food because of the greater demand generated by the relief families.

Because the food stamp plan seemed to be so effective, Senator Aiken of Vermont over the past 12 years has introduced bills in Congress to provide a National Food Allotment Plan. His first bill was introduced on July 8, 1943, and his latest on January 6, 1955. His plan has two purposes: (1) to improve the diets of low-income families and (2) to improve

*Schickele, Ranier; *Agricultural Policy*; McGraw-Hill Co., pp. 233-9.

prices of farm products by expanding the effective demand for food.

The plan sets up a basic weekly allotment per person which includes the following foods:

- a. 5 $\frac{1}{4}$ quarts of milk or its equivalent in cheese, evaporated milk or dry milk
- b. 3 pounds, 7 ounces of potatoes and sweet potatoes
- c. 8 ounces of dry beans, peas and nuts
- d. One pound, 10 ounces of tomatoes and citrus fruits
- e. One pound, 9 ounces of green or leafy vegetables such as green cabbage, kale, snap beans and carrots
- f. 2 pounds, 6 ounces of other vegetables and fruits
- g. 4 eggs
- h. One pound, 12 ounces of meat, poultry and fish
- i. 4 pounds, 4 ounces of flour and cereal
- j. 14 ounces of fats and oils
- k. 11 ounces of sugars, sirups and preserves

The retail value of these foods determines the basic allotment in terms of dollars and the amount of stamps which may be sold to a family may not exceed this amount per person. Provision is made for differentials by regions and by size and type of community. Also, adjustments are to be made in allotments for meals eaten away from home or for home production in the case of gardeners and farmers.

Stamps would be provided which low-income families could buy at less than their face value. The plan provides that the family in buying stamps must pay either 25 percent of their face value or 40 percent of its weekly income, whichever is larger, for the allotment of stamps. For example, if the allotment were valued at \$5 per person, a family of 4 persons would have to pay \$5 for \$20 worth of stamps if the family's weekly income was \$12.50 or less. If the weekly income were more than \$12.50 but less than \$50 the cost of the stamps would be 40 percent of that income. If income were \$50 or more per week, there would be no incentive for buying stamps.

Not more than one-third of the stamps could be designated for purchase of specified foods presumably those in greatest surplus or those required to improve nutrition. If such a plan were in effect at present, I am sure the hog and broiler producers would be pressing the Secretary to put pork and fryers on the designated list.

Free special coupons not to exceed 10 percent of the purchased coupons can be distributed by the Sec-

retary. These, presumably, would be used for foods in extreme surplus.

Food dealers who wished to participate in the program by accepting coupons would have to register with the Secretary of Agriculture. Banks would be authorized to redeem the coupons.

What might be the effect of such a program? First, the number of persons to be benefitted by such a program would vary greatly with economic conditions. At present, with a high level of employment, not more than 5 percent of the non-farm families would benefit from the program. At present, probably 2 million non-farm families or about 7 million persons would be eligible. In times of economic depression, the percentage of non-farm families who would benefit might reach 20 to 25 percent.

The number of farm families to benefit from this program would be hard to estimate because of home production of food. It seems likely that under present conditions the number of farm families might be as great as one-half million.

On the other hand, very few individuals outside families would be benefitted by the program.

The annual cost of the program also is difficult to estimate. Something between \$500 and \$750 million might be required at present if the basic allotment were \$5 per person per week. In times of economic depression the cost might be as high as \$3 billion.

The cost of the program can be reduced or increased markedly by a small change in the size of the basic allotment. If such a program is to be effective the allotment must be sufficient to provide a minimum adequate diet.

The figures are based on the assumption that family income must be \$650 per person before 40 percent of that income will provide a minimum level of living. This would mean a family income of about \$2350 a year for the average family of 3.6 persons. If, however, that minimum level of food expenditures were increased \$1 a week (from \$5 to \$6), the income requirement would be \$780 per person and \$2800 for the typical family. An increase of this amount would increase the number of eligible participants by about 50 percent and probably double its cost.

The administration of the program presents a number of problems. One of these is the machinery required for reviewing the income declarations and the setting of allotments. The other is the policing of the use of coupons to make certain that they are not used for non-food items in the general stores. The plan, however, eliminates the problem of physical handling of the commodities by sending them through normal marketing channels.

The program would be expected to:

1. Provide a minimum adequate diet for every consumer regardless of his income.
2. Improve diets by increasing the percentage of high quality foods.
3. Use the normal channels of food marketing and distribution.
4. Improve farmers' incomes by an amount equal to at least 80 percent of the food subsidy.
5. Reduce the need for limiting food production.

The benefit of the program to farmers comes mainly from its effect on prices of foods rather than the subsidy itself. By providing greater effective demand for low-income consumers, the program, in effect, forces the medium and high-income consumers to spend a larger percentage of their incomes for foods. Thus, the total retail value of food purchases by all consumers would be increased by more than the subsidy. Some economists expect that the increase in farmers' incomes created by the program would be as much as 25 percent greater than the cost of the subsidy.

This program does not directly affect grains and cotton which account for most of the problem of surpluses. It is apparent, however, that the increase in effective demand for livestock products under the program would work downward to the feed grains and eventually create a price influence on these grains considerably in excess of its influence on prices of livestock products. Furthermore, consumers with very low incomes spend about one-half of their income for foods. If under the program, they were able to limit this to 40 percent, much of this additional income released by the program would be spent for clothing.

A GROWING POPULATION AND FARM SURPLUSES

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Some Facts About Population Increase in the U.S.

1. The rate of increase has varied greatly from time to time. The Arithmetic rate has varied from 0.73 percent per year, 1930-1940, to 2.07 percent per year,

1890-1900, and 1.78 percent per year, 1950-1955. Rate has more than doubled from 1930-40 period to 1950-55.

Historically, the population doubled every 25 years until the Civil War, due to large families and foreign immigration. But the birth rate declined steadily from 1800 to World War II. The sharp rise since the War, though not unexpected, was not expected to hold up so long.

Under present circumstances, with relatively little foreign immigration, such variation in the birth rate is likely to be associated either with the swing of the business cycle, or some change in the value system of the people with respect to the family. Such change in values may come gradually, but is more likely to result from some strong emotional experience such as a people experience when they pass through a crisis; e.g., war, earthquake, epidemic, or religious revival. The tensions brought on by the recent "cold war" could play a definite part.

Prospects for Future Population in the U.S.

1. Predictions over any great length of time are precarious. Chief difficulty in our society is in predicting birth rate, since the death rate remains relatively constant.

The latest prediction of the U.S. Census Bureau is for 179.4 million people in 1960, and 228.5 million by 1975. This is an upward revision made in 1955. It forecasts 7 million more people in 1975 than was forecast in 1953. This is due to the birth record of the last 5 years.

If these predictions come true, there will be 14.8 million more persons in 1960 than in 1955; and 63.7 million more in 1975 than in 1955. There can be no guarantee placed upon the reliability of these estimates.

2. Will food production keep pace with this population increase should it occur?

Many leading production experts seem to believe that an increase in food supply of 40-50 percent by 1975 is feasible. If so, it will keep pace with population.

3. Will the population of 1975 consume as much, or more, foods per capita as at present?

a. The total food consumed in pounds per capita, 1910-14, as compared to 1950, has varied little. There have been differential gains and losses, e.g., less cereals and potatoes, and more dairy and fruit products.

During that time, 1910-14, the birth rate declined, but the adult population aged 15-44 remained about the same as a proportion of the total population. Labor

became less strenuous and the population more sedentary. That the total value of food consumed remained about the same, suggests that the population was eating better.

b. The trend toward better nutrition will probably continue, but it is questionable whether people will consume a greater volume of food. Perhaps as people grow taller and heavier they may consume more food.

On the other hand, the 1975 population will probably contain relatively more children under 10 years of age, and more persons aged 65 or over than in 1955. This will tend to reduce the per capita consumption.

Also the population will be still more urban and

perhaps more sedentary in 1975, and they may be controlling overweight better.

Population Growth Vs. Food Supply

There is little factual evidence, it seems, leading to the conclusion that the growing population of human beings will be able to eat up the surplus, in the short run. In the long run what happens will depend upon the rate at which technology develops productive capacity, possible changes in the birth rate, and the number of foreign immigrants received. With the birth rate as high as it now is, it is more likely to go down rather than up, particularly if times should become more settled.



Panel, l. to r., Dayton Maclay, Richard Uhlmann, Frank Miller, Ed Roddy, Coy McNabb, and J. W. Burch.

INCREASING SALES THROUGH ADVERTISING

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In my discussion this morning I would like to include not only advertising as we usually think of it in newspapers, radio and TV, but also promotional activities and merchandising.

In our so-called surplus products or those products in large supply, we have at least two groups, those that lend themselves to a promotional campaign and those which do not. Dividing them in a different way (but the grouping would be somewhat similar)—live-

stock products and grains. Is there any indication that more livestock products, for example, can be sold by an all out promotional campaign?

In 1953, milk sales in Memphis, Tenn. were 7 percent higher than the year before. When the U.S.D.A. made a study to try to find out the reasons for this, here is what they found. From October, 1950, to September, 1952, the average price of milk increased about 4 cents a quart. During that same time the retail sales of fluid milk dropped 18 percent. Milk prices were going up—sales were going down.

Starting in October 1952, fluid milk prices decreased and by March the price had fallen 4 cents a quart. During this period of price decline the milk producer and handler conducted a stepped up advertising promotional campaign. In addition, a number of merchandising changes occurred. Some of these were the elimination of price differential between homogenized and regular milk, between glass and paper containers and there was increased promotion of half-gallon containers. Sales increased and by March 1953, were greater than the previous year. This upward trend continued throughout 1953.

For a seven day period in 1953, the families interviewed were using about one quart more of fluid milk than they had the previous year. This increase in milk sales apparently was not due solely to the price declines for many homemakers did not know that prices had dropped but they were aware that a promotion program was on.

There are other interesting details of the study but certainly it would indicate that promotional efforts

are helpful in obtaining maximum milk sales.

Here is a commodity that is different from many of the others on our surplus list. It's different because all our research indicates that few people consume the quantity of milk they need for good health and nutrition. The dietitians, nutritionists, and doctors are all on the side of the dairy industry. The trend is toward greater milk consumption.

On the other hand, we have a product like wheat which is one of our major surplus commodities. Wheat consumption per person has been declining during the past 50 years. With our increased population the total quantity now used is about the same as it was 50 years ago. The total consumption of wheat for food in 1954 was 475 million bushels, exactly the same as it was in 1909. We are using the same amount of wheat for food in this country, even though our population has increased from 90 million in 1909 to 162 million in 1954.

We have stressed the importance of a great variety of foods in our diet. Less bread, potatoes and corn meal are being consumed and more fruits and vegetables, meat, eggs and milk. So all this puts wheat in an entirely different category than dairy products. Certainly we can't turn to advertising to bail us out as far as wheat is concerned. Emphasis will have to be in some other direction to solve the wheat problem.

There is another kind of promotional work that deserves our attention, and we have had a good demonstration of how it works. I am referring to the beef program that worked so effective during 1953. Our cattle numbers were high, shipments to market were heavy, and even stepped up because of the widespread drouth. About 28 percent more beef was sent to market. What would you expect an increase of 28 percent in supply to do to the price? The price farmers received dropped, of course, (about 27 percent average for all grades), but the amazing thing is that it didn't go any lower with a 28 percent increase in supply. People bought more beef than they had in many years. Our beef consumption went up from 61 pounds per capita in 1952 to 77 pounds in 1953 and 79 pounds in 1954.

What are some of the reasons this took place? First, there was an all out campaign by the meat industry, USDA, colleges and perhaps most important of all the retail food stores to sell beef. Chain stores, independent food stores, cooperated to the utmost by featuring beef in their full page ads of the large daily newspapers. In many cases, margins were cut and the result was large quantities of beef moved at more favorable prices to the producer than would otherwise have been possible.

Perhaps there are other reasons why the beef program was successful. Hog numbers were down, pork was higher than it is today. In addition, the Government did buy some beef. These are factors which should not be overlooked.

Advertising is expensive as anyone in the business will tell you. It is estimated that retail food stores spend about 1 percent of their gross sales on advertising. With \$40 billion gross annual sales, that is \$400 million spent for advertising in newspapers, radio, TV, etc. How this \$400 million is spent is important to groups such as poultry, pork, and beef producers. May I say here that the cooperation of retail food stores with the commodity groups has certainly been good, and I'm sure very helpful, in moving some of the commodities that have been and are in large supply.

Another promotional program is underway now on pork. Pork supplies are high but the increase in demand has been something short of spectacular. Some of the reasons given for this slow demand is that the consuming public is more conscious than ever of a diet that will prevent overweight. Fat pork is not very popular with the housewife. To move items, we have got to have a product the consumer wants. Also, now we have a large supply of beef and other meats. Nevertheless the way pork is being featured and promoted by retail food stores and other groups, I am sure more pork will move and thus keep the price from going as low as it would otherwise. Perhaps as a result of this program we can make more progress toward producing a meat type hog than we have heretofore.

Certainly it is believed that these advertising and promotional campaigns will help on the short run as well as the long run. If they keep the dip in price from going as low as they would without such a campaign, they will have benefited the producer temporarily at least.

From a long run viewpoint the results may be even more helpful. I am sure that the ADA believes that the milk drinking habit may be established by a lot of people and they will keep it up for many years. Also, there is some evidence that people have the beef eating habit as a result of the beef promotion program.

With all the promotional and advertising activity of different commodity groups we can ask ourselves the question, where is this leading us. We can only eat so much —we obviously can't eat more of everything.

Missouri farmers are in a rather fortunate situation in that they are producing many of the food products in which the trend is toward greater consumption. That is, meat, milk and eggs. Potato farmers for exam-

ple are in a different position.

I mentioned earlier that our livestock industry is in a different position than our crop producers. It is generally agreed that the livestock industry converts about 7 pounds of dry matter in feed into 1 pound of dry matter in meat, milk and eggs.

These livestock products are foods that people want—people are eating more of them. Advertising and promotional programs will no doubt help this move along at a faster rate.

DeGraff of Cornell said, "If we were to take our present surplus feed grains and to convert them to livestock products, the volume of meat, poultry, and eggs would be about 2 percent more per year."

The arguments given for this are:

1. This is the only apparent way to get rid of a burdensome excess of accumulations.

2. Livestock products appear to be the only form in which the domestic market can absorb these accumulations (barring war or crop failure).

3. Lower prices for livestock products results in greater demand—more so than lower prices for crops.

On this last point let me illustrate. Milk sales in Kansas City have been rising for years. However, June sales are usually lower than May sales. Whether this is due to hot weather and more competition from other drinks or the fact school is out—I don't know. Since 1949 the people of Kansas City consumed less milk in June than they did in May. Every year this happened until 1954. That year consumption went up in June.

This happened to be the year when price supports were lowered and due to that or other reasons milk dropped 2 cents a quart in Kansas City, June 1. Also, there was a promotion or advertising campaign put on by the dairy industry during that same June. Both of these factors no doubt had some effect. Daily milk sales of Class I milk were up. The trend of less milk being sold in June was reversed. Actually there was a 4.7 percent increase compared to the previous year.

Perhaps this suggests to us that an increase in the efficiency of our marketing system to make possible lower prices—tied in with a good advertising and promotional campaign—would pay big dividends as far as livestock products are concerned. This points to the field of marketing and that's another story which we don't have time for here.

In conclusion, let me summarize:

1. Advertising and promotional work will help move some commodities into consumption, at the same time decreasing the consumption of others.

2. A combination of lower prices and promotional activities have been very effective in increasing the consumption of livestock products.

3. And finally, perhaps the biggest value of all will be in promoting the use of livestock products which convert 7 pounds of dry matter in feed to 1 pound of dry matter in meat, milk and eggs. Through advertising and promotional activities our total consumption of these protein foods will go up and our supply of grains would tend to be less. No doubt that is the biggest contribution our advertising and promotional program can make in the long run.

REMOVE SURPLUSES BY INCREASING FOREIGN TRADE

FRANK MILLER
DEPARTMENT OF AGRICULTURAL ECONOMICS

Today we are asking ourselves what we can do with the abundance that surrounds us. My task is to discuss the possibilities of removing surpluses by increasing foreign trade. In theory, the solution of the problem is very simple. If you did your war service in the South Pacific, the silo-like stomachs you saw on children in that area were grim and indisputable evidence of the malnutrition that exists there. Those of you who were in India and China can close your eyes and call to mind the spindly shanks of thousands of thinly clad people going about the streets of the cities where you visited. You may have been in Calcutta where per capita milk consumption is less than a pint a week or in Bagdad during a famine where you saw workmen going about the street in the early morning removing the bodies of people who had starved to death during the night.

Now how big is this surplus problem? How much food and fiber do we have to sell? Throughout our national history, wheat and cotton have been our largest and most consistent export products. In the first three decades of the present century, we sent abroad an average of 173 million bushels of wheat a year (Table 1). In the drouth and depression years of the 1930's when we were net importers a part of the time, outshipments dwindled to 25 million bushels. World War II brought the demand abroad back to 193 million bushels a year in the 1940's, and efforts to relieve starvation after the war hiked it to 307 million in the 1950-54 five-year period. In order to meet this demand, the farmers of the United States raised the

TABLE 1 -- PRODUCTION AND EXPORT OF SELECTED AGRICULTURAL COMMODITIES IN THE UNITED STATES,
1900 to 1954.

WHEAT

Years	Population U.S. (1,000)	Production			Exports Percent of Production	Carry over (1,000 bu.)	Average Price	
		Total (1,000 bu.)	Per capita (bushel)	Net (1,000 bu.)			New York Cents per bu.	Liverpool Cents per bu.
1900-1909	83,109	666,955	8.0	145,855	21.9		102	99
1910-1919	98,981	774,147	7.8	179,074	23.1		162	169
1920-1929	114,146	822,452	7.2	194,178	23.6	127,666	151	157
1930-1939	126,669	745,578	5.9	25,078	3.7	248,640	104	84
1940-1949	139,249	1,064,190	7.6	192,943	18.1	319,701	200	152*
1950-1954	156,405	1,087,495	7.0	307,129	28.2	508,202	267**	208**
1955	164,563	917,000	5.6			1,020,686		

*Number 2 Manitoba northern at Fort William. The Liverpool market closed in September 1939.

**Four year average.

TOBACCO

Years	Population U.S. (1,000)	Production			Exports			Average Price per lb. Received by Farmers (Charts)
		Million Pounds	Per Capita Pounds	Million Pounds	Percent of Production	Carry Over Million lb.		
1920-1929	114,146	272.5	2.39	10.0	3.7	435.8	19.1	
1930-1939	126,669	316.9	2.48	12.7	4.0	654.0	16.3	
1940-1949	139,249	488.1	3.49	23.2	4.8	808.1	38.7	
1950-1954	156,405	580.2	3.72	31.0	5.3*	1080.0	51.2*	

*Four year average

COTTON

Years	Population U.S.	Production			Exports			Average price per lb. New Orleans Cents	Liverpool Cents
		Million Bales	Per Capita Pounds	Million Bales	Percent of Production	Carry Over 1,000 ba.			
1900-1909	83,109	11.15	67.14	7.43	66.6		10.74#		
1910-1919	98,981	12.83	65.24	7.47	57.6	2,477	19.82#	22.94 ^o	
1920-1929	114,146	13.08	57.09	7.16	55.5	3,057	20.45	23.95	
1930-1939	126,669	12.92	51.06	6.27	49.3	7,817	9.91	11.56	
1940-1949	139,249	11.75	42.12	2.64	22.6	8,416	24.97	24.49	
1950-1954	156,405	13.78	44.00	4.10*	30.3*	5,419	37.36*		

*Four year average.

#Nine year average.

^oEight year average.

output of wheat from an average of 667 million bushels in the first decade of the century to more than one billion bushels in all of the years but three since 1943. In the first 30 years of the century we had to ship out about 175 million bushels a year to keep the carryover under 150 million bushels. Now we must sell approximately 265 million bushels to keep the carryover below 150 million. In other words, we have 60 million bushels more of wheat to sell than we had on the average from 1900 through 1929.

The export situation in cotton appears to be less difficult than in wheat. In the first decade of the century our farmers produced an average of 11.5 million bales. Two-thirds of this quantity, or 7.43 million bales were sold abroad. Production since 1950 has averaged 13.78 million bales, leaving approximately 4.1 million bales for sale abroad. It appears that we have only 55 percent as much cotton for export now as we had fifty years ago.

While wheat and cotton are our most abundant commodities, they are not the only surpluses we have. In *Planning Pamphlet Number 91*, published in May, 1955, the National Planning Association points out

that: "The United States is the world's largest exporter of farm products. Our exports in recent years have made up about one-fourth of all agricultural products entering world trade. They rose to unprecedented heights during World War II and the immediate postwar period, but have declined very materially since 1952.

"The volume of agricultural exports, excluding cotton in the five-year period of 1948-49 through 1952-53, was 80 percent above average of the 1930's, and about 40 percent above the 1920's. Cotton exports were 25 percent below those of the 1930's. In 1951-52, the total value of our farm exports was \$4.1 billion. In 1952-53, it dropped 31 percent to \$2.8 billion. In 1953-54, it was \$2.9 billion. From 1951-52 to 1953-54, the value of grain and cotton exports each declined by nearly 50 percent. These two items account for most of the difference. Exports of other agricultural commodities did not change greatly. In 1948-49, 60 percent of our exports—amounting to nearly \$2.5 billion—were paid for by our foreign aid program. In 1953-54, only about 12 percent were paid for in this way."

The data presented in this quotation point out

that there is a desire for our products in foreign countries, but the outward flow declines as soon as the means of payment is reduced. There are many hungry people in the world and many more who are poorly nourished. Our surpluses would not make a dent in the need for food if we could get the products distributed. As I see it, any one or several combinations of four procedures can be used to increase foreign trade in farm commodities:

1. Subsidize exports.
2. Sell our products at world equilibrium prices.
3. Extend credit to other countries and let them use the funds to buy our farm products.
4. Import goods and services from other countries and send them farm commodities in payment.

You can think of many other techniques but my time will run out before I get these four explained.

Now what about export subsidies? We have been following this method of selling farm products abroad for several years. Wheat has been sold at the world price and the government has paid the exporter the difference between what he got and what gave for it on the market. The plan has moved large quantities abroad. It lacks permanence, however. Congress must appropriate money to pay the subsidy. Another defect is resistance from other exporting countries who are friendly to the United States. Several months ago a member of the board that directs the Canadian Wheat Pool pointed out that Canadian farmers were not opposed to selling wheat on the world market in competition with farmers in the United States; they did object to being in competition with the United States Treasury. The significance of this remark becomes clear when we call to mind the fact that 41 percent of the value of all agricultural exports between July 1, 1945, and June 30, 1955, was government financed.

A variation from the export subsidy is the two-price system advocated by at least one of our major farm organizations. Under it the grower would be paid a price based upon parity for the part of his product that is used for food in the home market, and the world or supplemental use price for the remainder.

A second method of increasing foreign trade would be to sell our products at world equilibrium prices. This procedure has been used throughout most of our history. The data for wheat and cotton presented in Table 1 illustrate how the plan works. For three decades following the turn of the century, American wheat was sold at prices that moved the supply into consumption. Prices at Liverpool, England, the market that reflected supply-demand conditions around the world, usually were a few cents higher than

in New York. This difference was enough to cause wheat to flow from surplus areas to places where people could consume it. In good crop years like 1901, 1906, and 1915, larger quantities were exported. In poor years such as 1904, 1910, and 1925, relatively small quantities were sent abroad. Production per capita averaged higher than it has in recent years, but the carryover was never excessive.

Support prices were started in 1929. In the 1930's the Liverpool price averaged 20 cents a bushel under New York, and the carryover rose from an average of less than 128 million bushels to more than 248 million, despite three short crop years when we were net importers.

The Liverpool wheat market was closed in September, 1939. No longer do we have a market that reflects world supply-demand conditions. Distribution is handled through the International Wheat Agreement, negotiations between government officials, and unilateral transactions between exporters and importers in surplus and deficit countries. A rough idea of market conditions can be obtained by comparing prices at New York and Fort William, Canada. Since 1940, the New York price has averaged 51¢ higher than the Fort William price. It does not cost 51¢ a bushel to get wheat from Fort William to loading ports on the eastern seaboard of Canada or the United States. Result—Canada has emerged from the war years without burdensome surpluses. Our carryover on July 1 this year was 1,020 million bushels.

A third procedure that can be used to increase exports of farm commodities is to extend credit and let the borrowing country use the funds to buy our surplus commodities. This procedure has been used, but it has not been very satisfactory. The loan part of the transaction involves agreements between government officials. These men know that food disappears with a single use. Money borrowed to buy it for a nation is not much different from a family charge account that runs from year to year at the grocery store. If settlement cannot be made at regular intervals, the account becomes a burden.

There is still another objection. The nation extending the credit has specific items of surplus to sell—wheat, for example. Consumers in the borrowing country have definite food preferences. In the sections of the world where people are perpetually hungry, more of them eat rice than eat wheat. Neither government officials nor the people they represent are likely to remain happy through the years if loans are extended to them only on condition that they buy items that are no better than second choice in their daily diets. Like the groceryman, the people of the United

States want the loans paid. The buyer is likely to feel that the goods were sold to him at a high price when starvation gave him no choice except to buy.

A fourth procedure for expanding exports of agricultural commodities is to trade with other countries so they can send us goods and services in exchange for our foods and fibers. In the early part of our national history, we imported more goods and services than we shipped abroad (Table 2). The people of Europe, particularly Great Britain and Holland, were investing large sums of money in American railroads, mines, factories and farm land. Immigrants were coming to our shores in large numbers and sending a part of their earnings back to their families. American cargos were carried in alien ships and insured by foreign companies. By 1870 it became necessary for us to send more merchandise abroad than we received in order to pay the interest on debts, freight charges, insurance premiums, and take care of remittances of immigrants. In other words, we had to sell more merchandise than we bought in order to balance international accounts. This situation, fixed in the minds of our people the notion that the only way we can be prosperous is to sell more goods than we buy. In the first quarter of the twentieth century, any school boy or girl would tell you that the United States was a prosperous nation because it had a "favorable balance of trade."

The United States has been the principal supplier of food and materials to Great Britain and her allies in two world wars. During World War I, we reversed our position from a debtor nation to a creditor nation. No longer was it necessary for us to send more goods

abroad than we bought in order to balance international accounts. The reverse of the situation to which we had become accustomed was required. Our people were not willing to accept this fact. When the countries who owed us money started to ship us goods to pay the service charges, we hiked our tariffs to unprecedented levels. All of the countries except Finland defaulted. Write-downs and cancellation of government and private debts had returned us to a net debtor position to the extent of almost \$1.3 billion by the end of 1940. The excess of exports over imports since 1940 had made us a creditor to other nations for approximately \$13.9 billion at the close of 1951. No doubt the amount is larger now. We have continued to send more goods abroad than we have purchased. If the balance of trade cannot be reversed, the possibilities of increasing exports of farm commodities are very remote indeed.

Now I have tried to say that there are at least four possibilities of increasing foreign trade in agricultural commodities: 1. Subsidize exports. 2. Make loans to governments in countries where food is scarce on condition that the money be spent for surplus products. 3. Sell farm commodities at world equilibrium prices. 4. Reduce tariffs, remove import quotas and take off exchange regulations so goods and services can be traded for other goods and services around the world.

The first two have very limited possibilities of successful use. Three and four will work if we will let them work, but we may not be happy with the immediate results.

TABLE 2 -- EXPORTS AND IMPORTS OF MERCHANDISE AND BALANCE OF FOREIGN TRADE IN THE UNITED STATES AVERAGE FOR TEN-YEAR PERIODS, 1791 to 1950.

Years	Exports \$1,000	Imports \$1,000	Excess of Exports + & Imports - \$1,000
1791-1800	46,774	59,185	- 12,411
1801-1810	74,532	92,766	- 18,234
1811-1820	58,989	80,812	- 21,823
1821-1830	69,421	72,949	- 3,528
1831-1840	103,550	119,520	- 15,970
1841-1850	122,620	121,123	+ 1,497
1851-1860	248,887	284,475	- 35,588
1861-1870	254,327	331,867	- 77,540
1871-1880	589,301	535,222	+ 54,079
1881-1890	765,136	692,187	+ 72,949
1891-1900	1,024,870	763,328	+ 261,542
1901-1910	1,616,250	1,158,500	+ 457,750
1911-1920	4,586,638	2,611,976	+1,974,662
1921-1930	4,587,161	3,741,786	+ 845,375
1931-1940	2,622,388	2,097,566	+ 524,822
1941-1950	10,973,470	5,133,389	+5,840,081
1951	20,218,000	15,054,000	+5,164,000
1952	20,701,000	15,728,000	+4,973,000



Panel, l. to r., Leonard Schruben, Uel Blank, J. H. Longwell, Daniel E. Brady, and J. O. Bray.

WHAT KIND OF ADJUSTMENT IS NECESSARY

UEL BLANK
EXTENSION ECONOMIST
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I'm going to proceed on two assumptions with reference to our goals—goals on which, I feel, there is a wide area of agreement.

The first is that we are interested in economic progress for our nation as a whole. We have demonstrated that a considerable rise in living levels is possible in a fairly short time. We want this to continue, and we believe *that it can!*

Secondly, as farmers, we are particularly interested that we share in this rise of living levels and that the returns to labor, capital, and management in agriculture be at least on a par with that of other industries.

These are economic goals. In addition, it is recognized that all of us have aims and needs that are not satisfied by our living level or the material wealth that we have accumulated. In many ways, our social and spiritual needs may be more important than economic satisfactions.

For the most part, we're dealing with economics here—to the extent that it can be separated from other things. Overall needs are mentioned to help keep the proper perspective.

It should be clear from the foregoing part of this conference that there is no simple, easy solution to the problem of surpluses. We have mentioned domestic consumption and foreign markets. Special disposal programs may be of real value in the short run. However, for the long run solution, we have no alternative but to meet the problem head-on. This means the adjustment of production to effective demand.

Even this has many sides to it and cannot be done once and for all. Rather it has been, and will be, a matter of continuing adjustments through the years.

Now, what adjustments are necessary? My answer to that question may surprise you. As I see it, we are actually getting the kinds of adjustment in agricultural production that we need!

There are a few notable exceptions to this generality that I'll deal with in a minute.

Please note that I said the adjustments taking place were of the *kind* that we need. In many cases however, while adjustment is in the right direction, not enough has taken place.

When we look for adjustments to make in agricultural production, we can take our cue from the most significant fact of our U.S. economic history, and this is the unbelievable increase in the productivity of human labor that has occurred. This has made it possible for fewer and fewer of our people to produce food; while an increasingly higher proportion worked at other jobs—such as building roads, bathroom fixtures, etc.—that raise our living levels.

Let's look at what has happened, for a minute.

In 1800, the U.S. had a total population of only a little over 5 million people. But of these, around 4 million were required to produce food. Thus about 80 percent were farmers.

At the time of the Civil War, the proportion of farmers had dropped to around 60 percent—20 million out of 32 million.

By 1910, our total population had risen to over 90 million. Farm population had also risen—but not as rapidly—to 32 million or about 35 percent of the total.

For the period from 1910 to 1940, the farm population was fairly constant at near the 30 million mark. Total population continued to grow. The result was that by the end of the period, farm population made up only 22 percent of the total.

In the 15 years since 1940, the number of people on farms has dropped rapidly, from 31 million to 22 million. Today, farm population is only 13 percent of the total.

Since 1800 then, we have seen an adjustment from a situation where about four people in every five were on farms, to the present where we have only about one person in eight on farms.

Would you like to know the details of how and why such a change takes place? If you would then here's a simple exercise that you can perform to find out. When you get home, write down the names of ten families who were your neighbors on the farm during 1935 to 1940 and the number in each family. Now, of those still living, count the ones on farms at present

and those living and working elsewhere. If you're about average, you'll find that half of these people who once were your neighbors are not now farming. Now ask yourself why these came to leave—and you'll get a good answer to the question.

This shift of our population into non-farm employment is beneficial to us for at least two reasons:

First, if high living levels measured in terms of automobiles, electricity, refrigerators, etc. is what we want, it's necessary to keep as small a portion of our population producing food as possible. If a man must spend his time farming, he just isn't available to build automobiles, electric generators, or work in steel mills.

In the second place, the fewer people there are to divide the total agricultural income among, the larger amount each family will receive.

Should you need further evidence of the importance to us of having a high percentage of our population working at other things beside farming, we might look around the world at other countries. When we do this, we can make this general observation. The countries with the highest proportion of their people engaged in agriculture are those with the lowest living levels. Dean Longwell has just returned from India. He tells me that there 82 percent of the people are farming; millions barely subsist. In contrast, only 13 percent of our population is farming, and we're having a conference on surpluses!

If any criticism could be made of this movement of human resources (labor and management) from agriculture, it would be that it has not and is not now taking place rapidly enough. This underscores again what I have said, that we are getting the right kind of adjustment but not in the proper amount.

Taken as an average, labor hasn't been as productive in agriculture as in other industries. This is mainly because there has been an over-supply of labor in agriculture. The result has been that dollar incomes to farm people have been chronically low compared with others.

Why has there been such a lag? There are several reasons: For one thing, farm population has reproduced at a faster rate than urban—causing farm population to build up more rapidly. The nature of the industry has a bearing—you can't set up a farm business in a few weeks and aren't likely to lightly discard the whole thing. Then, too, a farm can support people at a subsistence level, thus allowing them to live at home; you can't do that as well in town. Perhaps even deficiencies in rural schools can also be blamed.

Specifically, how does this relate to the surplus problem? I've suggested it already, but here's another

way it can be said: With a few extra workers on farms all competing with each other to get their incomes up, some unneeded production may result, and it only takes a little to drop the price a long way. For another example: We only get a surplus when we set the price at a given level. A small production unit must have a high price on its low volume of output to enable the operator to live. On the other hand, an operation, set up to produce at a high volume, can take a lower profit on each bushel or pound and still keep going.

Again, the adjustment toward efficiency of farm operations is strongly in the right direction. Our record of progress with respect to output per hour from work on the farm is very good. In the last 20 years, it has more than doubled. Along with improved methods and better machinery is an increasing farm size. In the decade from 1940 to 1950, the average Missouri farm grew 12 1/2 percent in size.

This agricultural revolution from a subsistence toward a commercial operation has greatly increased the problems of management. Those who can put the right combinations of land, labor, capital and management together, along with reasonable weather, fare well. Doing this isn't easy, and I need not add that there have been many others who found the going hard.

It should be noted that other industries are also having to make continual adjustment to improve operating efficiency. I understand that J. C. Penny has had to close some of his smaller stores because overhead could not be met. The automobile industry provides another example. There, Nash and Hudson have recently merged to form the American Motors Company in order to take advantage of the efficiencies of greater size.

For the individual farmer, the handwriting on the wall is clear: It is essential that a good Balanced Farming operation be set up that will turn out a high volume at a low cost per bushel or per pound.

The alternatives are a lower income than the farm family should be willing to accept, or adding to income with outside employment.

Earlier I said that there were some exceptions to the fact that we were getting the kind of adjustment that we needed.

We agree, don't we, that if one area of the U. S. can produce a given crop at a lower cost per bushel than another area; then, other things being equal, the low cost area should do the producing.

Let's take wheat for an example: The areas having the lowest production costs for this crop are the plains states—the Dakotas to western Kansas and Colorado.

Yet, in the recent difficulties over wheat supplies, we find that these states reduced their output of wheat for '54 and '55 by almost $\frac{1}{3}$ compared with 1946-50. Against that, the cornbelt states actually increased wheat production!

This occurred under a program of administered prices. We need to ask some searching questions of our pricing and production program, as to why that happened.

Tied in with the wheat problem, are the distortions of normal production patterns caused by war and the aftermath of war. If it's necessary to change our production pattern during a war, then we must learn to get back to the normal trend as soon as possible. This caused grief after World War I, and it is doing so again.

There's one other kind of production adjustment that needs mention. This is that we produce the kind and quality of products that are most nearly in line with consumer demand.

Dozens of examples can be given: Meat hogs versus fat hogs that produce surplus lard; a high quality egg that consumers will pay a premium for in the stores against current receipt eggs that go to lower uses or turn consumers to other products.

I've used wheat for a bad example before and could take a final jab at it. Although we have more than a whole year's supply carried over, of all wheat, we actually have to ship in Durum wheat to meet our needs. It's now selling at above the loan rate. Of course, Missouri farmers can't do anything about Durum wheat production.

More careful attention to market demands and the quality of our products can mean higher consumption and better returns.

Now, to summarize the necessary adjustments or changes in production that we need in order to realize increasingly higher levels of living and to help insure that farmer's share in that increase.

First, I have pointed out that we actually are getting the kinds of adjustment that we need, but not always in the amounts necessary.

Of first importance are the improvements in efficiency in production that have changed us from a nation of people, 80 percent of whom were farmers, to a farm population of only 13 percent in just 150 years. Despite this tremendous adjustment, there has been enough lag that returns to labor and management on farms has been chronically below non-farm incomes on a dollar basis.

This improvement in efficiency means that we have more goods to divide up among ourselves. The

movement of rural people to city employment means there are fewer farmers to divide the farm income among.

Along with this, farms have grown larger; much larger amounts of capital are needed; and the problems of management have been greatly increased. High-volume, low cost per unit-of-output farm operations are demanded by the situation.

Efficiency would demand that we produce each crop in the area where it can be grown to the best advantage. In recent years, we haven't done this with certain crops; wheat for example. Since this occurred under a program of administered prices, we need to question the methods that have been used.

The distortions caused by war needs have aggravated our troubles, many of which result from an inability or unwillingness to return to normal, following a period of artificially high demand.

Closer adjustment of our output to consumer demands is another way to get better consumption of certain products and more returns to farm businesses.

PROBLEMS OF VOLUNTARY ADJUSTMENT

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The Problem We Face

To deal with problems of voluntary adjustment in agriculture, I will need to examine two symptoms of the total agricultural problem. The first is overproduction, which, like a fever, is a symptom of trouble, but not itself a disease. The second symptom is low farm incomes. If we can discover the conditions which cause these symptoms, we will be well on the way toward making sensible policy prescriptions. While the problem of low farm incomes is related to the problem of over-production, an increase in demand, such as we saw during the last war, can solve the surplus problem while leaving the low income situation largely unchanged. I shall direct my discussion largely to the low income symptom or problem in the belief that it is of most pressing importance to farmers in Missouri.

Some idea of the size of the problem can be gained from a recognition of the fact that more than one in every four farm families in the United States is a low income family. Of the 5.4 million farm operator families in the U. S. in 1950, about 1.5 million had cash incomes of less than \$1,000.¹ The U.S.D.A. has recently made a study which shows that about 1,200 of the 3,074 counties in the United States, by their definition, are low farm income counties. In Missouri, 31 of the 114 counties in the state were rated as having a moderate or substantial problem.

I assume that it is clear that adjustments must be made in agricultural production if we are to solve the surplus problem. I also assume that there can be no question about the necessity for adjustments if we are to whip the low income problem. The questions are, whether we should sit back and wait for things to work out or whether positive programs should be built to help the process along. If positive adjustment programs are to be undertaken on an enlarged scale, we naturally ought to find out the nature of the problem so as to discover the requirements of the cure. In a search for answers to these questions, I shall first describe the forces which have brought on the need for adjustment. I will then try to give an account of the kinds of adjustment needed and the forces which slow up voluntary changes. After looking at the kinds of programs that would be required to help the changes along, I shall leave it up to you to decide whether the medicine is worse than the disease.

Why Agricultural Production Must Be Adjusted

In the first place, changes in the pattern of agricultural production are a part of the complicated process of economic development. By economic development or progress, I mean that combination of changes in products and methods of production which have enabled us to create ever higher and higher levels of material welfare. It is a curious fact that the rate of total progress is governed by the rate of cost-cutting innovations in agriculture, but one turn of the wheel later, the resulting progress in the total economy turns the economic screw which forces agriculture to make a new set of adjustments. The situation has been aptly summarized by K. E. Boulding: "We have, therefore, a strange paradox, that labor-saving techniques in agriculture are of supreme importance to society at large but are a distinct source of embarrassment to agriculture itself. The fruits of our scientific farming and our agricultural colleges are found on the tables of the

masses, not in the pocketbooks of the farmers."²

It seems to me that this view of the nature of the agricultural problem ought to make us skeptical about the "fair share of the national income" argument in farm-policy discussions, not because I think this is unimportant, or that farmers generally do get a fair share, but because it takes our attention from the heart of the problem. If economic progress is in fact dependent on cost-reducing improvements in agricultural production, which I think it is, we should not expect to get parity prices. We only get parity prices if demand increases faster than agricultural production, as has been the case in war time in this country and is the case in backward countries which practice primitive agriculture. Instead of parity prices, I think we should strive for parity income. I know of no reason, moral, social or economic, why farm families should not enjoy all the good things of life which money will buy, and enjoy these things on a par with other groups in our economy. But when we put the problem this way, it becomes evident that the determination of a fair share of the national income for agriculture depends on the number of families there are who must earn their income from agricultural production. Let's look at the record to get an idea about the changes which have taken place historically.

Year	Percent of Population on Farms	Percent of National Income from Agriculture
1910	34.9	16.0
1920	30.1	14.0
1930	24.9	8.3
1940	23.2	8.1
1950	16.6	8.0
1954	13.8	5.5

(Source: Mighell, Ronald, "American Agriculture, Its Structure and Place in the Economy," John Wiley and Sons, 1955.)

In addition to the forces of general economic progress which require a transfer of productive resources—largely labor—out of agriculture, there is also the pattern in which technical improvements like hybrid corn fall on the countryside and give rise to unequal pressures for change within agriculture.

The magnificent success we have seen in this country in technical improvements in agriculture is not, unfortunately, an unmixed blessing. By technical improvements I refer to the fruits of research which include hybrid corn, mixed fertilizers, the tractor and combine, the milking machine and artificial insemination—to mention a few. It is well understood that changes of this kind can generate surplus farm produc-

¹Development of Agriculture's Human Resources; House Document No. 149.

²The Canadian Journ. of Econ. and Pol. Science; Vol XIII, pp. 436-446.

tion if demand does not increase as rapidly as output. What is less well understood, I think, is the fact that these changes deal out profits to some farmers and destruction to others. With technical progress in agriculture, some farmers are forced to make adjustments like Gilbert and Sullivan's billiard sharp whom the Mikado required to play

"In fitless finger stalls,
On a cloth untrue,
With a twisted cue,
And elliptical billiard balls!"

The nature of these changes is something like this: The new techniques fit more profitably on some farms than on others. If the new techniques happen to fit in an area like hybrid corn fit on Iowa farms, they support land values, encourage the use of mechanical corn pickers, reduce labor requirements and encourage an expansion in farm size. These changes, which are fine for Iowa farmers and consumers, put marginal corn farmers in a tight squeeze. The competitive position of the corn farmer whose land does not respond so well to hybrids is worsened. The value of his land tends to fall, he can't afford the modern equipment which was so profitable in Iowa, and he is in a poor position to expand his farm and turn to grass farming if he is losing money and the value of the land he already holds is falling.

But this is only the beginning. If there is industrial unemployment as there was during the 1930's there is no place to go. While real land values fall, land prices hold up as families bid the price of poor land up to give themselves a place to work. Of course,

they can't afford much modern equipment, or much lime and fertilizer, and they are forced to grow cash crops on land that ought to be in grass, to meet family living expenses and farming expenses. They have neither the capital nor land to make their business large enough to provide profitable full-time employment. I argue that these families are forced to pay some of the costs of economic progress by accepting lower standards of living than they could have earned in the absence of technical progress.

I think that I can support this view of the nature of economic progress in agriculture with factual evidence. I have studied changes in Morgan and Carroll counties, Mo., for the period from 1910 to 1950 (Table 1). These data show that the density of population decreased 42 percent in Carroll County between 1910 and 1950 against a decline of 18.2 in Morgan County. Carroll County has more fertile soil judging from yields and land values. There are several indications that Carroll County farmers have had greater success in adjusting their farms than is true of Morgan County farmers. They increased the average size of their farms a little more than was the case in Morgan County; a larger percentage of the farms have been operated by tenants which is also true of the most prosperous counties in Illinois and Iowa; and the Hagood Farm Operator Level of Living Index for Carroll County has always been above the U.S. Average. Between 1930 and 1940, the density of population increased in Morgan County (but not in Carroll) and the value per acre of land and buildings reflect this pressure as Morgan County land was valued at 50 percent of Carroll County values in 1935, while it was only 40

TABLE 1 -- CHANGES IN MORGAN AND CARROLL COUNTIES, MISSOURI CENSUS DATA, 1910-1950

	1910	1920	1925	1930	1935	1940	1945	1950
Population per square mile:								
Carroll	27.9	24.6		22.6		19.8		16.2
Morgan	20.9	19.6		17.8		18.7		17.1
(From 1910 to 1950, the population per square mile decreased 42 percent in Carroll County, but only 18.2 in Morgan.)								
Average size of farm, acres:								
Carroll	128	134	136	146	139	153	174	187
Morgan	138	147	147	157	138	152	158	175
Percent of farms operated by tenants:								
Carroll	34.5	34.8	37.2	40.2	45.7	47.0	36.4	27.4
Morgan	26.9	22.6	27.5	28.9	35.9	36.1	25.1	13.9
Farm Operator Level of Living Index, U.S. Avg.:								
Carroll				75		79	100	122
Morgan				111		101	122	156
Average value per acre of land and buildings:								
Carroll	\$60		\$89	\$78	\$42	\$45	\$56	\$83
Morgan	\$25		\$40	\$38	\$21	\$19	\$24	\$33
Morgan as percent of Carroll								
Corn Acreage (1,000):	40		44	48	50	42	43	40
Carroll	116		100	88	46	79	86	70
Morgan	47		35	35	27	22	19	14
Corn Yields, bu. per acre:								
Carroll	27.5		22.9	27.4	4.4	37.6	37.4	37.6
Morgan	28.9		23.4	16.4	4.7	21.6	28.5	28.4

percent, in 1910. In these 40 years the acreage of corn in Carroll decreased 40 percent, but yields per acre rose about 4 percent. With a 70 percent decrease in corn acreage, yields only held constant in Morgan County.

Now let's see if we can figure out what all this means. I have argued that the technical improvements in agriculture are a good thing for economic progress, and thus for society as a whole. And most technical improvements save labor or increase output per man. But it is clearly the case that the labor that is saved must be used for the production of other goods and services if we are to realize the full benefit of the improvements. What most people want after they can buy all the food they want is better housing, more cars, TV, medical service, better education for their children, travel, better churches, more entertainment and leisure time. While there are top limits to the amount of food anyone can consume, there is almost no limit to the amount of these other things people will demand if they have the money. The question is, how do we get the people who are released from agricultural production employed where they can supply these other goods?

Many of us have thought that these changes would take place automatically if no one tinkered with the economic machine. But whether we like it or not, a lot of tinkering has already been done on the machine. The creation of the Federal Reserve System, the creation of the Land Grant Colleges of Agriculture and Extension Service, agricultural legislation supporting cooperatives, soil conservation, and Federal Land Banks and price-support programs are all examples. In addition, we should mention labor legislation, social security laws, and especially the employment act of 1946 which charges the Federal Government with responsibility to see to it that high levels of employment and production are maintained. I think there is every reason to believe that full employment is a good thing for agriculture, both because it gives us a demand for our products and especially because it will help provide jobs for those who are displaced by agricultural progress.

But in spite of all these efforts, more adjustments are needed in agriculture, and I have tried to show that there are good reasons for doubting that they will work out soon if we depend altogether on voluntary action. The reason is that technical progress in agriculture makes it very difficult for many farmers to finance the kinds of adjustments which are required. If agricultural improvements are so important to economic progress, it seems clear that agriculture has a claim to some sort of subsidy. But the geographic pat-

tern in which the farm benefits from technical progress falls is such that price supports benefit most those who have the smallest adjustment problem. Are we wise enough to devise kinds of agricultural subsidies which would enable low income farmers to reorganize their farms on a larger scale so they can earn satisfactory incomes? Could we use some of the subsidy to absorb the capital losses on land that needs to be retired from cash crops and put to grass? Could we use some of the subsidy to train and finance the movement of people from areas where there are too few real agricultural opportunities to places where there are good jobs? Could we guide more manufacturing plants to rural locations so that people would not have to leave their homes, but could continue with part-time farming?

As I said, these look like ways out, but it is up to you to decide whether the medicine is worse than the disease.

PRODUCTION CONTROLS AS A SOLUTION

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At the outset let us understand that production control efforts aren't new. Earliest history records man's efforts to control output. Sometimes the effort was directed for the general good of all the people and sometimes other aims were lurking in the background. In other words—private profits at the expense of others in the society.

Also let us understand that efforts to restrict production are not confined to farm groups. It only seems that way. There are so many farmers, they are ineffectively organized for this sort of thing, and politicians blow hot air over the issues to keep them smoking. But others exercise industry-wide control of production; to be plain about it, they restrict production.

Some non-farm industry restrictions are placed by a virtual monopoly of an industry by one firm. Now this isn't always bad—but it's true. It's a game of follow the leader in other industries. When demand slackens everyone in the industry cuts back on production.

Some industries follow restrictive production practices determined by labor. Prices of automobiles and farm machinery are based in part on wages set for the entire industry. Anyone wishing to make automobiles must calculate possible costs on the basis of an industry-wide establishment of wages even if he could hire workers at a lower rate. Likewise, he must accept industry-wide establishment toward uniformity of production per work hour even if his workers were willing to handle more units per hour.

This is a form of production control, some call it monopoly, brought about in an industry through the labor side of the team. It's just as effective in extracting money from yours and my pocketbook as if the boards of directors of each firm got together and agreed to restrict production to maintain a given price.

Other devices to restrict supplies have been used for a long time, too. One of our best examples is provided by the tariff on imported goods. For products usually imported into a country, tariffs are effective in raising prices or restricting imports to retail at low prices.

But what good is a tariff on products we export? More specifically, during the last 10 years of unsubsidized trade in wheat, the average price in Kansas City was about 25 cents per bushel below Liverpool, the world center of wheat trade. It cost about that amount to transport wheat from Kansas City to Liverpool.

At the same time there was a tariff of 42 cents per bushel on wheat. If tariffs are so beneficial, why didn't it raise wheat prices?

In contrast, the United States usually imports beef. The tariff in this case restricts the supply of beef from Argentina and Australia for sale in the United States. I am personally acquainted with cattlemen who are strongly opposed to domestic price supports for grain. But I don't know of a one who advocates removal of tariffs on beef.

Why does government help to an industry seem more sinful in one case than the other?

These illustrations show that ways and means of control of supplies are virtually endless. Generally, however, they can be grouped under two headings: Private controls in a free market; government controls in a controlled market. As in many situations, the dividing line isn't a sharp one. The extremes plainly are black and white but there is frizzy grey in between.

Let us first look at some of the private controls in agriculture of the past. The Night Riders of Kentucky and Tennessee provide an experience for us to examine. They were active shortly after the turn of the century. We can find more recent examples

such as blocking milk deliveries in the early 1930's but if we pick the earlier date perhaps we can look at this problem of farmer-run controls somewhat more objectively.

The objective of the Night Riders wasn't merely to reduce production of tobacco. The Night Riders attempted to eliminate the crop for 1908. It was an organized attempt of farmers to meet the restrictive buying monopoly of the Tobacco Trust. In other words, they were going to fight monopoly with monopoly. But the plan didn't work.

Of course, there are good reasons why this scheme didn't work then and similar schemes won't work now. It is not in the individual farmer's interest to cut production if all other farmers will cut and force prices up. Since each farmer feels this way the net result often is an expansion of production instead of a reduction.

I do not doubt for a minute that farmers producing a given crop like wheat or cotton could organize themselves into a strong monopoly. Probably another 3 or 4 depression years would have seen this happen. It happened in the coal fields. But there was bloodshed. It most likely would require quite a few lines and an organization of much strength plus legal license.

Instead of brute force, we chose instead to attempt to reduce production through government action making it attractive to each farmer to comply with output goals.

We have Federal Order Milk Markets. We have acreage allotments on corn. We have marketing quotas on wheat. We have made loans on various commodities in storage. We have bought and destroyed as well as bought and given away farm products and still we have a greater supply than can be sold at prices most people will agree as being high enough to offer a fair return to the farmer.

Let us consider the acreage and production of corn in the United States. Data on this crop going back to 1870 are shown in Table 1. Notice the production of corn in 1952. It was the second largest crop in history but was grown on the smallest number of acres since 1894. The record crop in 1948 was grown on fewer acres than any crop, save one, since 1894.

In 1894, 80 million acres produced 1.6 billion bushels of corn. In 1955, 81 million acres is expected to produce 3.1 billion bushels. Yields have almost doubled.

How can you control production with acreage allotments under these circumstances? The highest average United States corn yield for any one year was 42 bushels. However, 756 Wisconsin farmers grew

an average of 102 bushels per acre when they followed a fertilizer prescription of the University. It illustrates the potential production when incentives are provided.

Table 2 indicates the change Missouri farmers make as they shift from planting certain crops. You will notice that the total acreage doesn't change much which verifies what we have said all the time. That is if wheat or cotton is restricted in acreage other crops will be planted in place of these, creating surpluses of other crops.

In conclusion we might summarize the gist of my remarks by saying that in an industry such as agriculture where we have a large number of small production units, the only way we can expect production restrictions to work is to provide an incentive that each farmer can see. An incentive can be either in the form of a reward or can be penalty which would be a negative type incentive. Other than this there is no prospect of reducing agricultural production barring a major catastrophe and bankruptcy of many farmers.

TABLE 1 -- CORN: HARVESTED ACREAGE, YIELD PER ACRE, AND PRODUCTION; UNITED STATES 1870 TO DATE.

Year	Acres	Yield Per	Production	Year	Acres	Yield Per	Production
	Harvested	Acre			1,000	Bushels	
1870	38,388	29.3	1,124,775	1913	100,206	22.7	2,272,540
1871	42,002	27.2	1,141,715	1914	97,796	25.8	2,523,750
1872	43,584	29.4	1,279,369	1915	100,623	28.1	2,829,044
1873	44,084	22.9	1,008,326	1916	100,561	24.1	2,425,206
1874	47,640	22.2	1,058,778	1917	110,893	26.2	2,908,242
1875	52,446	27.7	1,450,276	1918	102,195	23.9	2,441,249
1876	55,277	26.7	1,478,173	1919	98,145	27.3	2,678,541
1877	58,799	25.8	1,515,862				
1878	59,659	26.2	1,564,537	1920	101,359	30.3	3,070,604
1879	62,229	28.2	1,751,984	1921	103,155	28.4	2,928,442
				1922	100,345	27.0	2,707,306
1880	62,545	27.3	1,706,673	1923	101,123	28.4	2,875,292
1881	63,026	19.8	1,244,803	1924	100,420	22.1	2,223,123
1882	66,157	26.5	1,755,272	1925	101,331	27.6	2,798,367
1883	68,168	24.2	1,652,148	1926	99,452	25.6	2,546,972
1884	68,834	28.3	1,947,838	1927	98,357	26.6	2,616,120
1885	71,854	28.6	2,057,807	1928	100,336	26.6	2,665,516
1886	73,911	24.1	1,782,767	1929	97,805	25.7	2,515,937
1887	73,296	21.9	1,604,549				
1888	77,474	29.1	2,250,632	1930	101,465	20.5	2,080,130
1889	77,656	29.5	2,294,289	1931	106,866	24.1	2,575,927
				1932	110,577	26.5	2,930,352
1890	74,785	22.1	1,650,446	1933	105,918	22.6	2,397,593
1891	78,855	29.6	2,335,804	1934	92,193	15.7	1,448,920
1892	76,914	24.7	1,897,412	1935	95,974	24.0	2,299,363
1893	79,832	23.8	1,900,401	1936	93,154	16.2	1,505,689
1894	80,069	20.2	1,615,016	1937	93,930	28.1	2,642,978
1895	90,479	28.0	2,534,762	1938	92,160	27.7	2,548,753
1896	89,074	30.0	2,671,048	1939	88,279	29.2	2,580,985
1897	89,965	25.4	2,287,628				
1898	87,784	26.8	2,351,323	1940	86,429	28.4	2,557,146
1899	94,591	28.0	2,645,796	1941	85,357	31.1	2,651,889
				1942	87,367	35.1	3,068,562
1900	94,852	28.1	2,661,978	1943	92,060	32.2	2,965,980
1901	94,422	18.2	1,715,752	1944	96,014	32.8	3,087,982
1902	97,177	28.5	2,773,954	1945	87,625	32.7	2,868,795
1903	93,555	26.9	2,515,093	1946	87,585	36.7	3,217,076
1904	95,228	28.2	2,686,624	1947	82,888	28.4	2,354,739
1905	95,746	30.9	2,954,148	1948	84,778	42.5	3,605,078
1906	95,624	31.7	3,032,910	1949	85,602	37.8	3,238,618
1907	96,094	27.2	2,613,797				
1908	95,285	26.9	2,566,742	1950	81,817	37.4	3,057,803
1909	100,200	26.1	2,611,157	1951	80,736	35.9	2,899,169
				1952	81,099	40.4	3,279,403
1910	102,267	27.9	2,852,794	1953	80,608	39.6	3,192,491
1911	101,393	24.4	2,474,635	1954	79,875	37.1	2,964,639
1912	101,451	29.1	2,947,842	1955	80,765	38.6	3,117,739

TABLE 2 -- MISSOURI: HARVESTED ACRES ABOVE OR BELOW TEN YEAR AVERAGE OF MAJOR CROPS, 1945-1954.

Crop	1945		1946		1947		1948		1949		1950		1951		1952		1953		1954	
	Above	Below																		
(Ten Year Average) Thousand Acres																				
Corn		255	287		110	292		115		125		245	27		56	66		41		
Oats	28		360		174	284		231	104		277		289		229		160		143	
Barley		24		27		27		20		10		30		30	13					
Wheat		133		224		116	348		509		78	119		185	141					
Rye	5			1				1		1	6		11	8			24		7	
Cotton		197		147		26	98		126		22	33	43		98					
Sorghums-Grain	.5		10	4				9		11	4		11	4		32				
Sorghums-Silage	1		12			1		3		1	6		16	9	3		47			
Soybeans-Beans	471		473			366		396		334	18	99		533	741		645			
Soybeans-Hay	25		3		3			30		16	39		36	9	35		67			
All Hay	504		135		395		215		324		222		305		113		910		1075	
Tobacco	1		2													1		1		
Total	563	1086	787	894	402	820	1237	459	1305	373	344	290	437	745	603	647	1031	1196	1041	

Source: U.S.D.A., Crop Production

WHAT MISSOURI FARM LEADERS CAN DO

C. E. KLINGNER
EXTENSION ECONOMIST
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We have devoted two days to the discussion of Farm Surpluses, which we consider one, if not, the most important problem in agriculture today. I believe you will agree that the problem has been defined and that we have had an excellent discussion of the causes and some of the proposed solutions to the problem. These solutions have been explored from the standpoint of possibilities as well as limitations.

However, we still have the 64 dollar question to answer. That is, "What can you as farm leaders do about it"? There seems to be general agreement that we have no solution. As a matter of fact, no one has yet come up with a complete answer.

As I view the situation, we have three alternatives as we leave this room today. One would be to *do nothing about it*. That is, just go home and forget about the entire problem. I am sure that this is the least desirable approach. In the first place, the problem is too acute and the stakes too high to ignore.

The second alternative would be to merely go home and *talk about it*. We have attempted to provide you with copies of the talks. You may pick them up as you leave the room. I hope you will take these talks home and discuss them with your neighbors. Also, that you will arrange for a discussion of the topics at meetings of your local farm organizations, civic groups or other community groups, in order that you may help bring about a better understanding of the many ramifications of the problem.

Just talking about it will not be enough. It will require action if a solution is reached. As a matter of fact, education doesn't take place until we have some action. So the third alternative calls for *action*.

We might think of action from two standpoints. The first is "what can I do on my own farm." In other words, what can I do to make the most money on my farm under existing conditions. This means going home and making a survey of your present operations and try and figure out the best plan of operation for your farm under existing conditions and with existing farm programs. This is a short-sighted view but I think it is one that most of you will use because you are interested in making the most money possible at the moment.

However, I hope you will go beyond the farm gate and think of the problem from a long-time viewpoint. It has been pointed out that the programs we have today are not the complete answer within themselves. Certainly no one program, such as fixed or flexible price supports will suffice. What will work for one commodity may not work for another. Therefore, we need to do a great deal of very objective thinking. That is where you come into the picture as farm leaders. Encourage your neighbors to participate in the policy development meetings of your farm organizations and let the results of your deliberations be known.

Personally, I feel very strong on this matter. The farmer who does not participate in the policy development meetings of his farm organization and give expression to his views, has no more right to complain about the way the programs are operated or the type of farm program we have, than does the person who fails to vote at election. Certainly, all of you can make a contribution toward the solution of this problem because it is a *sum total thinking* of all the people that ultimately decides what we do in a democracy. I would like to challenge you, as leaders, to help make the information presented the last two days available to the neighbors in your community, as well as members of the various organizations and encourage them to do some objective thinking about the entire problem.

If you get this job done, it should encourage our Congressmen to do the right thing. In other words, it should make it politically feasible to do what is economically sound.

1955 FARM FORUM PROGRAM

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Copies of the panel discussions that followed each of the talks are available upon request from: Mailing Room, Mumford Hall, University of Missouri, Columbia.