FOOD

FOOD

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and

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THIS BOOK HAS BEEN PRODUCED
IN FULL COMPLIANCE
WITH ALL GOVERNMENT REGULATIONS
FOR THE CONSERVATION OF PAPER, METAL,
AND OTHER ESSENTIAL MATERIALS

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PREFACE

EVERYONE considers himself an authority on food. The farmer knows about its production, the middleman about its distribution, the housewife about its preparation, and everyone about its consumption. The authors have no special pretension as authorities other than to equate these widely divergent views.

This book is an effort to present our past experiences with food, to describe what currently appears to be its more important phases, to survey our national policy, and to present the outlook.

In the early days of the Church a complete code of religious doctrine was handed down to the laymen. There were some unbelievers, who were called to account for their heresy. These unredeemed had a spokesman whose thankless task was to challenge the orthodox doctrine of the day. This spokesman, since he was supposed to represent the powers of evil, acquired the highly descriptive title of "the Devil's Advocate."

In more modern times certain economic doctrines have been handed down by the authorities of the State. Tailor-made plans for agricultural production and food consumption, new codes of economic ethics, and the fixing of prices by decrees are a part of the new economic order. Recently, when the food muddle thickened, ration tickets were passed

out, and a few pennies were "anted" into the subsidy "kitty."

This new doctrine of planned economy has its heretics and unbelievers. For some time these unredeemed have had hard going. Outnumbered for nearly a decade, they have been termed the "rugged individualists" and the "economic royalists" by the one- to fourteen-caret "liberals." Their spokesmen have been few.

The authors, being skeptical of many of the new economic doctrines, undertake to be the Devil's Advocates in defense of their own heresy and that of others.

There is little in the handling of the food problem to inspire in the jury of 125 millions any sublime faith in the infallibility of our Washington chefs.

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F. A. Pearson
Don Paarlberg

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CHAPTER 1

WAR AND FOOD

HUNGER is playing a dominant role in human history. Conquest, Plague, Famine, and Death, the Four Horsemen of the Apocalypse, are riding in this war as they rode in others.

War plays havoc with the world's food supplies. Despite the individual and collective efforts of man, world wars reduce the supply of food.

Production Decreases and Waste Increases

World food production decreases during wartime because there is less man-labor to plow, cultivate, and harvest the crops. It is difficult, if not impossible, to take fifty million men from the farms and factories of the world, put them into the armed forces, and still maintain world food production. Even Hitler has not yet been able to devise a plan whereby men can both work and fight. Women may be pressed into service, but efficiency is lowered. Steel is diverted from food machinery to munitions. Fertilizers are diverted from food production to explosives and other war purposes. The acreage of cultivated land is reduced by camps, training fields, flying fields, and the like, which frequently take the fertile, level, low-lying ground. Thousands of acres of crops are trampled

down, destroyed, or left unharvested by the invading and defending armies. The net result of all these forces is a diminution in the world's production of food.

War impedes the transportation of food and therefore affects its availability. This may be even more important than decreased production. For deficit areas this is as serious as if production itself had stopped. Food is scarce in France although it is abundant in Argentina and stocks accumulate, with grain sometimes burned as fuel. The difficulties of transportation thus further diminish the world's available food supply, already diminished by declining production. England shuts off Germany's food supply and in turn is blockaded by Germany. The embattled countries do everything possible to reduce the supplies of food available to the enemy. The Germans destroy huge amounts of food en route to England and to our fighting forces in other theaters of war. The English bomb the food dumps of Germany and destroy food in transit. In the transportation of food from Germany to the eastern front, large quantities are lost through sabotage and spoilage. This is an old, old game. Food is indeed a weapon of war.

The work of both Allied and Axis army commissaries is done under difficult conditions and, despite the best of plans, is wasteful of food. War is the world's worst waster of food.

So far as food production and consumption are concerned, war is more than inefficient; it is chaotic. There are no degrees of efficiency; there are merely relative degrees of chaos.

Civilians Get Left-overs

There is truth in the old saying that "an army moves on its stomach." Its stomach must be filled, and filled with a better food than is eaten by the folks on the home front. The German army gets the best of the food that is available. It gets sausages if there are any. It gets the French wines and

cognac if there are any. It gets the Italian fruits if there are any. Civilians must be grateful for whatever is left.

Since the amount of food available for the civilians declines faster than that for the soldiers, the civilians must change their food habits. The first reduction comes in the production and consumption of the highly prized "protective foods," meat, milk, eggs, and fruit. The diminishing supplies of food are too precious to be fed to animals; and to avoid starvation, inventories of livestock are consumed. Production of hogs and hens is usually curtailed because they are a type of livestock that consumes food fit for direct consumption by man. This occurred both in England and on the European continent. In destitute countries like Greece and Poland, the slaughter of livestock merely postponed the inevitable day when the amount of food available for civilian consumption dwindled below the subsistence level. Malnutrition, disease, and starvation followed. The death-rate immediately rose. This is the harsh method by which war adjusts the number of food-consumers to the amount of food available. Starvation probably kills more people than do bullets.

Millions of consumers in a war-torn world are a good deal like Lazarus at the rich man's gate. Lazarus had to be satisfied with the crumbs that fell from the rich man's table and, while dying from hunger, had only the dogs to lick his sores. Food is the essence of life.

United States Fortunate

Today the world offers illustrations of the various stages of hunger wrought by the havoc of war. Of the warring countries, World War II has probably played the most havoc in Greece and the least in Australia, Canada, and the United States. The United States has a high standard of living in the form of livestock products, and also has an additional re-

serve, animals on the hoof. Harvests have been abundant, and the destruction by war has been minor. The nation's farms have not been overrun by invading and defending armies.

At the other extreme is Greece, with a low standard of living, poor soil, inadequate rainfall, and scant food reserves, depending to a considerable extent upon imports. Greece has been overrun by the invader, imports have virtually ceased, and the conquering foe has lived off the country as much as he was able. Starvation adjusted the Greek population to the dwindling supplies of food. The Germans no doubt commandeer additional supplies of food as they become available, and starvation continues.

The United States, like other warring nations, is also in the process of changing the civilian consumption of food. However, our change is not a reduction in amount. It is merely a substitution of the less desired foods for the highly prized ones. Up to the present time this change has not been sufficient to cause malnutrition or disease, let alone starvation. The United States is so fortunate in her capacity to produce cereal grains that her population need not fear starvation.

War Reduces Number of Consumers

War not only plays havoc with food supplies; it plays havoc with the number of food-consumers. War reduces the number of combatants during the war. War also kills civilians because of more than normal exposure to the elements, more than normal physical exertion, too little heat, too little clothing, too little food, and/or sudden changes in diet to which they find it difficult to adjust themselves.

War also retards the expansion of population after the war. Some persons are misled by the fact that with the outbreak of war, birth-rates rise. This occurs because of "prosperity"

and hasty marriages. If the war is of extended duration, birth-rates will decline. After the war they will again rise. However, like the increased birth-rate at the start of the war, this too will be temporary. War creates a surplus of females and a shortage of males. In the long run the effect of war is a decrease in the birth-rate.

When the war and its aftermath are over and when man stops wasting food and gets back to producing it, there will be a more abundant, nutritious, and appetizing diet for those who are left. But, as Jane Ace says, they must take the "bitter with the better." Their cup will overrun with the "better," but they cannot obliterate the "bitter" — that loss of those who were ridden down by the Four Horsemen, Conquest, Plague, Famine, and Death.

CHAPTER 2

THE FOOD SHORTAGE

LIKE Old Mother Hubbard, Uncle Sam has gone to the cupboard and for the first time in twenty-five years has found it bare. The public reaction was first unconcern, then unbelief, and then alarm.

The concern is real. The food supply is not like the supply of other critical materials. The supply of planes may be increased by building new factories. The supply of soldiers may be increased by the draft. But the production of food is always near its maximum. Increases come largely through high prices and favorable weather, which are beyond the control of the farmer.

The food situation will be worse before it is better. We have been too optimistic about food production. The years from 1937 to 1942 were all years of bumper crops. We came to accept these good yields as normal, and erroneously planned our food strategy on the assumption of continued high production. Four thousand years ago in Egypt Joseph was more realistic.

The food situation is critical not only in the matter of supply, but in regard to requirements as well. Despite the fact that for two decades we have been eating more food than we produced, the nation has now embarked upon a pol-

icy of supplying food not only to our military forces and to our civilian population, but also to our allies and to the rehabilitation of depressed peoples throughout the world. The Secretary of Agriculture estimates that the requirements of our own military forces and our allies represent one fourth or more of the estimated food production of 1943.

Except during World War I this nation has always taken its food supply for granted. During the thirties the idea of overproduction of food became so firmly rooted that we began to think in terms of permanent agricultural surpluses. The solution to the food problem took the form of the slaughter of little pigs, acreage control, and accumulating surpluses.

Concern for the nation's "ill-fed third" has always been good politics. With abundant supplies of food and low prices, the nation decided that it was good economics as well. Subsidized consumption was introduced as the solution to the surplus-food problem.

The popular discovery of the vitamin provided a field day for the nutritionists. To a considerable extent the nutritious diet of the United States has been provided by the condensation of cereal grains into livestock products such as milk, meat, and eggs. The abundant supply of food in recent years, together with its low cost, made a nutritious diet feasible. Only with an abundant supply of food can a nation afford to count its vitamins instead of its calories.

The wisdom of our peacetime food strategy at best was controversial, but such strategy has no place in a food program in time of war. Ten years of the psychology of surplus had sold us on the idea that production was not a problem, that additional requirements on our food supply could be met without difficulty, that food prices should be kept low, and that no nutritional sacrifices need be made.

It is from these inherited ideas that some of our present

food problems arise. With the outbreak of the war, the only food strategy we knew was to do more of the same thing we had been doing before. It would have been difficult to devise a food policy less in the public interest.

The food program has been subservient to the inflation program whereas the inflation program should be subservient to the food program. The keynote of our food strategy has been the maintenance of low prices for food. Low prices have long been associated with abundance, and the nation has not troubled itself to find which was cause and which was effect. It was naïvely thought that by creating low prices abundant food supplies could be assured. Thus armed with salt, the government set out to catch its bird. Low ceiling prices were established. The public has always instinctively interpreted a low price as an encouragement to increased consumption. The nation cleaned out the butcher shops and gorged itself on the highly prized foods, meat, eggs, and milk. Likewise for centuries farmers have interpreted low prices for a product as a warning to decrease its production.

With consumption increasing and production inhibited, further controls were resorted to. The venture in regimentation which began with the seemingly mild fixing of prices led first to rationing, then to subsidies, and always to more and more controls. The nation has a bear by the tail and dares not let go so long as the administrators distrust the individual economic judgment of its citizens.

The people of the United States are poorly trained, either in leadership or in followership, for strict administrative control of their habits of eating, spending, and earning. They recall having been told and having agreed that it was for freedom in such things that they were fighting. Administrative rulings have been hastily drafted, and widely ignored. Many are not convinced that the controls generally are wise or that they should be obeyed. Americans traditionally

have not followed laws and edicts blindly — unless they approved of them.

The nation has had three problems thrust upon it: winning the war, fighting inflation, and inaugurating new social reforms. Any one of these is a major undertaking. Washington is interested in all three; the 136 millions are interested primarily in the first one — winning the war. Some think that the anti-inflation and the reform programs slow down the war effort.

Artificially low ceiling prices for food, short supplies, high incomes, and general apathy regarding administrative edicts create a perfect setting for black markets. The public in general is more in a mood to patronize the black markets than to persecute them.

Continued emphasis on nutrition has encouraged an overexpansion of the livestock industry, which is a luxury in most nations even in time of peace. The livestock population, increased beyond the feed supply, will be liquidated the hard way when the feed bins are scraped clean.

Optimism about our food potential has led us to make commitments for Lend-Lease food exports that exceed the possibility of fulfillment.

And, finally, our conviction that the production of food was not a problem led us, until recently, to policies that inhibited rather than encouraged food production.

After having been convinced for a decade that the United States had huge surpluses of food, the public apparently is now headed for the other extreme and fears hunger. This is equally in error; we need not starve or even diminish the quantity of our food intake. All we will need to do is to change the type of food we eat. If we were willing to eat the type of food eaten by most of the world, we could feed approximately twice our present population.

The food situation will find its solution through the opera-

tion of economic laws, to which our national policy has and will make grudging concessions. Food prices will rise, thereby encouraging production and discouraging consumption. The type of food which we are consuming will change and our consumption of the more desired foods will decline. We shall fail in our promise to feed our allies on pork loin and powdered milk; if we feed them at all it will be largely on grains. We shall see more emphasis on the production of more food, and less emphasis on its quality or on the price we pay for it.

If food is to win the war, it will have to be used like other scarce war materials, not like the main dish of a Roman feast. If food is to write the peace, it will have to write for many people. The only way our food supply can be written for many people is in terms of wheat, beans, and potatoes rather than milk, eggs, and meat.

The Nation Is Not Hungry

Agitation about the food supply has been inspired by the tongue and not the stomach. There has been no shortage of energy food in the United States. However, if the weatherman is a non-co-operator and the government continues to encourage the feeding of wheat to livestock and the grinding of wheat for synthetic rubber, and Lend-Lease exports of wheat increase sharply, a shortage of energy foods might develop. There is, and will continue to be, a shortage of meat, dairy products, and other highly prized protective foods for civilian consumption.

The consumer measures the supply of food in terms of whether or not he can get meat, dairy, and poultry products — the foods he most desires. Furthermore, the amount of these foods that he would like to buy depends on his income. He tends to gauge his shortage by the difference between the amount of pork chops he can buy and the amount he would like to buy, based on the purchasing power of his rising in-

come relative to the low frozen prices of his frozen food supplies. This difference is now very great. It does not measure the shortage, but it does contribute to the "holler." Because meat supplies for civilian consumption are less than the consumer would like to buy, it does not follow that all foods are scarce.

The consumer will submit to a gradual change in his food habits, but resists a sudden change. During the two decades from about 1909 to 1929 the consumption of beef fell about 30 per cent. Each year the consumer ate one pound less of beef. The change was so gradual that he hardly knew it.

In 1943, however, the consumer is being asked to make a sudden reduction of about 40 per cent in his consumption of all meat. He will eat almost 60 pounds less meat than he ate in 1942; he knows it and is telling others in no uncertain terms.

The consumer is irritated by any change in his food habits, loathes a drastic change, resists even a small reduction in the consumption of his favorite food, and cries: "Starvation!" when all these things happen at the same time. This practically sums up the food situation and the agitation concerning it, but does not explain how it came about.

Who Caused the Food Shortage?

During 1942 the nation produced the greatest amount of meat, milk, and eggs in history. Yet civilians think they are eating the least amount that they can remember. The question that all ask is: "What became of the food?" The consumer's "food problem" is the current shortage of meats and other highly prized foods. He wants to know why he can't get them in the accustomed amounts.

There has been no lack of answers. The most frequent answer is that the soldiers have been responsible. Lend-Lease is frequently named as the guilty party. The consumer himself

is charged with having created the shortage, either by feasting or by hoarding. Some accuse the government of hoarding, and some say food is being wasted. Others say it is the black market. These are all partial answers, and are all partially correct.

Soldiers Did Not Cause the Shortage

The most common explanation has been that the shortage was due to our soldiers, sailors, and marines.[1] From the viewpoint of an official who must make an accounting that will quiet the questioning consumer, this is an expedient if not an accurate answer.

The army consumes a tremendous amount of food. But the men consumed tremendous amounts of food as civilians, and increase the country's food requirements only in so far as they eat more than they did as civilians. A soldier eats much more meat and about 20 to 30 per cent more total food than he did as a civilian. The additional food requirements of the 1942 army, which averaged about four million men, were equivalent to about a 3-per-cent increase in the meat requirements of the nation, and about a 1-per-cent increase in total food requirements. This was not a very substantial amount; in fact, it was considerably less than the increase in food production. By themselves, the soldiers did not create the shortage, though they did contribute to it.

As the army increases from four, to eight, to twelve million men, the food requirements mount. A fighting force of eight million men would increase our meat requirements by 6 per cent; and of twelve million, by 9 per cent. The increase in total food requirements for eight and twelve million men would be about 2 and 2.5 per cent respectively. Such fighting forces will make inroads into our food supplies.

[1] Apparently the army plans to feed some civilians of invaded nations. In that event such food should not be charged to the soldiers.

Lend-Lease a Major Cause of Shortage

Exports of Lend-Lease food, which are known to be large, are named as the cause of the shortage. Officials, who do not wish to antagonize the consumer, have sought to minimize this argument. It has been reported that over the last two years Lend-Lease exports of food "represented only a small percentage of our total food supply." This is an accurate statement, but it does not accurately describe the present or the recent past. Beginning from zero in March 1941, Lend-Lease shipments of food increased rapidly. An average of such a period is not high, but the present rate of shipment is higher than the average. It is the present rates that count.

Much of the Lend-Lease food exports have been the highly prized nutritious animal foods. Although these foods represented less than half the 1942 tonnage, they represented about 75 per cent of the total dollar value. The nation exported a better diet than it ate.

There can be little question that Lend-Lease has been an important cause of the shortage. A clue to the government's intentions regarding future Lend-Lease food exports may be obtained from the statements of Secretary Wickard. It would appear from his statements that Lend-Lease will take from 15 to 20 per cent of our 1943 food production. This would be equivalent to increasing our population by twenty to twenty-five million people. In view of the fact that prior to the outbreak of the war the nation ate more food than it produced, such heavy exports would create a real food problem.

The fall of Italy will add new demands on our already dwindling larder. Fortunately, the Italians are great consumers of wheat in the form of spaghetti. The immediate burden will not be serious unless we attempt to up-grade their standard of living.

OPA Unwittingly Stimulated Consumption

The contention is made that the consumer himself contributed to the shortage by gorging himself on the highly prized foods. Evidently the consumer felt no guilt, for it was he who clamored loudest about the shortage.

In order to forestall inflation, OPA set low ceiling prices on the highly prized foods. With advancing wages, full employment, low taxes, and little else to buy, increased consumption of the highly prized foods — meat, milk, butter, cheese, and eggs — was encouraged.[2]

Since the dawn of recorded prices food has been effectively rationed by price. Low prices encouraged the consumption of articles that were in abundance. Conversely, high prices discouraged consumption and therefore rationed supplies when they were short. Under a system of rigid ceiling prices, this simple mechanism does not work.

The nation has been trying to prevent visible inflation by fixing low ceiling prices, and in so doing has effectively encouraged consumption of the highly prized foods. Under such a system there would be a continuous shortage. Even with a large supply of food for civilian consumption, faulty rationing would produce many apparent shortages.

Even the lowly potato, one of our cheapest foods, was badly handled by the administrators. Potatoes are a relatively perishable crop and cannot be carried from one crop season to the next. The adjustment of supplies and requirements is most critical in the spring at the tail-end of the old crop and before new potatoes come on the market. At that time stocks of old potatoes are either thrown to the hogs or carefully doled out by high prices.

Following the establishment of ceiling prices for potatoes

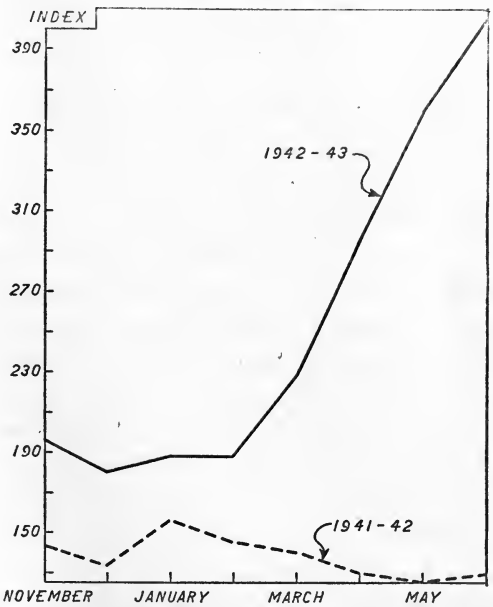
[2] Taxes have been raised and food prices have risen, but not in proportion to wages and not as much as economically desirable.

in the fall of 1942, farm prices remained relatively stable through February of 1943. Thereafter they rose rapidly in spite of the ceiling prices (figure 1). These fluctuations were in striking contrast to the relative stability of prices during the previous crop year.

There was not much difference in the production of potatoes between these two years. The United States crop for 1942 was 4 per cent greater than the previous year; and for the thirty late states, 3 per cent greater. With the higher prices prevailing for 1942 crops, there was less loss after

FIGURE 1. INDEX OF NEW YORK FARM PRICE OF LATE POTATOES, 1941–2 AND 1942–3 MARKETING SEASONS

1910–14 = 100



During 1941–2, free prices were relatively stable. During the first part of the 1942–3 season, prices were stable at a higher level. Thereafter, despite ceilings, prices rose from an index of about 190 to 400.

harvest, better care during the winter; and less was fed to livestock.

By January 1, 1943 there was nothing in the statistics of merchantable stocks held by growers, local dealers, and buyers to indicate that anything unusual would occur. For the thirty late states January stocks were only 2 per cent less than for January 1942.

During the fall, winter, and spring seasons of 1941–2 potato consumption was rather stable at about a third of a pound per person per day. This is equivalent to about a medium-sized potato. During the fall of 1942 consumption rose to almost 0.4 pound. Therefore there was only about a third of a pound available daily per person for the 1943 spring consumption. On a per capita basis, the 1942 fall consumption was 15 per cent *greater* than a year earlier, whereas the amount of old potatoes available during the spring of 1943 was 3 per cent *less*.

During January and February 1943 the ceiling prices continued and presumably consumption was maintained at about the preceding high level. About the first of March 1943 the rationing of canned and dried vegetables began. It would not be unreasonable to assume that in order to conserve their supplies and their coupons, folks increased their consumption of "cheap," old-crop potatoes. On March 15 there was about a quarter of a pound per person per day for the remainder of the spring season. The low ceiling prices and the rationing of processed vegetables were accompanied by high and increasing consumption of potatoes, followed by very high black-market prices and decreasing consumption. What happened to the consumption of potatoes after March 15, 1943 is a matter of conjecture. With the mounting prices, potato consumption for the last sixteen days of March probably declined to about normal. This would have left about one month's consumption for the following forty-five days.

Rising prices and scarcity of potatoes during April reduced consumption even more. By May 1 there was available only about one sixth of a pound of old potatoes per day. Consumption declined primarily because of a lack of potatoes.

Although the average consumption declined during April and May 1943, the decrease was by no means uniform. Many ate more potatoes than usual to save their blue coupons and/or their supplies of processed vegetables; others ate as usual. Others must have eaten much less, and many ate none. The hogs most certainly ate less. This was not equality of sacrifice. Some large hospitals in potato areas of central New York did not serve potatoes for almost a month. Many families were unable to buy old potatoes. A goodly proportion of the armed forces in this country were without potatoes for several weeks. They were fed rice, spaghetti, parsnips, hominy grits, macaroni, and the like. It was difficult even to get potatoes to provision outgoing boats. In New York City late potatoes brought as much as ten dollars per hundred-pound sack in black markets. This was over four times the ceiling price at near-by shipping points.

The acute potato situation in the spring of 1943 indicated clearly that setting low ceiling prices is not necessarily serving the best interests of the consumer. The government could hardly have set a more favorable stage for a rapid disposal of the 1942–3 potato crop. By the low ceiling prices, unaccompanied by the rationing of potatoes and accompanied by the rationing of dried, dehydrated, and canned vegetables, the government in effect told the people to eat the potatoes just as rapidly as possible. The 125 million people [3] did what the government, through prices, told them to do.

The government, through too low ceiling prices, rationed out the potatoes at too rapid a rate. Black-market operators,

[3] Allowance made for 11 million men in the service.

aided and abetted by the public, tried to reverse the government policy. Apparently a good many of the people came to the conclusion that if a choice had to be made, they would rather eat in the face of black markets than starve legally.

In terms of farm production, there was no shortage of potatoes in the spring of 1943.

In terms of the city consumer, there was a shortage.

The same was true of other foods.

The government's actions were at cross purposes. Like Edgar Bergen and Charlie McCarthy, the government put on a ventriloquist act with OPA as the puppet. Speaking in its own voice, the government asked the consumer to "share the food." Speaking through its Charlie McCarthy, the government said: "Help yourselves, boys; it's cheap while it lasts." It *was* cheap while it lasted — but it did not last.

Since man responded to his economic motives rather than to the patriotic appeals of his government, he was handed a ration card and was told that he could buy only so much meat, butter, and cheese. Many students say that this shortage was created by the consumers. It was not due to the consumers; it was due to the acts of their government, which unwittingly asked them to do what it did not want them to do.

Unless the rationing system is equitable, and unless the unspent incomes of the low-wage groups are somehow absorbed, a part of the highly prized foods will by-pass the regular channels and reappear in the black market. Black markets, the inevitable accompaniment of low ceiling prices and unspent incomes, result in waste and spoilage and contribute somewhat to the shortage.

There is no question that OPA ceiling prices temporarily hastened the disappearance of highly prized and other foods by encouraging the consumption of the stocks in the channels of distribution and by increasing the supplies moving

through black markets. This added to the price administrator's problems. How much it is impossible to say.

There will no doubt be many who are convinced that most of these and the following strictures are fundamentally sound, but doubt whether the administration could be guilty of so high a percentage of error. The authors contend that it is high because the administration has eliminated price as a guide and has substituted regimentation instead. Having made that fundamental error, all others follow from it.

The administration has accomplished certain things for the war effort and civilians. These accomplishments have been well presented by the administrators and the Office of War Information and have received wide discussion by radio, the press, movies, and word of mouth. It is assumed that the public is familiar with most of them. It is not our intention to extoll these accomplishments, since there is no reason for duplicating this information. Here and there we have pointed out some wise administrative acts, but have concentrated our attention on a few of the less publicized administrative shortcomings. The administrators have made mistakes and, being human, do not admit them. Since these errors affect millions, the public is entitled to know about them.

Avoidable Waste Negligible

Many persons explain the shortage of food in terms of waste. The consumer rarely wastes much of the highly prized foods. Regardless of whether this waste is normally a large or a small amount, it decreases when the price of food rises. Waste on the part of the consumer is no explanation of the present food shortage. Highly prized foods are too valuable to be wasted.

In time of war there is considerable waste of food on the part of the armed forces. The Quartermaster General's data

presented to the Truman Senate Committee indicated that one fifth of all the food entering the army mess halls ended in the garbage cans. One third of the cereals, one half of the soups, and one fifth of the meat was wasted. No doubt a part of the situation will be corrected as experience is gained. A part of the waste may be due to the fact that young folks do not take to cereals and are not ravenous soup-consumers. They detest and will not eat the kale that the nutritionists recommend.

Large amounts of shipped food are lost in transit. Other shipments may reach their destination, but there may not be adequate terminal facilities to take care of all of them. Tons of butter and thousands of cans of fruit spoiled in Alaska because of inadequate storage facilities. With the uncertainties of war, it is inevitable that large amounts of food will be lost in transportation, in storage dumps, or even in its final stages of preparation. If this loss were as much as ten per cent of the consumption of ten million soldiers, the losses would be equivalent to the addition of over one million persons to our dinner table. This is not a formidable amount, but it does add to the problem. This is one of the inevitable wastes of war, and little can be done about it.

The Government a Big Hoarder

In time of scarcity, the government tells the consumer that it is unpatriotic to hoard, but fixes low prices on food products and so encourages him to hoard. The net result is some increase in the amount of food carried on civilian shelves. Relative to normal household stocks, the increase is not large. The typical consumer is not equipped to increase his stocks of food because he has no place to store it. Whatever changes occur, they contribute only to the apparent shortage.

In time of war the government becomes the greatest hoarder. On April 1, 1943 the government commandeered

40 per cent of the inspected beef,[4] 45 per cent of the pork, 35 per cent of the lamb, 4 to 60 per cent of various canned goods, and a goodly proportion of the salmon. The bulk of these supplies are for current needs, including the army and Lend-Lease. A part, however, are bought in anticipation of possible future needs, which is merely another expression for hoarding.

No one questions whether the government should maintain adequate stocks of the highly prized foods for its soldiers, sailors, and marines. Through errors in judgment or through the enthusiasm for adequate supplies, government hoarding occasionally is carried to extremes. Since the government is not normally a hoarder of food, it aggravates the present food shortage.[5]

Few if any of these many drains on our present food supply in themselves could have been held responsible for the acute food situation. Their combined effect was enormous.

The consumer asks who ate the little pig that went to market, and therefore who was responsible for the shortage. Figuratively, the foreigner got the ham and most of the bacon. The soldier got a good share of the pork chops and a few good roasts. The civilian got a shoulder and some sausage. Part of the meat was hoarded by the government, and part of it is at the bottom of the Atlantic.

Many Mouths to Feed at Our National Barbecue

It is impossible to estimate accurately the amount of the highly prized foods that will be allocated to our own fighting

[4] Increased to 45 per cent, effective June 14, 1943.

[5] The tendency of governments occasionally to hoard needlessly large supplies of certain foods was well illustrated in World War I. England did not dispose of her hoards of bacon and butter until the summer of 1921, and Italy was still struggling to get rid of her hoards of high-priced sugar until the winter of 1921. When the United States government finished dumping its wool after World War I, the farm price was about fifteen cents and the sheep industry was prostrated.

forces, our Allied forces in arms, the civilians of this country, and civilians in Allied and liberated nations. All have been promised tickets to our national barbecue. Neither is it possible to determine the losses due to poor distribution, waste, black markets, government and private hoarding, or losses at sea. Furthermore, it is impossible to anticipate how large our food production will be and therefore how big a supply there will be to divide.

Ceiling prices, Lend-Lease, losses at sea, and our fighting forces have been the major causes of the meat famine. Losses at sea have been greater than the unsuspecting public assumes. Insurance rates to Murmansk and the western ports of England have been high and indicate that losses at sea bulked large.

With passing time, it will be possible to weigh more accurately the factors causing our meat shortage. However, it will be difficult to show that the shortage was due to the scapegoats — black markets, waste, poor distribution, and private hoarding — rather than to Lend-Lease, losses at sea, and our fighting forces. War is the cause; there is no disproving that fact.

The Food Picture Will Change

The first phase of the food shortage was a shortage of meat, the most palatable of the protective foods. Eggs, which have not been short and have been urged on the consumer as a substitute for meat, may be scarce during the winter of 1943–4. There has been no shortage of energy foods, but one may develop.

The future of food is a highly complex problem of supplies, kinds, choice, free prices, ceiling prices, food distribution, food habits, food as a weapon of war, rationing, nutrition, subsidies, black markets, inflation, and administrative action further befogged by charge and counter-charge by spokes-

men for the many interested groups. The facts concerning food are confused by priorities, price-fixing, rationing, support prices, rollbacks, subsidies, and innumerable administrative compromises — a result of political expediency. It is difficult to separate the factual considerations from political expediency. The facts about food are reasonably clear. Political expediency is something which is never the same for one person in two positions, or two persons in one position, and furthermore it is not the same from day to day. Therefore both aspects of the problem have been treated.

It would take a master mind to array, to interpret, and to place the facts and political expediency in their proper perspective in the great panorama — food. By the time the picture was painted it would be out of date. Some parts of the picture never change, while others change so rapidly that it is difficult to see and orient them. The scenes change, the background shifts rapidly, the turnover of participants is large, and the relative importance of the many factors changes. The pictures could not be painted fast enough and no gallery would be large enough to display them. There is only one thing that is certain, and that is change.

Since most of us are merely amateur cameramen, all we can do is to take a few snapshots here and there. The discussions that follow are snapshots of some of the more important phases of the food problem. Although many phases of this problem are clear as crystal, our knowledge is not expansive enough to take into account all the conflicting factors in the oncoming food problem.

The following chapters draw on the experience of the past, attempt an analysis of the present, and present a few appraisals with the hope of sharpening the focus of the food picture for 125 million people.

CHAPTER 3

FARM LABOR AND MACHINERY

THE CITY dweller knows that there is a shortage of certain kinds of foods. He has been told that he himself was responsible. Others say the shortage of food is due to a lack of machinery. Perhaps the majority attribute it to the shortage of farm labor.

Farm Labor

Widespread concern regarding farm labor came with the opening days of 1943, when there were somewhat more than the usual number of farm sales. Much of the misunderstanding of the labor situation arises from such superficial observations rather than lack of facts.

Modern Farming Requires Many Skills

The modern farm worker is neither the straw-chewing rustic pictured in the funny papers nor the grasping lobbyist described in the metropolitan press. He is an intelligent, hard-working, resourceful individual who takes rather seriously his job of feeding the world.

The days are gone when "any fool could farm." The mod-

ern farmer must be familiar with all the manual and mechanical jobs of production. He must have a knowledge of money and management, so that he can buy and sell to advantage. He must know how, when, and where to plant and to rotate his own labor and that of his hired man and of his family from hour to hour, day to day, and season to season.

To train a farmer takes years of experience, gained mostly in the school of hard knocks, aided by scientific information obtained from research and extension work. The nation's ten million trained farm workers are one of her greatest resources.

Efficiency of Farm Labor Increasing

The American farmer is the world's most efficient producer of food. In 1942, there were 10 million workers on farms in the United States. They produced about 450 million tons of crops, exclusive of pasture, and about 75 million tons of livestock products, or a total of approximately 525 million tons. During the year, each farm worker produced about 45 tons of crops, about 35 tons of which were condensed or refined into seven or eight tons of the highly prized livestock products.

Over the last quarter of a century the efficiency of the farmer has increased rapidly. From before World War I to the twenties the output of crops per farm worker increased 25 per cent. This increase, though remarkable, was not so spectacular as that of the much publicized assembly lines of our Detroits. From the twenties to the forties, production per farm worker continued to rise. By the first three years of the forties, production of food and feed crops per man had increased 26 per cent over the twenties, and 58 per cent over 1910–14 (table 1).

This increasing efficiency was the result of a variety of causes. The rapid improvement of agricultural machinery

was perhaps most important. Better breeds of animals and varieties of plants and improved cultural practices have had their influence. In recent years the favorable weather has increased yields and hence output per farm worker.

One hundred years ago the farmer produced food primarily for himself. As his efficiency rose, he produced food for himself and also a surplus of food for the city consumer. The proportion of the total population that can live in the city is dependent upon the farmer's efficiency as a food-producer.

TABLE 1. INDEX OF PRODUCTION OF FOOD AND FEED CROPS PER FARM WORKER, 1910 TO 1942

1926–30 = 100

Period	Production of food and feed crops	Total farm employment	Production per farm worker
1910–14	84	106	79
1920–9	100	101	99
1940–2	115	92	125

Family Labor Does Most Farm Work

About twenty per cent of the population of the United States lives on farms. During 1942 about one third were workers, of whom 2,500,000 were classified as hired hands, and almost 8,000,000 as family workers.

At the present time as in the past most of the manpower on farms is farm family labor, and not hired labor, as the man on the assembly line usually assumes. Over three fourths of the working force on farms in 1943 was "unpaid labor," consisting of the farmer himself, his wife, and his children. The paid labor, more commonly known as hired labor, represented the remaining quarter.

Farmers Produce Surplus Labor

In addition to producing more food than he needs, the farmer produces more human labor than he needs. There are more children produced and reared to manhood and womanhood than can be effectively employed in agriculture.

In the country, children are an economic asset. They gather the eggs, milk the cows, drive the team for the hayloader, and do many other tasks that would otherwise take the time of a man. Furthermore, the country is a cheap place to raise children. Food is abundant and relatively cheap. Housing is less expensive than in the city, and many of the goods and services that are required in the city can be dispensed with in the country. It is not surprising that farm families average larger than city families.

Country children are well trained for either farm or city work. They are taught to work at an early age under the direct supervision of their parents. In working with their fathers on the hay wagon or in the barn, they take part in discussions of the issues of the day. Thus they learn manual skills, resourcefulness, and the ability to think. The country annually trains and turns over to industry about 500,000 workers. Industry finds these recruits well qualified to become manual or skilled workers, and a considerable proportion develop into executives.

In Good Times Labor Shifts to Cities

The rate at which this surplus labor leaves farms, and consequently the supply of labor on farms, are determined primarily by changes in labor efficiency, prices of farm products, and employment opportunities in the cities. If farm prices are low and agriculture is not prosperous, more than the normal number of these farm-reared children seek employment in the prosperous urban industries. If employment oppor-

tunities in the cities are poor, the migration is slowed down even though conditions on the farms may be unfavorable.

War Depleted Farm Labor Supply

During 1942 there was a rapid shift from farm to city. The net movement away from farms, over 1,600,000 persons, may be broken down as follows:

Enlistments or inductions in the armed forces, young males	737,000
Others, males and females, all ages	890,000
The net movement away from farms for 1942	1,627,000
The net movement away from farms for 1941	1,357,000
The net movement away from farms for 1940	681,000

As a result of the agricultural depression and urban expansion of the twenties, the net movement away from farms rose to as much as 1,100,000 but never reached the 1941–2 levels. The normal rate is about 500,000 per year.

The rate of movement has been more rapid in the South and the Mountain States than in the states east of the Mississippi and north of the Ohio river.

The net movement away from farms during 1943 will be much less than that for the last two or three years. This will be because:

(a) The present policy is to defer men for farm work.
(b) The previous large-scale migrations to the armed forces and to industry have depleted those age groups that normally leave farms in the largest numbers.
(c) Former farm residents are returning to farms.
(d) The lengthening of the urban work week reduces the pressure on farm labor.
(e) Reduction in employment in non-war industries provides war industry with additional labor from city sources.
(f) Urban building has declined.

Labor Force Dwindles in Effectiveness

There has been a change in the composition as well as in the number of persons reported as working on farms. With the reduction in the number of farm workers, more farm women, elderly men, and other farm residents who previously had not been doing farm work have replaced those who left farms. The 1943 farm labor force will have the highest proportion of women, children, aged, and inexperienced persons in recent history. This will result in some diminution in the effectiveness and quality of the labor force.

The depression prevented many older farmers from retiring as rapidly as otherwise they would have done. Consequently the average age of farm operators is the highest in history. In 1940 there were about twice as many operators over forty-four years of age as there were prior to World War I (table 2). The age distribution is not uniform throughout the nation. Seventy per cent of New York's farmers are over forty-four years of age. These older farmers, though long on experience and judgment, are short on physical endurance. The rising average age of farm operators will be an obstacle to the maintaining of food production.

TABLE 2. CHANGING AGE OF FARM OPERATORS IN THE UNITED STATES*

Year	Per cent under 44 years	Per cent over 44 years
1900	71	29
1910	72	28
1920	66	34
1930	63	37
1940	42	58

* Census of the United States: 1900, Special Reports — Occupations; 1910, 1920, 1930, Population; 1940, Agriculture Summaries by Subjects; United States Department of Commerce.

Women, children, and aged men constitute a part of the normal farm labor reserve. Despite the great contribution to the farm labor supply that has already occurred from the tapping of this reserve, further contributions will have to be made.

Large Force Does Not Assure High Production

The 1943 farm population is the smallest since 1910. During these thirty-four years the farm population has declined about four million persons. The farm population declines a little over 100,000 people per year. The net movement away from farms averages about 500,000 people per year. The difference between the net movement away from farms and the decline in farm population is due to an excess of births over deaths, about 400,000 per year.

Changes in farm population are characterized by unusual rather than by usual or average changes. From 1930 to 1933 the farm population increased by almost two million persons, upwards of 600,000 per year. This was due to the great depression, when surplus farm population could not move to the cities and the unemployed in cities drifted back to farms.

During World War I the farm population declined 1.4 million in two years. During the urban prosperity and low farm prices of the twenties the farm population declined 900,000 in two years.

With the draft of men into the armed forces and war industries during World War II, the farm population declined 2,400,000 in three years. This is the greatest reduction since records were available.

These unusual changes in farm population have had little effect on food production. During the depression of the early thirties the farm population increased and farmers produced less food and feed crops (table 3). From 1917 to 1919 farm population declined and food production increased. From

1940 to 1943 farm population fell almost twice as much as during World War I, but total food production increased three times as fast (table 3). Superficial observation would lead to the conclusion that increasing the farm population does not increase the food supply and that the way to get more food is to have a war and draft the farm labor supply. However, providence and changes in the economic incentives play important roles in our food supplies.

TABLE 3. RELATION OF UNUSUALLY LARGE CHANGES IN FARM POPULATION TO THE AMOUNT OF FOOD AND FEED CROPS PRODUCED

Periods of large change in farm population	Number of persons on farms *	Index of production *	Per cent change in	
			Farm population	Food production
Decrease				
1917	32,340,000	87.2		
1919	30,930,000	93.9	− 4.4	+ 7.7
Decrease				
1922	31,749,000	91.8		
1924	30,817,000	101.1	− 2.9	+ 10.1
Increase				
1930	30,169,000	99.9		
1933	32,033,000	97.8	+ 6.2	− 2.1
Decrease				
1940	30,269,000	100.9		
1943	27,821,000	128.0	− 8.1	+ 26.9

* Farm population was based on January 1 enumeration; crop production, on reports for the preceding year.

During the years from 1929 to 1932 the farmer had plenty of help, no price incentive, and the weatherman was indifferent. There was no change in the production per worker (table 4). During World War I prices rose 82 per cent and farm workers were scarce. The weatherman was helpful and production per worker rose 15 per cent. During World War II,

up to and including the crop year 1942, farm labor was scarce, but the acreage per worker increased. The weatherman came through with marvelous distribution of abundant moisture, and yields rose 19 per cent. The net result was that the dwindling supply of labor produced one third more food per worker.

TABLE 4. EFFECT OF WEATHER AND PRICE INCENTIVES ON FOOD PRODUCTION

Crop years	Incentive, per cent change in prices	Weatherman	Farm workers	Yields, per cent increase	Production per worker, per cent increase
1929–32	− 50	indifferent	abundant	2	none
World War I, 1916–18	+ 82	helpful	scarce	5	15
World War II, 1939–42	+ 45	very co-operative	very scarce	19	31

To produce large amounts of food takes labor, incentives, and weather. With the help of weather, a decreasing farm population can produce an increasing supply if there is plenty of incentive.

Sales of Farms Do Not Threaten Production

During the early part of 1943 the press publicized the sharp increase in the number of auctions and of farms sold. The usual explanation is a shortage of labor, and it is commonly believed that such sales mean decreased production.

The most frequently publicized sales are those of large farms with many hogs and cattle, employing several hired hands. The liquidation of these large farms makes the headlines, but their number is small, and they play a minor role in our agricultural production. When the operator of such a farm decides to quit farming "because of the shortage of

labor," the farm does not go out of production, as is commonly assumed. In most cases the large farm is divided and operated by several tenants or owners as family-sized units. The family-sized units are not so spectacular, but together produce about as much food as the large unit.

Less spectacular, but frequently cited, are the sales of the typical family-sized farms. It is again erroneously concluded that such sales arise mainly because of labor shortages and will result in decreased food production.

A certain number of sales always occur because old men retire and young men start farming. The only aspect of the present situation that calls for explanation is the acceleration in the number of these sales. Normally, young men went into debt to start farming, spent most of their time paying off the debt, and when the farms were cleared of debt, the operators were ready to retire and move to town. The rate at which they left farms depended on the profitableness of agriculture. During the prosperous years from 1910 to 1920, about 22 to 24 per cent of the farmers on Illinois farms were over fifty-four years of age. As a result of the agricultural depression, the percentages rose to 31 and 35 respectively in 1930 and 1940. Consequently, in 1943 there were many more than the usual number of old men operating farms. With the improvement in prices and the abundant harvest, farm income has risen sharply. This has enabled the older operators to liquidate their debts and retire.

The same factors control the rate at which young men start farming. With the prosperity from 1910 to 1920, over 25 per cent of the operators were under thirty-five years of age. In 1930 and 1940 the proportion of young men declined to 18 and 17 per cent respectively. Consequently, at the present time in Illinois and in most of the better agricultural areas of the United States there is an accumulation of potential farmers.

The increase in the number of auctions and of farms changing hands that inevitably accompanies the acceleration of these retirements is neither an index of a shortage of labor nor an indication of prospective food shortages. Most of these farms will continue to be going enterprises. They will be taken over by aggressive men and will be operated efficiently. Since there is no shortage of men looking for good farms or looking for more good land in our productive areas, their urban cousins need not be disturbed by the sharp rise in the number of farm sales that occurred in 1942 and will continue into 1943 and 1944. The common explanation will continue to be a "shortage of labor." A more complete explanation would be the high average age of present operators and their rising incomes that permit retirement.

Labor Policy Reversed

The nation's farm labor policy has changed with passing time, as has the policy on farm production.

In the early stages of the war, the policy was to draft farm labor indiscriminately. Ten years of surplus psychology had sold the nation on the idea that production was not a problem, and that additional requirements on the food supply could be met without difficulty. Local draft boards of city-minded people had no reason to believe that they should exempt farm labor when their stores were filled with signs marked "Surplus Foods," "Victory Specials," and the like, all bearing some official insignia of the Federal government.

Farm labor was drafted not only by the army, but also by industry. During the depression the normal migration from farm to city was dammed up. With the revival of industry and advancing city wages, there was a rapid shift from farm to factory. Surplus workers and some of the necessary farm workers quickly shifted to the cities.

As the food problem became acute, the national policy on

farm labor was reversed. Labor was frozen on farms. Farm labor was deferred, and Selective Service encouraged experienced farm workers who had gone into industry to return to the farms. The national farm labor policy includes the importation of Jamaican, Bermudan, and Mexican labor and the raising of a huge land army. The present farm labor policy, if carried out, should provide the farmers with an adequate supply of labor.

By the fall of 1943 some city-minded folks thought there was an abundant supply of farm labor and they were muttering that there were hundreds of thousands of young men hiding in haylofts.

Deferment Solves Labor Problem

The farm labor problem is not a new one. In the eyes of the farmer, there has always been a farm labor problem. The unique feature of the present situation is that for the first time in twenty-five years the farmer finds the rest of the country agreeing with him. Alarm concerning the food supply has made many converts. Farmers always have enough work to keep another man busy. They usually consider themselves short of help, and usually think that hired labor costs too much. At the end of the season, the farmer brags about the work he accomplished with so little additional help. Normally, however, most of the farmers have all the help they can profitably afford to hire. This year was an exception. Because of the adverse weather of 1943, aging farmers with a scarcity of labor were called on to plant the oats, corn, and other crops and harvest the hay crop all at one time. Never before have they worked so hard or so long, or been so discouraged.

Most of the farm labor problem eventually finds its solution across the country in terms of harder work "from kin-see to kaint-see" and not across glass-covered desks. Farmers

plant crops in the spring and harvest a big or little crop depending primarily on the weather, regardless of the freezing of farm labor, the fixing of farm wages, importation of labor, the raising of a land army, and most of the other regulations that may be promulgated from time to time. Some of these activities will be of assistance to the farmer. The most important is the deferment of farm labor.

The deferment of farm labor will automatically supply a considerable amount of labor in a sense not often realized. Deferment will again serve to dam up the flow from farm to city. Large numbers of boys from fifteen to eighteen years of age who would normally migrate to the cities will stay on the farm and help solve the farm labor problem. The effectiveness of deferment will be diminished in some communities by social pressures which prevent requests for deferment.

The normal movement of surplus labor from farm to city was accelerated by the disparity between farm and city incomes. As farm incomes and farm wages rise, the disparity between farm and city incomes diminishes and the rate of movement away from farms declines.

State and Federal agencies will popularize the "back-to-the-land" movement and the land armies. City folks will be trained for farm work. However, back-to-the-land is no solution to the farm labor problem unless the back-to-the-landers are young men who have physical vigor and have not been away from the farm so long that they are no longer acquainted with the changing phases of agriculture.

It is relatively easy to transfer skilled farm labor to the assembly line and make a skilled city worker in a short time. Unfortunately, the process cannot be reversed. It may take only two or three months to make an intelligent farm laborer into an efficient shipbuilder. It will take two or three years to make an intelligent shipbuilder into an efficient farm hand.

This is due to the fact that in industry one frequently works day in and day out under constant supervision at one or two operations. On a farm the jobs change from morning to night, day in and day out, with a minimum of supervision. Many city-minded folks think of food production as a mass production industry. More often, it is one man working alone at ever changing jobs. He must know how to do the job and when to do it.

Reserve of Skilled Farm Labor

There are millions of men and women in the United States who know how to do farm work, but who are not working on the farms. Agriculture not only produces a surplus of food, it produces a surplus of well-trained workers who migrate to industry. There is no other source of such an enormous reserve of skilled labor.

Many of the farm-reared men in the cities have risen to positions of responsibility and cannot be spared. Others are ready to go back to the farm when the returns are equally remunerative. A land army raised from this surplus of skilled labor would be an effective one.

Another important source of farm labor is the farm women. In this as in other wars the heaviest burden falls on women. Normally the farm women do all the housework and a little of the farm work. Farm women did more than the usual amount of farm work and will be called on to do still more.

The great source of woman labor is in the city rather than on the farms. City women raise fewer children and their household activities are simpler; they do not preserve and can the meat, fruits, and vegetables, or board the hired man and do his laundry. City women can replace some of the farm-reared men, who can then go back to farms. Although not spectacular, this is effective. The beautiful farmerette perched on a tractor is very picturesque but not very effec-

tive. She would be much more effective if she replaced an able-bodied, farm-reared man now working in a factory and his efforts were transferred to food production.

There is an acute shortage of young, well-trained male help on farms. The average age of farmers is above normal. These older farmers lack the physical endurance necessary during the heavy work of planting, haying, and harvesting. Normally the problem solves itself through the hiring of extra men and the exchange of neighborhood help. With the farmer, his wife, and children working practically at capacity, there is an opportunity for Federal, state, and particularly local agencies to provide small amounts of skilled, mobile workers to assist such farmers at the time of peak labor loads. This is not a job for farmerettes or the $26,000,000 land army drafted from inexperienced city folks.

There are only a few ways of effectively increasing the farm labor supply:

1. defer skilled farm workers;
2. discharge from the army skilled farm workers already inducted;
3. draft workers now in cities who have had farm experience;
4. depend more upon farm woman labor;
5. shorten the school year and release *farm* children for spring and fall farm work.

There is another phase of the farm labor problem that receives scant consideration. There must be a constant succession of men taking over the farms relinquished by aging operators. These men may be farmers' sons working as hired men on their fathers' or other farms, accumulating capital. This has been called the first rung of the agricultural ladder. There are also many young married men with farm training who are working in non-essential urban industries, accumulating capital to start farming. Because of the high proportion of old men now operating farms, great care should be taken that Selective Service does not deplete this reserve of

oncoming farmers when the nation begins to draft married men in non-essential industries.

Farmers Are Resourceful

Farming is a continuous struggle against the vicissitudes of nature. Down the ages farmers have been forced to adjust themselves to countless changing conditions unknown to the man on the assembly line or to most other city folks. The ability of the farmer to get work done under adverse weather conditions, shortages of labor, and the like is so commonplace that it is rarely appreciated. In the future as in the past the consumer can depend upon the versatility and perseverance of the farmer and his family to meet most of the emergencies as they arise.

Under the deferment program, the labor problem on the typical family farm, which produces most of the nation's food supply, will not be serious except at the peak of the harvest season. Even at that time the extra help needed is only a small proportion of the total labor required to plant and harvest the crop.

Farm Machinery

During the past sixty years the importance of farm machinery has mounted rapidly. In 1880 farm machinery represented 3.3 per cent of the total capital invested in our agricultural plant. Since that time the importance of machinery has increased at an increasing rate, and by 1940 farm machinery represented over 7 per cent of the capital.

Formerly crops were planted, cultivated, and harvested largely by human labor. The only other power was one or two teams of horses. The number of plows and the size of the grain binder were determined by the amount of horsepower that could be used efficiently with these tools. The number of hours per day that the tools could be operated

and the rate of speed at which they moved were dependent on the endurance and speed of the horse. The horse's upper limit was about two and a half miles per hour for about ten hours a day.

The farmer produced food first for himself, second for his horses, and third for market. With the advent of the internal-combustion engine, the farmer produced some food for himself, and the rest of it went to the city. The horses were disposed of or, if kept, were put on reduced rations. As far as feed is concerned, horses have become the "submerged tenth," the animal contemporary of the downtrodden human third.

Modern Machinery Revolutionized Farming

With the coming of the tractor, truck, and automobile, farm work was speeded up. The number of plows and the size of the cultivators were increased. The grain binder gave way to the combine. The factor that limited speed and working hours was no longer the endurance of the horse; it was working conditions and the endurance of the farmer and his family. Working with lights and operated in shifts, the modern tractor pulls a gang plow at four miles per hour for twenty-two hours a day.

By improving his equipment the farmer greatly increased the production of food per farm worker. In fact, the machines made the farmer so efficient and made his time so valuable during the growing season that he produced less for himself and began to eat out of tin cans and off the meat counters and grocery shelves and out of the baker's ovens just like his city cousin.

These increases in efficiency are rather different, in point of fact, from what they appear. A common fallacy is to compare the amount of wheat that a farmer can raise with a tractor and combine with the amount he can raise with horses

and the threshing machine. Superficial observation counts all this as increase in efficiency, but many invisible men are working back of the tractor. Formerly the farmer raised the horses and raised the feed for them. The horses did the work of producing wheat and hauling it to town and raising their own feed. With the new methods, only the farm worker is visible, but work that he formerly did is now done by a large number of other workers who mine the iron, roll the steel, and make and transport the tractor. Still other workers are producing, transporting, and refining oil. Others are producing combines and trucks. Still others print catalogues and sell and finance the machines. Still others must repair these machines. The total time of the farmer and all these invisible workers must be combined to determine the real increase in efficiency in wheat production. The saving of human time is greatly exaggerated when superficial comparisons are made.

Farmer Must Have Tools of His Trade

If the farmer is to maintain food production at a high level, he must have the necessary equipment. He must have steel for his combine, copper for his motors, gas for his tractor, rubber for his truck, and service men to repair the large numbers of intricate machines. WPB has taken copper and steel from agriculture for munitions and at the same time has unwittingly eliminated distributors of repair parts and repair men themselves. If the farmer is unable to obtain his tools, he must once more do all the tasks which in recent years have been done for him by the unseen workers. The nation is asking the farmer to cope with his continual problems, the weeds and the weather, which have always kept him busy, and in addition to do jobs formerly done for him. Since he cannot do all, and can do nothing about the weather, more weeds and less food will be produced.

Machinery Restrictions Relaxed

Our national farm-machinery policy was to divert steel from food production to arms production. This drastic policy has been somewhat relaxed and some steel has been released for farm machinery. Early in 1943 WPB permitted an increase in farm-machinery production from the previous allotment of 23 per cent of the 1940 level to 40 per cent, and increased repair parts to 160 per cent of the 1940 and 1941 production. A long time elapses between the releasing of steel and delivery of the machinery to the farmer. Therefore WPB action will have little effect in 1943. The increase is large enough to evidence admission of the difficulty, but not large enough to correct it. The change in policy occurred after farm organizations had expressed alarm regarding the effect of the curtailment on food production and after the food shortage became generally evident.

The machinery situation is more important than is generally realized. Because of the agricultural depression, farm machinery was worn down for more than a decade. In many parts of the United States the resulting shortage was only partially replaced prior to the war. The number of machines on farms in 1943 was the highest in history, but their age was greater than in previous years. In addition, the draft of farm labor by the military forces and by industry has made labor-saving machinery even more important than formerly.

Shifts in crop production call for large amounts of new equipment. Southern farmers have been encouraged to substitute peanuts for cotton. Cotton-producers do not have the machinery necessary to harvest peanuts.

Inexperienced farm help will result in more than the normal wear and tear and breakage.

Restrictions on machinery production will have an adverse and cumulative effect on food production. Since the farm-

machinery problem is a steel problem, the nation must keep a watchful eye on the allocation of manpower and steel. If steel is withheld from food production, increasing amounts of manpower must be made available for food production if it is to be maintained. The armed forces cannot have both unless the war is of short duration.

More Tractors Needed

In view of the shortage of young, vigorous, male farm workers and the high average age of present farm operators, restrictions on tractor production should be relaxed.

Power is needed for farm work. Within narrow limits, horsepower and tractor power may be substituted for one another. With the drafting of manpower and the declining horse population, tractors become more important and more necessary.

During the past thirty years old dobbin has given way to the tractor. In 1910 horses and mules furnished all the farm drawbar power. The tractor made little headway during the next ten years, but thereafter the expansion was rapid. The number of horses declined and the number of tractors rose. Tractors now furnish 44 per cent of the drawbar power. The power furnished by the horses has declined about as fast as that of tractors expanded. In 1920 one unit plowed, planted, cultivated, and harvested about 85 acres of crops (table 5). In 1943 the acreage will be about the same, 82.

If the nation pushes its crop area to 360 million acres in 1944, a total of about 4,400,000 tractor equivalents will be needed. Work animals on farms are aging rapidly. It would not be surprising if there should be a decline during 1943 of 300,000 or more horses and mules on farms. In that event two million tractors will be needed. This is 100,000 more than there were on farms on January 1, 1943. If 100,000 of the present farm tractors are unfit for use by 1944, a min-

imum of 200,000 new tractors will be necessary for a program based on 360 million acres. Since the food problem is so serious, experienced young male labor is so scarce, and depreciation may be high, it would be much safer to produce about 250,000 tractors.

TABLE 5. CHANGES IN TRACTOR AND HORSE DRAWBAR POWER, 1910 TO 1943 *

Year	Crop acres, millions	Drawbar power furnished by			Acres per tractor equivalent ‡
		Tractors, millions	Horses and mules, tractor equivalent millions †	Total power in terms of tractors, millions	
1910	329	—	3.89	3.89	85
1920	360	0.25	4.48	4.73	76
1930	370	0.92	3.60	4.52	82
1940	344	1.55	2.60	4.15	83
1943	355	1.90	2.45	4.35	82
Estimate for next year:					
	say	then	say	then	say
1944	360	2.00	2.39	4.39	82

* Brodell, A. P., and Birkhead, J. W.: *Age and Size of Principal Farm Machines.* United States Department of Agriculture, Bureau of Agricultural Economics, mimeographed report, April 1943.

† Based on horses and mules on farms two years and older; five animals equal one tractor.

‡ The tractor farms no more acres now than five horses formerly did, but the tractor plows deeper and fits the land better.

The condition of power equipment is quite similar to that of the tractor. Many of the machines are about the same age as the tractor and should be replaced. There is a shortage of combines, corn pickers, and cultivators. Provision should be made for expanding their numbers.

The farm-machinery program should be based on the likelihood that (a) the crop acreage will be increased, (b) the horse population will continue to decline, (c) experienced man-labor will be scarce, and (d) breakage will be high.

Truck Transportation

Trucking plays an important role in the movement of food. Two thirds of the livestock, one half of the fruits and vegetables, and two fifths of the butter, cheese, and dressed poultry move by trucks.[1]

There has been a downward trend in the total tonnage and the proportion of food moved by trucks. From 1941 to 1942 the proportion so moved declined from 60 to 55 per cent. Conversely, the amount and the proportion moved by rail rose.

There is little question but that the amount and the proportion of food moved by trucks will continue to decline, placing an increasing burden on the railroads. This has and will continue to be due to the rising "death-rate" of trucks. During 1940 about 40 to 55 per cent of the farm trucks on Midwestern farms were more than ten years old. The problems of replacements, repair parts, tires, the quantity and quality of gasoline, overloading, incompetent drivers, and unskilled repair men are serious but will not be impressed on folks until the trucks and autos break down like the "one-hoss shay."

Transportation is so important that someone must survey from time to time the allocation of Detroit's productive plant to jeeps and tanks. Unless the war is of short duration, Detroit will ultimately be producing more trucks for the transportation of food and less fighting equipment for the armed forces. Detroit cannot produce both.

Supplies of Nitrogen Short

The outlook for fertilizer is hampered by the supply of only one element, nitrogen. Phosphorus and potash are rela-

[1] Webner, W. G.: *Estimated Volume of Motor Freight.* Bureau of Agricultural Economics, United States Department of Agriculture Mimeograph report, July 1943.

tively abundant. The War Production Board has restricted the use of nitrogen for fertilizer in favor of explosives. If the war is of extended duration, nitrogen shortages may handicap food production. The nation must reconsider from time to time the allocation of nitrogen between food and gunpowder.

Although grain, the backbone of the nation's food supply, is produced in areas that require relatively little nitrogenous fertilizers, such crops as fresh vegetables, potatoes, and cottonseed oil, an important part of our food supply, are grown on soils that require nitrogen.

The coastal area from Maine to Texas is characterized by light soils that require constant applications of commercial fertilizers, including nitrogen. There is practically no reserve of nitrogen remaining from previous applications of fertilizer; and on these light soils there is little natural reserve.

The next most important region requiring large amounts of fertilizer is the fruit and vegetable area bordering on the Great Lakes. There are many other smaller areas with light soils. Irrigated regions on the west coast and the Mountain States also require intensive applications. These areas produce a goodly proportion of our potatoes, fresh and canned fruits and vegetables, and peanut and cottonseed oil. A lack of nitrogen would handicap food production in these sections.

Fertilizer production is hampered by factors other than a lack of supplies. Ceilings have been set on wages of workers in fertilizer plants as well as on prices of fertilizers. These ceilings are low relative to urban competitive wage scales and prices of some farm products. Frozen wages below the level paid in competing industries will prevent fertilizer companies from obtaining adequate help. If this condition persists, the production and distribution of fertilizer will be retarded.

Low ceiling prices for fertilizer and rising farm prices

have encouraged heavier than normal applications. Fertilizer prices are low relative to prices of cotton. From 1939 to February 1943, prices of fertilizer materials rose 16 per cent, and prices of cotton rose 126 per cent. From February 1942 to 1943, fertilizer prices declined 2 per cent and cotton rose 10 per cent. Cotton has risen in price relative to fertilizer over the entire war period. This stimulates the use of fertilizer. The amount of fertilizer applied per acre of cotton is low, but the cotton area is enormous. A material increase in the amount of fertilizer applied to the cotton acreage might reduce the supplies available for other crops.

In certain intensive crop areas farmers have sharply increased the normal applications of fertilizer. Fertilizer and labor are two of the costs entering into crop production, and within limits they are interchangeable. With farm wage rates rising sharply, with low ceiling prices on fertilizer, and with high prices of certain farm products, the tendency has been to shift toward heavier applications. Such practices might result in an abnormal distribution of the amount of fertilizer available.

CHAPTER 4

CROP PRODUCTION

THE FOOD muddle is noteworthy for two things: a lack of facts and a misinterpretation of the facts we have.

On one hand the consumer hears that America is a land of milk and honey, and on the other hand he hears about an over-all shortage of food. Empty butcher shops and overflowing wheat bins can be cited to support either view.

For twenty-five years the average American hasn't troubled himself to do much thinking about his food supply. Food was always available in ample quantities; the only problem was to choose the type suited to one's taste and purse. To the consumer, the problems of production, processing, and distribution of food were non-existent or at least unimportant, since they solved themselves with little effort on his part. The "farm problem," when it reached the consumer's ears, was phrased in terms of overproduction, surpluses, and lost foreign markets. We became concerned about the adequacy of our food supply only when food became short.

What Are the Facts Regarding Crop Production?

For the consumer, a supply problem first really exists when a familiar article is missing from the grocery shelves. However, the supply of food does not suddenly find itself upon

the grocery shelves in accordance with the demand. The food supply is a complicated problem that involves prices, weather, available acreage, farm labor, changing population, foreign trade, and numerous other factors.

It is a tremendous task to provide an attractive, ample, nutritious diet three times a day, 365 days of the year, for 136,000,000 people with different requirements, tastes, and buying power.

To produce the crops to feed our livestock and human beings requires millions of acres of land, large amounts of manpower, adequate machinery, a huge capital investment, and an immeasurable store of knowledge. The economic system must provide an adequate return so that the farmers will have an incentive to plant, and a benevolent Providence must provide rainfall and sunshine in the proper proportions so that the crops will grow.

Agricultural Production Always Near Maximum

Agriculture is unlike industry in several ways. Agricultural production, limited by the weather, is always near its maximum for a given price level, while industrial production is usually limited by the amount that can be sold. A part of our difficulty comes about because we apply to agriculture a type of reasoning suited to industry. We think that if we increase our demands for food, agricultural production will automatically rise to meet them. A more realistic approach would be to recognize that food production does the bidding of the weatherman and prices and is allergic to administrative control.

Half Our Land in Farms

The United States has about two billion acres of land, of which one billion are in farms (table 1).

Although a little over fifty per cent of the total land area

in the United States is in farms, crops were harvested from less than a third of that land in 1939, a good crop year. Therefore, of the total area of land in the United States, less than one fifth was harvested cropland.

TABLE 1. DISTRIBUTION OF LAND IN FARMS, 1939 *

Classification	Millions of acres	Per cent
Cropland, harvested	321	30
Cropland, failure	21	2
Cropland, idle or fallow	57	6
Pastures, plowable	131	12
Woodland †	137	13
Other land ‡	394	37
Total	1,061	100

* ——: Census of the United States, 1940: Agriculture, United States Summary, United States Department of Commerce, page 10, 1941.

† Farm wood lots or timber tracts, natural or planted, and cutover land with young growth.

‡ Pastureland other than plowable and woodland pasture; wasteland, house yards and barnyards, feed lots, lanes, roads, etc.

That year the nation harvested crops from 321 million acres. There were 78 million additional acres of cropland that produced nothing. This area, which represents about one fifth of the crop acreage, was idle or not harvested because of normal fallowing practices, AAA policies, wind, hail, drought, floods, insects, disease, low prices, or lack of labor.

The plowable pastures, woodland, and other lands, which include non-plowable pasture, wasteland, house yards and barnyards, feed lots, lanes, and the like, represent over sixty per cent of the land in farms, and over twice the harvested crop area.

As far as expanding our food supply is concerned, the amount of idle or fallow land could be somewhat reduced and a small portion of the plowable pasture could be cultivated.

Non-Farm Lands Produce Some Food

Almost half the area of the United States is in desert, bare rock, marshlands, beaches, cities, towns, roads, parks, public grazing lands, forests, and the like. A considerable part of this non-farm land produces some food for man. The acreage of land in public and private range and grazing lands, classified as non-farm land, exceeds that in crops. About one third of the land not in farms is privately and publicly owned grazing lands, much of which is in the western part of the United States. The ranges produce pasture grasses adapted to arid or semi-arid conditions. Over half of the area in forests is also used for grazing. The carrying capacity of the woodlands varies inversely with the density and directly with the amount of sunlight that strikes the soil.

Since the carrying capacity of the woods and ranges is low, the meat produced per acre is very low, but in the aggregate it is considerable because of the huge acreage. This area is one of the most important sources of mutton and beef.

Good Farm Lands Produce Most of the Food

Studies of good and poor farm lands indicate that there is a wide variation in the amount of food produced. About one third of the farm land in the United States is poor, one third is fair, and one third is good. The poor land produces about one thirtieth of our food supplies and the good lands, about two thirds.

Land classes	Land area	Food produced
Poor	⅓	1/30
Fair	⅓	⅓
Good	⅓	⅔

Judging from past records, one should not expect to get much additional food from the poor lands during this war;

but it should not be assumed that some day we cannot get additional food from these poor soils. In fact, plans may be devised to get large amounts of food from them.

The production of food per man on most poor soils is low and on the good soils it is high. However, some poor lands have high productivity per man. This is the case on the Great Plains area and in the great open spaces of the Mountain States. In these areas farmers have adjusted their intensity of operation and type of farming to farms with thousands of acres.

With a shortage of food, a shortage of good land, a shortage of labor, and a shortage of machinery, what should be the nation's policy regarding the allocation of the scarce factors of production?

Farmers' experience and farm-management studies indicate that added applications of manpower, machinery, fertilizer, and the like yield more food when applied to the better lands than to the poor lands. Under a rationed economy there is a tendency to treat the good and the poor land alike or even to treat the poor better because it is poor. If the selective draft were selective enough, it would select more boys from the poor land for the army and leave more boys on the good lands to produce food.

The allocation of farm machinery, fertilizer, farm supplies, sprays, and the like tends to be on a share and share alike basis. If maximum food production is desired, the scarce instruments of production should be largely concentrated on the good to fair lands at the expense of the poor lands.

These recommendations would appear to operate to the disadvantage of the operators of poor farms. These men should find employment on good farms or in war industries where labor is scarce and wages are high.

Good Lands Already in Use

The acreage of idle land in the United States is an index neither of waste nor of how much our wartime food production could be increased.

It is sometimes thought that the acreage of crops could be expanded considerably if only we believed it necessary. However, the great bulk of our good agricultural land is already in production. Most of the land not being tilled has been proved by the competitive process to be unworthy of the expenditures of capital and labor that would be necessary to bring it into production. Drainage and irrigation could bring some additional land into production. For a number of years reclamation of new acreage has approximately equaled abandonment, and the acreage of farm land has been substantially unchanged. The acreage of land that could be reclaimed is small when compared with the acreage already under cultivation.

There are some marginal lands, it is true, that it might pay to cultivate in time of war. A large and sustained rise in prices could bring some of these marginal lands into cultivation, but the increase in total production would be small. The United States has nearly reached agricultural maturity. Increases in the acreages of certain crops can come about mainly through a reduction in the acreage of other crops. Total crop production cannot be materially increased by planting more acreage.

Corn, Hay, and Wheat — Our Biggest Food Crops

Corn, hay, and wheat, in the order named, are our biggest crops, and represent almost two thirds of the harvested crop area of the United States. Most of the corn, all of the hay, and a part of the wheat are fed to beast rather than to man.

The next most important food crops — oats, cottonseed,

barley, sorghums, and soybeans — together occupy 30 per cent of the crop area (table 2).

Four crops — peanuts, rye, potatoes, and dry beans — together represent 4 per cent of the aggregate acreage.

There are 40 other crops which, taken together, occupy about as much acreage as the four crops just mentioned.

TABLE 2. HARVESTED ACREAGE OF 52 CROPS, 1942

Crop	Million acres	Per cent
Corn	89	26
Hay	73	22
Wheat	49	14
Oats	38	11
Cotton (cottonseed)	23	7
Barley	17	5
Sorghums	15	4
Soybeans	11	3
Peanuts	4	1
Rye	4	1
Potatoes	3	1
Dry beans	2	1
40 other crops	12	4
52 crops	340	100

Important grains and hay represent 96 per cent of the crop area of the United States. Grain and hay are the backbone of the food for beast; grain and livestock products are the backbone of food for man.

We Attempted to Restrict Acreage

There was a widespread philosophy during the first and second New Deals that prices could be raised by reducing production. The method used was to restrict the acreage. From 1932 to 1940 the acreage of cotton was reduced 33 per cent, and corn 22 per cent. Soil-conservation practices en-

couraged the expansion of hay, soybeans, and sorghums. Hay, the second most important crop, increased 8 per cent.

The decreases in acreage exceeded the increases. Four important crops — cotton, corn, wheat, and oats — declined 47 million acres. Three crops — hay, sorghums, and soybeans — expanded 16 million acres. The policy of contracting some crops and expanding others caused striking changes in individual crops, but the total harvested acreage was reduced only 9 per cent. Some of this decrease was due to crop abandonment caused by low prices and would have occurred despite AAA.

The government set out to reduce production of "soil-depleting" crops [1] by decreasing the number of acres planted to them. The farmers, who are piece-workers, set out to increase production on the decreased acreage. The farmers obviously eliminated the poorer acreage and applied more man-labor, power, and fertilizer to the better acres. As a result, the acreage of soil-depleting crops fell 19 per cent, the yields rose 20 per cent, and total production declined only 3 per cent:

Government-controlled acreage fell to	Yields due to farmers' efforts and the weather rose to	Nation's production, a product of government's efforts times the farmers' efforts, declined slightly to
81 per cent	120 per cent	97 per cent

Attempted control of acreage is a poor tool for those who would have a planned agriculture.

Curtailed Acreage Brought Back into Cultivation

Following 1940, there was some loosening of crop controls. This and the advancing prices increased the acreage of corn

[1] Soil-depleting crops such as corn, cotton, wheat, etc.; and soil-conserving crops such as alfalfa, clover, and other sod crops.

3 per cent from 1940 to 1942. However, the acreage of cotton and wheat continued downward, declining 5 and 7 per cent respectively. The total acreage increased 2 per cent. Prices, unhampered by restrictions on production, direct or indirect, would have increased the acreage more.

From 1932 to 1940 the acreage of four feed grains was reduced under the policy of shifting from soil-depleting [1] to soil-conserving [1] crops. Since the outbreak of World War II, with its unparalleled requests for livestock products, some grudging concessions have been made, but these so-called soil-depleting crops have regained only about one third of the lost acreage. Thanks to hybrid corn and the weather, production was good despite the efforts of the restrictionists.

With higher prices and less restrictions, farmers intended to increase the 1943 acreage. Had the farmers carried out their 1943 intentions, about half of the acreage taken out of cultivation during the early years of the present administration would have been restored. Adverse weather prevented the realization of these expectations.

It seems reasonable to assume that, with further relaxation of the restrictions and higher prices, the acreage planted will continue to increase. It does not follow that if the acreage is increased, food production will rise in proportion to the increased acreage. The acres thrown out of cultivation and therefore those that may be brought back into production will be the poorer lands with less than average yields.

The contraction program reduced the acreage but did not greatly reduce total production. The expansion program may increase the acreage but may not greatly increase production. Had the government permitted an increase in winter-wheat production in the fall of 1942 in the Great Plains area, the 1943 food production would have been greater. In the

[1] Soil-depleting crops such as corn, cotton, wheat, etc.; and soil-conserving crops such as alfalfa, clover, and other sod crops.

Great Plains, where the greatest contraction in wheat acreage occurred, weather conditions during 1943 were favorable. However, the weather may not be favorable in 1944 after the government belatedly permits an expansion of winter-wheat production.

Agricultural Policy Blows Hot and Cold

From 1933 to 1942 the United States spent over five billion dollars in an effort to reduce production, conserve the soil, and adjust prices. During the past half-century the nation has spent about one billion dollars for research and extension work to improve the efficiency of the farmer and increase food production.

The two policies were obviously at cross-purposes. The crop-reduction policy was the more expensive and the less effective. The program of research and extension was less expensive and of considerable effectiveness and durability. If hybrid corn had been its only product, direct or indirect, the expenditures would have been amply justified. Hybrid corn increases production perhaps 15 to 20 per cent. Over the past five years this would have totaled about two billion more bushels of corn, or more than a year's production of pork. The value of such a contribution in the present emergency is worth more than the total cost of all research and extension work.

The farmer's urge to improve and to increase, with nature as his ally, usually triumphs over the forces of restriction and curtailment.

Much Depends upon the Weather

Prices told the farmer how many acres to plant, how much labor to hire, and how much fertilizer to apply, but did not tell him how much he would produce. That depended upon the weather. Improved machinery, better breeds of livestock,

and improved cultural practices have not decreased the farmer's dependence on the weather; they have probably increased it. Wet weather slows the man with the hoe, but it stops the tractor. Modern farm animals, bred for high production, probably respond more to violent changes in feed and weather than did their thick-skinned ancestors.

It is well understood that for one farmer, changes in the weather can make tremendous changes in yields. It might be thought that with six million farms scattered over forty-eight states, these changes would offset one another and the total food production of the nation would be relatively stable from one year to another. Such is not the case; although there is great variation in rainfall within small areas, this variation does not cancel out to make a constant average. Any particular year will have a general pattern over rather wide areas as to temperature and rainfall. If it rains, it rains upon the just and the unjust. In dry weather all signs of rain fail. In any year the total food production of the nation may vary as much as 15 to 25 per cent from the preceding years with no change in the farmer's intentions to produce, as indicated by acreage. During the drought of 1934, food production declined 24 per cent. With the good weather of 1942, food production increased 17 per cent.

Long-range weather forecasting has been struggling to become a science for hundreds of years. The possibilities of development in this field are intriguing but still embryonic. Cycles in the weather, permanent changes in temperature, and the like make good subjects for discussion, but as yet are not predictable. For all practical purposes, the astronomer who predicts next summer's weather by the sun spots is in the same class with the local sage who predicts a bitter winter by the thickness of a squirrel's fur. The two have about equal chances of success in predicting the weather of this and the next growing season.

The overwhelming proportion of the total variability in food production from year to year comes from changes in the weather, and only a small proportion is due to changing acreages, fluctuating supplies of labor, transportation difficulties, price changes, mistaken judgment, and the like. We frankly acknowledge that we can do nothing about the weather. To a limited extent, the other factors affecting crop production are within our control. In our enthusiasm over a small measure of success in controlling these, we sometimes forget that by far the greatest factor affecting crop production is completely beyond our control.

Goals and Intentions Mean Nothing to the Weatherman

There is a tremendous difference between the government's goals, established during the winter, the farmers' intentions to plant in the spring, and the final harvest the following fall. There is no truer saying than that hope springs eternal in the spring. During the early spring, farmers have high hopes. If the spring weather is favorable, the farmers may plant as many acres as they intended. To achieve the high hopes of the spring, however, there must be a proper distribution of an adequate supply of rainfall during the summer.

In the spring of 1934 the farmers intended to plant 186 million acres,[2] but the weather was good and they planted about 208 million acres. Thereafter the weatherman played havoc with production. Crops were so poor that 22 per cent of the crop acres[2] were abandoned and the yields of the remaining acres were 19 per cent below normal.[3] As a result, production was about 30 per cent below normal.[4]

In the spring of 1942 the farmers intended to plant about 217 million acres[2] and planted about 219 million. The weather was good and the farmers planted more than they

[2] Based on 14 crops. [3] Based on 28 crops. [4] Based on 53 crops.

intended. The weatherman was very co-operative throughout the year. The abandoned acreage was small and the yields of the harvested acreage [3] the highest in history. This unusual combination produced a crop 25 per cent above normal.[4]

Between spring and fall a fickle weatherman can give us a crop 15–25 per cent below normal or a crop 15–25 per cent above normal. This is not a theory; it is a fact. It has happened in the United States.

In the spring of 1943 the farmers planned to plant 229 million acres,[2] compared with 219 million in 1942. This was a substantial increase. However, this optimism was short-lived. During the spring of 1943 the weatherman was a non-co-operator and the farmers planted only 218 million acres.[2] This was eleven million acres less than they intended and one million less than they planted the previous year.

The government dictates the acreage goals; the farmers dictate the intentions to plant; the farmer and the weatherman compromise on the acreage actually planted; and the weatherman dictates the acreage that shall be harvested and the yield per acre. The most the government can do is some paper work. The rest is in the hands of the farmer and the capricious, unpredictable weatherman.

Incentives Important to Production

Probably a continuation of the production of 90–95 per cent of the nation's food is assured for the duration regardless of low ceiling prices relative to urban wages. However, the other 5–10 per cent depends on alternative opportunities. This marginal food is the most expensive part of our supply. It is not only as important as any other part, but it is especially important in time of war that we produce all that is possible. It is also very important that all that is produced

[2] Based on 14 crops. [3] Based on 28 crops. [4] Based on 53 crops.

is saved. Unharvested crops are more frequently an indication of low prices than of labor shortage. In order to maintain food production, incomes in agriculture must be commensurate with incomes in other industries. If the incentive — prices — is high, farmers will put forth their maximum effort for over-all food production.

For some commodities this was recognized. Following Pearl Harbor imports of vegetable oils declined and the government undertook to expand the acreage of soybeans for oil. Soybeans compete with corn. In 1940 a bushel of soybeans was worth 1.5 bushels of corn, and the following year the farmers planted 5.9 million acres of soybeans. The government's support price raised prices of soybeans relative to corn, and a bushel of soybeans was worth more than two bushels of corn. The 1942 acreage of soybeans increased to 10.8 million acres.

Another instance of the effective use of the price incentive was the United States Department of Agriculture's support prices for butter to the end that production be maintained or increased. The butter deal was one instance in which the Department of Agriculture wisely made a reputation as an inflationist.

The policy regarding red kidney beans was less realistic. The government wanted more red kidney beans, but prices were held so low for the past season or two that in the spring of 1943 farmers in the major red-kidney-bean sections of New York State planted about 20 per cent less than the previous year. Of course, the number of producers of red kidney beans is small and their aggregate contribution to the nation's food supply is not large. With declining consumer supplies of animal protein food, however, there will be urgent need for the expansion of vegetable proteins, of which beans are a great source. The red kidney, the pea, and the lima bean are highly prized because of their palatability.

Prices have been more successful in stimulating production than have exhortations. The government appealed to the farmers to produce more hogs and more corn. Hog prices were more favorable than corn prices. In fact, the price situation for hogs was so favorable that the farmers' expansion program exceeded the government's requests. The price incentive was so strong that in the spring of 1943, the War Food Administrator urged the farmers not to increase the breeding of sows and gilts more than 15 per cent. There were estimates that some Corn Belt farmers planned a 50-per-cent expansion. To the extent that the government said it wanted something and then paid a stimulating price, it chose the correct means of accomplishing the objective.

The government kept down the price of corn, and in the spring of 1943 the farmers planned to increase the acreage of corn only 6 per cent.

The 1943 sugar-beet goal was the same as in 1942, but the price of sugar has not risen in proportion to wages, and the farmers intended to plant 30 per cent less beets than in 1942. They actually planted 39 per cent less, the smallest acreage since 1922. This equals about 750,000 tons of urgently needed sugar.

The only potent incentive to increased production is the dollar. The farmers and Congress want price to be the incentive. The administration, which favors price-fixing, wants subsidies.

Our National Crop Policy — Change

During the horse-and-buggy days the nation had no agricultural production policy other than to make two blades of grass grow where one grew before. This was a good policy. It was the only way the farmer had to increase his wealth, and no satisfactory substitute has yet been found.

For a decade beginning in 1932 our agricultural production

policy was one of scarcity, centering on the prevention or elimination of surpluses. The nation tried to prevent surpluses by restricting the acreage of wheat. Farmers were penalized forty-nine cents per bushel for wheat produced in excess of their quotas. We attempted to eliminate the surplus wheat by the ever normal granary policy. This did not dispose of the surplus, and the nation is now trying to get rid of it by feeding it to livestock, a very effective but not an advisable way.

The nation restricted the acreage of cotton and thereby reduced the production of cottonseed oil, an important food product. The nation reduced the acreage of corn, and thereby restricted pork production.

Policy Changed from Restriction to Expansion

Formerly, the policy was to pay farmers not to produce and subsidize to raise the price. Now the policy is to pay farmers to produce and subsidize to prevent prices from rising.

During 1942 farmers were encouraged to plant more peanuts and soybeans. The restriction policy on wheat was continued, and was not lifted until the spring of 1943. Acreage restrictions on cotton have not yet been relaxed. After the farmers have met their quota of war crops and complied with soil-conservation practices, they can increase their acreage of corn — if they have the acres.

Formerly our national policy was to control the acreage of important crops and permit prices to fluctuate. During 1943 our policy was to let the farmers plant crops of their own choosing, but rigidly regiment the prices. Formerly the fluctuating prices were not permitted to guide production. Now production is guided by a guided price.

The controlled-scarcity policy has grudgingly become a controlled-expansion program. Those who once sponsored the

scarcity policy have been placed in charge of the expansion program.

Changes were made in our policies on crop acreage, but they were made late. Changes were made in our policy on farm labor, but they, too, were late. Changes are being made in our farm-machinery policy, also belatedly. We have finally come to realize that production must be stimulated. Some folks credit the planners with seeing the difficulties and making the changes. Others contend that they did nothing until shortages occurred, when the force of public opinion compelled them to make changes. If the latter point of view is correct, those in charge of our food strategy were weathervanes rather than administrators.

We Have Outgrown Our Policy on Crop Production

By far the most important government food program for 1943 is still that of the AAA. Some contend that the support-price programs are more effective. However, for most products support prices are below the market prices.

The AAA program was originally a farm relief measure designed to assist the depressed state of agriculture. The program, with amendments, has been continued despite the increased need for food and the decreased need for relief.

The AAA has used crop allocation and marketing quotas to restrict the production of some crops. We are restricting the cotton acreage from which cottonseed oil, an important vegetable fat, is obtained and which is now so scarce that it must be rationed. Paying farmers not to produce cottonseed oil does not assure us that more of the other vegetable oils will be produced.

Parity payments may have some justification in time of agricultural stress, but have little to recommend them in time of war. In fact, the government agencies are operated at cross-purposes. The AAA attempted to raise farm incomes

by parity payments, and OPA tried to hold down prices, and thereby farm income.

As a distress measure, the nation devised a soil-conservation program purportedly in the interest of future food supplies. Despite the war, much of the old AAA policy to conserve the soil for future generations was still in force during the summer of 1943. It has been stated that farmers can plant crops of their own choosing. It is true that penalties for excess planting of corn have been eliminated; but considerable indirect control still exists by classifying certain crops as "war crops" for which AAA payments are made. It will be difficult to eliminate the national, state, and local interests involved in this program.

When the nation is at war and denuding itself of its manpower and other natural resources, there is little reason to continue a program of soil conservation at the expense of much-needed current supplies of food. The best of our manpower, mines, and forests are drafted for the war effort. Can there be any objection to mining the soil for a few years when food is so scarce?

We Should Be Realistic about Food Production

In time of war the food strategy should not be based on a year like 1942, when the acreage planted was high, the abandonment low, and the yields the highest in history. The year 1942 was one of those rare ones when the pictures in the seed catalogues came true. Only an optimist would base a wartime food policy on the pictures in a seed catalogue. In time of war we should be realists instead of optimists. We should base our estimates of future crop production on the assumption that (a) either there would not be sufficient labor and/or machinery, and/or favorable spring weather to plant all the acres that the goals call for or the intentions indicate, and that (b) the weatherman would be a non-co-

operator during the growing season and therefore the harvested acreage and the yields per acre would be average or less.

Based on this point of view, crop production may be 10 or 15 per cent less than the bumper crops of 1942, which apparently have been the bench mark for our Lend-Lease food policy and our other food commitments.

Our program has been to expect a higher production than will be realized. This is not only poor planning, but poor psychology. It would be much better if the people were led to expect little and be doubly thankful if they got more than they expected. Winston Churchill [5] impressed this simple principle on 46 million Englishmen when he told them: "I have nothing to offer but blood, toil, tears, and sweat."

Outlook Is for Declining Production

Among the many factors that affect crops, not one points to materially higher production.

There will be little expansion in the acreage of crops in the next several years, with the possible exception of the Great Plains, where the lifting of wheat restrictions may put more acreage under the plow.

There could, of course, be increases in food production through shifts from extensive to intensive crops. For instance, meadows may be plowed up and planted to beans. Such practices would increase the production of food crops, but increasing amounts of equipment and human labor would be required, both of which are scarce in time of war. The fact that more intensive cultivation could be resorted to is a guarantee against any over-all future shortage of food in the United States, but it is not likely that such an intensification will occur quickly.

Farm labor, machinery, fertilizer, spray materials, gaso-

[5] To the House of Commons, May 13, 1940.

line, rubber, and other supply problems and the price problem will irritate the farmers and alarm the country, but their net effect will not be of sufficient magnitude to jeopardize crop production. Crop production will be determined largely by the weather, and there is little that can be done about it except talk; and of talk there will be no end.

CHAPTER 5

LIVESTOCK PRODUCTION

On January 1, 1942 the nation had $7 billion invested in livestock, about fifty dollars for every man, woman, and child in the United States. There were about 145 million animal units, or about one per capita. More simply, there was one cow, or its equivalent in the form of hogs, sheep, and chickens, for each person. Cattle were the most valuable (table 1).

These animals consumed about 130 million tons of grain and ate, slept on, or tramped over 200 million tons of roughages. There were, in addition, about 160 to 180 days of pas-

Table 1. NUMBERS AND VALUE OF LIVESTOCK IN THE UNITED STATES

January 1, 1942

Type	Number	Value
Cattle	75,000,000	$4,140,000,000
Horses and mules	14,000,000	1,051,000,000
Hogs	60,000,000	943,000,000
Sheep	57,000,000	488,000,000
Chickens	475,000,000	395,000,000
Turkeys	8,000,000	23,000,000
Animal units *	145,000,000	$7,040,000,000

* One sheep equals 0.04 of one feed-grain consuming animal unit; chicken, 0.045; turkey, 0.18; other cattle, 0.51; hog, 0.87; dairy cow, 1.0; horse or mule, 1.14.

ture. The pastures and 330 million tons of crops together with the water were reduced to about 80 million tons of highly prized animal foods.

There was more moisture in the livestock products taken out of the barn than there was in the feed hauled into the barn. On a basis of dry matter, seven pounds of grain and seven pounds of roughage, exclusive of pasture, were fed to make one pound of these products.

The highly prized livestock and livestock products represent about twenty-five per cent of the dry matter consumed by the American people.

Livestock Big Consumer of Crops

Practically all food is produced from crops, the vast majority of which must be planted, cultivated, and harvested annually.

Agriculture produces certain crops for direct consumption. Among these are beans, lettuce, and potatoes. Other products are for direct consumption but must first be processed. Wheat as flour, oats as oatmeal, and buckwheat as pancake flour are examples. These foods are the staff of life.

Still other crops are produced to be fed to animals and transformed into food for man. Beasts consume all of the roughages, all of the pasture, and about three quarters of the cereal grains. Man eats about 3 per cent of our most important food crop, corn; hogs and other animals eat 85 per cent. Man eats about two thirds of the second most important grain crop, wheat; livestock probably gets about one sixth. Beasts get about 95 per cent of our oat crop. Man drinks about 30 per cent of the barley crop, and beasts eat about 60 per cent (table 2).

Some Foods Refined by Livestock

Livestock may be broadly classified into two groups: those which refine crops unfit for human consumption, and those which condense crops that are fit for human food.

TABLE 2. DISPOSAL OF GRAIN AND HAY CROPS

Approximate proportions consumed by man and beast *

Crop	Man	Beast
Corn	3	85
Wheat	65	15
Oats	3	95
Barley	30	60
Rice	50	5
Rye	25	50
Sorghums	0	100
Buckwheat	65	20
Hay	0	100

* Seed, storage, and exports unaccounted for.

A Graphic Summary of Farm Crops. Bureau of Agricultural Economics, United States Department of Agriculture, Miscellaneous publications Number 512, February 1943, page 12.

The farmer uses beef cattle, sheep, and dairy cows to refine bulky, inedible crops into food fit for man. These animals were equipped by nature with a digestive system that enables them to handle large quantities of coarse, bulky foods. During the summer months animals refine the inedible pasture grasses into milk and meat. In the winter they refine the inedible part of the crops produced the previous summer, such as timothy, alfalfa, and clover hay, cornstalks, straw, by-products of the milling industry, and low-quality grains. The livestock refine these inedible products into the nutritious but expensive products: beef, mutton, lamb, milk, butter, and cheese.

Beef cattle, sheep, and dairy cattle are not only refiners of inedible food; to a considerable extent they are also har-

vesters and gleaners. During the summer months they harvest for themselves huge amounts of food in the form of pasture grasses. During the fall and winter they are gleaners, gathering up food that would otherwise be wasted. In so far as these animals eat crops that man himself cannot eat and in so far as they harvest and glean crops that would otherwise go to waste, they add to man's food supply.

Other Foods Condensed by Livestock

There is another type of livestock which serves more as condensers of food than as refiners. Farmers use hogs and poultry to condense crops already fit for human consumption. Hogs were equipped by nature with a digestive system much like man's; neither the hog nor the hen can survive on large quantities of coarse, bulky foods. Hogs and hens condense the cereal grains that man does not require into nutritious and highly prized but expensive pork, poultry, and eggs.

Some of the animals are kept to serve as scavengers, to pick a precarious living from foods that man will not eat or has not the means of gathering. On many farms a hog and a few chickens serve this purpose.

Since, for the greater part, these animals consume food which could otherwise be used by man, they deduct from man's total supply of food. Consequently, when man's food supply is seriously threatened, these animals are quickly liquidated.

Number of Refiners and Condensers

On January 1, 1943 the nation had 55 million units of animals that might be classified as refiners of food unfit for man (table 3). Sheep were the most numerous, but dairy cattle were the most important.

The nation had almost 90 million units of animals that

might be classified as condensers of grains that man could eat. Chickens are numerically the most important, but from the standpoint of feed consumption and pounds of food produced, hogs are the most important.

TABLE 3. NUMBERS OF LIVESTOCK

January 1, 1943

Refiners *		Condensers *	
Class	Number	Class	Number
Dairy cattle	40,000,000	Hogs	74,000,000
Beef cattle	38,000,000	Chickens	540,000,000
Sheep	55,000,000	Turkeys	7,000,000
Animal units	55,000,000	Animal units	90,000,000

* There is, of course, some overlapping. The dairy cows consume some grain. The hogs eat some grass and grain by-products. The hens consume some ground alfalfa hay, meat scrap, and grain by-products.

The "condensers" or heavy grain-consumers, turn out about 80 pounds of dry matter per year for each man, woman, and child in the United States. The cattle and the sheep, the "refiners," produce about 150 pounds of dry matter per capita.

Livestock Lags behind Crop Production

A severe curtailment in crop production is followed by a decline in the current production [1] of all livestock. The first effect is always on the livestock for which the least feed reserves exist, beef cattle on the range. Hog production, of course, is just a reflection of the reduction of the corn crop.

[1] Meat "production" as reported by the United States Department of Agriculture includes all animals killed. To the layman, this is erroneously assumed to be that produced for the year or its equivalent. When farmers are liquidating their animals, this so-called production is *greater* than the actual "current" production. Conversely, when farmers are holding back animals to build up their herds, so-called production is *less* than the actual "current" production.

The least violent declines occur in the production of dairy products.

The drought of 1934 was one of the most severe in the nation's history. Per capita production of food and feed crops declined 24 per cent. Some of the effects of the drought were felt immediately in the current production of meat; but other effects were delayed until 1935. Based on whichever year was the lower, the decline in current production of these highly prized foods was 15 per cent.

Although current production declined 15 per cent, consumption declined only 5 per cent. The drastic decline in the current production was largely offset by added supplies from inventories. In fact, during 1934 the consumption of meat was about normal. Following the drought of 1934, inventories declined 10 per cent, somewhat less than either crop or current livestock production. The full effect of the drought on both current production and consumption of the highly prized foods did not occur until 1935. The liquidation was practically over and consumption was dependent upon current production. Both current production and consumption were 10 per cent below the 1932–3 level.

When crop conditions improve, current livestock production increases and farmers accumulate livestock on the hoof. Following the drought of 1936, there was a succession of good crop years; crop production per capita increased 43 per cent; and livestock products 28 per cent. In addition, farmers stored about four months' supply of food in the form of livestock on the hoof — their "ever normal" granary.

Regardless of whether there is a sharp curtailment in crop production or unusually abundant harvests, current production of all highly prized foods moves in the same direction. Meat changes approximately in the same proportion as crop production. The production of eggs and poultry changes

about two thirds as much. Milk production changes relatively little.

The complete dependence of livestock production upon crop production is thus illustrated by experience. It is impossible to expand livestock production beyond our feed supply, no matter how much we may desire more milk, meat, and eggs. Those who wish to see high livestock production might better give their attention to the production of feed crops than to exhorting the farmers to raise more animals. Feed, not livestock, is basic; the number of animals is quickly adjusted to the feed supply. If greater livestock production is desired, the prices of feed should be permitted to rise so as to stimulate the production of feed grains. The numbers of livestock will automatically rise as long as feed is available. Recent emphasis on livestock production relative to feed production is like pulling men off the assembly line to put them in the shipping department.

Livestock Products per Acre and Feed Unit

Formerly the farmers raised large amounts of grain and hay to feed horses so that they could produce more grain and hay to feed productive livestock such as hens, cows, and hogs. Now the tractor does much of the heavy field work and the automobile and truck do all the road work formerly done by horses. The amount of feed fed to horses declined because of the reduced numbers and the reduced rates of feeding to the reduced numbers. Consequently there was more feed available for the production of the highly prized animal products for man.

There has been a sharp increase in the amount of livestock products produced per acre of feed crops because of the improvement in field cultural practices, the development of better varieties of crops such as hybrid corn, and the expansion in the acreage of alfalfa. Not only has the feed produced

per acre been increased but the feed is being used more efficiently by livestock. Improvement in the breeds of livestock, improved feeding practices, and a slight increase in the amount of protein feeds have contributed to the rising output of livestock products per unit of feed available. During the past quarter of a century the production of livestock products per acre of land and per unit of feed have risen 44 and 27 per cent respectively (table 4).

TABLE 4. INDEX OF PRODUCTION OF LIVESTOCK AND LIVESTOCK PRODUCTS PER ACRE AND PER UNIT OF FEED *

1910–14 = 100

Five-year period	Per acre	Per unit of feed
1910–14	100	100
1924–8	118	121
1938–42	144	127

* Feed grains and hay.

In general, these changes are gradual and occur over long periods of time. The amount of milk produced per cow has increased gradually over the past quarter-century. The change from horsepower to tractor power was more rapid and certainly more spectacular. The expansion in the acreage of alfalfa has been slow. The development of hybrid seed corn was gradual, but its adoption by the Corn Belt was sudden and spectacular. This increased the possibilities of expanding livestock production. There is a limit to the amount of feed that can be made available to other types of livestock through a reduction in the horse population. There is a limit below which the number of horses is not likely to decline. Furthermore, the amount of feed fed to each horse is approaching an irreducible minimum.

Therefore continued increase in the amounts of highly prized foods produced from a unit of feed awaits the geneticist and the commercial breeder; the nutritionist and the commercial feeder; and the plant breeder and the commercial seedsmen. Undoubtedly, over the next quarter of a century, progress will continue to be made. But the changes will be slow and gradual and the chances of any significant increases in our food supplies from this source during the next year or two are small.

First We Discouraged, Then We Encouraged Production

Our changing policy concerning the production of crops has been accompanied by a changing livestock policy. In 1933 the nation slaughtered millions of pigs to keep them off the market. During the latter part of the thirties the nation curtailed the expansion of livestock by locking up grain under the ever normal granary policy. Recently this policy has given way to a program of all-out livestock expansion, with particular emphasis on pork production, frowned on a decade ago. It is questionable whether the economic interests of the nation have changed in proportion to these changes in policy, as the impending liquidation of livestock will indicate.

Not only has it been patriotic to expand livestock production, but it has been profitable as well. High prices have been paid for livestock products, and grain prices have been kept at relatively low levels to encourage livestock production. In 1942 the expansion policy of the government coincided with the expansion policy of nature, and the government congratulated itself upon its success.

Since hogs are condensers of food, the slaughter of pigs during the early thirties piled up food at a time when it was generally believed there was a surplus. The recent expansion of numbers of hogs, on the other hand, has reduced food sup-

plies at a time when we are faced with a shortage. The expansion in the numbers of livestock, which began in 1937 and continued into 1943, was due to a succession of good crops. Most of the abundant supplies of livestock in 1943 were a product of six years of the co-operative efforts of the farmers, the seedsmen who developed and multiplied hybrid corn, and the weatherman. Their combined efforts more than counteracted the efforts of the restrictionists.

The nation can plan for increased livestock production based on low grain prices as long as the grain does not run out. For continued expansion it is necessary that the expansion of feed crops keep pace with the increasing numbers of livestock. Livestock production is more than merely a problem of the number of sows that can be bred and the number of chickens that can be hatched. Because of the limitations of acres of farm land, farm labor, and machinery, the amount of multiplication that is possible in the production of feed crops is insignificant in proportion to the possibilities of increasing numbers of livestock. When livestock numbers do not expand or contract in proportion to feed supplies, there is likely to be trouble.

Low Ceiling Prices Caused High-Protein-Feed Shortage

One phase of the livestock expansion program has been the maintenance of low prices for the high-protein feeds in order to make livestock production profitable. The high-protein feeds for animals consist of tankage, meat scraps, and oil meal. The high-protein foods for man consist of meat, milk, and eggs. Our policy of maintaining cheap protein feeds for livestock was similar to our policy of maintaining cheap protein foods for man. In the early stages the same method was followed. Low ceiling prices were maintained, and rationing was not attempted.

A shortage of high-protein feeds for livestock developed

in the same way as the shortage of meat, a high-protein food for man. In fact, it developed more rapidly. The high-protein feeds represent only about 3 per cent of the livestock ration, while they represent about 25 per cent of the human diet. Since the high-protein feeds are so small a part of the livestock ration, supplies were quickly exhausted under the stimulation of low ceiling prices.

In the spring of 1942 OPA convinced itself and others that the prices of meat scrap and other protein feeds were too high and something drastic had to be done. It had been profitable to use high-protein feeds even at the pre-ceiling prices and OPA's action merely stimulated their consumption. Since the nation wanted more livestock products, as indicated by price and by government requests, why should not the farmers feed more high-protein feeds? The feeds continued to be cheap and it was both profitable and patriotic to increase production of livestock products. Furthermore, the hog, the dairy cow, and the hen never did have a high standard of living.

Since the prices of high-protein feeds are so small a part of the nation's price structure, OPA's action had little effect on the inflation problem. The action served primarily to raise the standard of living of the livestock for a short period of time, at the risk of drastic reduction later. With the stimulus of low ceiling prices, the feed hoppers were almost empty by the fall of 1942. It was not until August 1943 that the ceilings were raised.

With High Prices for Livestock, Protein Feeds Should Have Been High

The high-protein-feed situation depends in part on the incomes of livestock-producers, which in turn are dependent upon the numbers of animals and their prices.

Normally when the supply of livestock products is high,

the price is low. Conversely, when the supply is low, the price is high (table 5). The two factors of supply and price tend to equalize each other so that the incomes of livestock-producers do not vary in proportion to either prices or numbers. During 1942 this principle did not operate. The farmers had a large supply of livestock, which brought unusually high prices for such a supply. Therefore 1942 incomes encouraged farmers to produce more livestock products and to feed each animal a more nutritive ration. This alone would have created pressure on the supply of high-protein feeds and the normal reaction would have been higher prices. These higher prices would have distributed the supply throughout the season among the various classes of livestock. However, during the latter half of 1942 and during 1943 the pressure on the supply of protein feeds was not compensated for by firm prices.

TABLE 5. PRODUCTION, PRICES, AND INCOMES FROM LIVESTOCK PRODUCTS

	Supply	Price	Income
Short supply	90	115	104
Large supply	110	85	94
1942	110	143	157

The relationship between the prices of hogs and prices of high-protein feeds was also unusual. Normally, when there were many hogs, the price of hogs was low relative to the price of tankage. This resulted in a diminution in the amount of tankage fed each hog, thus spreading the supply among the large numbers. When there were few hogs and high prices, a 250-pound hog would buy eight sacks of tankage, and when there were many hogs and low prices, a hog would buy only five sacks. In 1942, with many hogs, a 250-pound hog would buy about ten sacks of tankage (if the farmer could get

them), compared with five sacks under normal conditions for many hogs.

A somewhat similar situation prevailed for prices of other livestock products and other high-protein feeds. For instance, in 1942 a can of milk would buy about a sack of oil meal, compared with about three fourths of a sack under normal conditions.

Since the country's livestock receives about half as much high-protein feed as recommended for efficient production, and the high-protein-feed price ratios were favorable, there was no force restricting the farmers from improving the standard of living of their livestock except the amount of high-protein feed available. The obvious effect of these relationships was to encourage the feeding of protein feeds at rates that could not be maintained.

Protein Feeds Low Relative to Other Feed Prices

Normally, high-protein feeds sell at much higher prices than corn meal. For instance, from 1926 to 1930 a ton of linseed meal was worth 29 per cent more than a ton of corn meal. Early in 1943 a ton of linseed meal sold for less than a ton of corn meal. Similarly, a ton of soybean meal sold for less than a ton of corn meal. In the spring of 1943 a 20-per-cent-protein ration was cheaper than the less appetizing and less nutritious 16-per-cent ration. Such relationships would naturally stimulate the rate of feeding of oil meals in the Corn Belt, where tankage and meat scraps may be in short supply.

For safety, the feed manufacturer normally included a margin of perhaps one half of one per cent extra protein in a 16-per-cent ration. With the low prices of high-protein feeds, a 16-per-cent ration might include as much as 18 to 19 per cent of protein. Assisted by OPA, which lowered the prices, by the manufacturer, who increased the protein in his ration, and by the feeders, who increased the ration, live-

stock consumed more than the normal amount of protein feed.

Although the government has seen fit to hold down the prices of the high-protein feeds, it has not taken on the job of rationing these products. The rationing of sugar, gasoline, and coffee is child's play compared with the intricate problems that would be involved in the rationing of the many kinds of high-protein feeds to the different kinds of livestock of varying ages and requirements in the many sections of the United States during the different seasons of the year.

We have rationed the high-protein foods for man on the basis of everyone sharing and sharing alike, from the newborn babe to the coal miner. This system, which has but one justification, simplicity of administration, cannot be applied to the rationing of livestock's nutritious, highly prized protein feeds. If it were, the chickens would have title to seventy per cent of these feeds. This would be so inequitable that practically every livestock-producer would be forced to violate the letter and the intent of the ruling.

Barter Economy

When supplies become short and ceiling prices are too low, black markets and a barter economy spring up. At the high prices for livestock and the low prices of high-protein feeds, there was a scarcity of high-protein feeds in the Corn Belt. It has been proposed that the farmers exchange a part of their soybeans for soybean meal and a part of their hogs for tankage. This has taken place. As a result, more tankage accumulated in the hands of certain farmers and dealers than could be used. Others visited the farmers and dealers and bought the excess at high prices. Some of the tankage later appeared in the Eastern poultry ration. Since the tankage was a small proportion of the poultry ration, the high price was absorbed.

Low Frozen Prices Stimulated Consumption of Feed Grains

The shortage of protein feeds, like the shortage of meat, developed when prices were held artificially low, and consumption was stimulated. A similar policy has been adopted for feed grains, and it appears to be headed for the same outcome.

The background of the feed situation is one of six good crop years and increasing numbers of livestock. Since livestock depends upon feed crops, numbers of livestock move with but lag behind changes in the supply of feed grains.

From 1937 to 1942 there was a succession of large feed crops. The supplies of grains normally fed to livestock increased from 104 to about 142 million tons.

For the six years ending January 1, 1943 the numbers of cattle increased 20 per cent; chickens, 39 per cent; and hogs, 65 per cent. On January 1, 1943 the number of cattle on farms was 78 million; hogs, 74 million; and chickens, 540 million — all the highest in history. The numbers of sheep are the second highest in history.

During the first part of this six-year period the supply of feed increased more rapidly than the consumption, and the carry-over increased each year. During the second phase of the period, supplies continued to increase, but they increased less rapidly than consumption, and stocks of feed per animal unit decreased twenty-five per cent. The numbers of livestock were catching up with feed supplies.

Normally, when there is an abundance of feed relative to livestock, livestock products are high relative to grain prices. Conversely, when grain is scarce, livestock prices are low relative to grain prices. Farmers adjust their production accordingly; they expand or contract their production according to these price relationships.

With livestock gaining on the feed supply, the price of corn

started to rise in December 1942 despite the huge crop that had just been harvested. Based on a common-sense economy, this was as it should have been. Livestockmen would have taken warning and started to think about curbing the expansion of their herds and flocks. However, the government had the problem of stopping inflation and continuing its avowed policy of encouraging livestock production. On January 12, 1943 OPA froze prices of corn, our most important feed grain, in every future, cash, and local market throughout the country at the highest prices prevailing the preceding day. This encouraged the further expansion of livestock. As the ceiling prices on the high-protein feeds accelerated their disappearance, the ceiling price on corn had a similar effect on feed grains.

A shortage of feed grains will disturb poultrymen and dairymen in deficit areas more than a shortage of high-protein feed. If feed grains are available and high-protein feed is scarce, farmers can feed more pounds of a lower-protein ration. If there is a shortage of feed grains, however, there is no substitute except the dairyman's excess stocks of hay and silage.

A shortage of feed grains for dairymen and poultrymen in deficit areas developed at a more rapid rate than that at which the total supply of feed grains disappeared. Grain farmers or livestockmen in the Middle West with excess grain were disgruntled with the $1.00⅞ for September corn in Chicago and placed a higher "reservation price" on their cribs of corn. In the modern lingo, these farmers have a high "priority," and the priority ratings of the New York dairyman and the Pacific coast poultryman were far down the line.

The problem of the livestockman is more likely to be getting grain than the price of grain. The first reaction of most consumers to frozen prices is favorable. All consumers like

low prices for the products they use. The Pacific egg-producer, the New York dairy farmer, and the Corn Belt hog farmer are no exceptions; but this general approval has been shortlived. An inadequate supply of grain at a low ceiling price is much more disturbing than an adequate supply at a high price.

Frozen Prices Mean Frozen Supplies

The government's adventures in fixing the price of corn were something like those of Alice in Wonderland. Effective regulation involves more than the issuing of edicts and the waving of wands. The experience with corn may be reviewed as an indication of some of the difficulties that beset the price-fixer.

Though the intention was to freeze merely the price of corn, it was soon discovered that the corn itself had been frozen. The normal rate of movement out of farmers' cribs slowed down. Midwestern farmers with a watchful eye on the exceptionally favorable government-guaranteed price of hogs decided that they could get more for their corn by converting it into pork than by selling at the ceiling price.

It soon developed that not only had the corn in the farmers' cribs been frozen, but the corn in the channels of trade went into hiding. Elevators and other handlers of grain usually "hedge" their transactions; that is, when they buy actual corn they sell a future contract and when they sell the actual corn they buy back the future contract. This operation is like betting on both sides of a prize fight; it protects the elevator against price changes and permits it to work on a fairly dependable and rather narrow operating margin. Without the process of hedging, a change in the price of grain would make paupers of some grain merchants and millionaires of others. Because of the added risk their margins would widen.

When the price of corn was frozen, the holders of contracts

calling for the delivery of corn at some future date refused to sell, knowing that the freezing order was only temporary and any price change would have to be upward. Future prices in all markets rose to the ceilings, and trading ceased. Those who wished to sell actual corn found themselves unable to buy back their future contracts. If they sold the actual corn, they practically guaranteed themselves a loss, since the temporary ceilings would probably be lifted and they would have to buy back their future contracts at a high price. The result was that corn was frozen in the elevators.

Meanwhile the trade clamored for corn and bid prices of the lower grades up to the ceilings, so that inferior grades sold for the same prices as the better grades. Out on the farms of the Corn Belt corn was sold to other farmers or to truckers at whatever price might be agreed upon. Corn began to by-pass the regular markets, and orders were given to limit the amount of corn involved in such trades.

The trade expected that with the expiration of the temporary order, higher prices would be permitted and corn would begin to move. But the price regulators had other ideas. The cash prices of the inferior grades were lowered, and the May, July, and September future prices were raised 1, 3, and 5 cents, respectively. It was hoped that this would loosen corn and start it to move. Some corn changed hands, but future contracts soon rose to the new ceilings, and trading again ceased. Later the May and July futures were raised further, which loosened up some corn. Market supplies of corn were so short that, by the middle of June 1943, corn refinery plants were in danger of being forced to shut down. Later the industry was requested to restrict production to 85 per cent of normal. Corn refiners produce starches, syrups, sugars, and many other products which are used for food purposes and for war and civilian industries. Since the corn refiners use only about four per cent of the crop, they have

never experienced difficulty in obtaining the necessary supplies. This is the first time in half a century that the industry has been threatened by an over-all shortage. The latter part of June 1943 the administration stopped future trading in corn and commandeered a few million bushels of hedged and unhedged corn in terminal elevators. The amount was small and much of this corn had already been allotted to essential industries. Therefore, early in July 1943, the War Food Administration announced that farmers who sold corn during the period from July to August 10 would share in any increased ceiling price announced prior to October 31, 1943. Country elevators, which became instrumentalities of the government, were ordered to sell within twenty-four hours after a carload, about 1,750 bushels, had been purchased. The Congressional mail concerning corn increased from many areas until it exceeded the communications about war.

Those in charge of fixing the price of corn were beset by corn-producers, who clamored for a higher price; starch factories, which needed corn; livestockmen in deficit areas, who wanted more feed; other administrators who were committed to rigidly fixed prices; and the trade, which prayed for any kind of a price just so it could do business. The regulators must have concluded from their hectic experience that you can lead a man to market, but you can't make him sell.

If this pricing policy is continued, corn will probably stay in hiding and the net effect will be to reduce that part of the production of milk and eggs formerly produced in the East and other deficit areas from the corn of the Middle West. Such a policy would shift a part of the production of the East's milk and eggs to the West, provided the Corn Belt hogs, which were legally entitled to "patronize the black market," didn't eat the corn first. Why should the hogs, chickens, and dairy cows of the Corn Belt have been permitted to pay black-market prices for corn, while one half the hogs and

over two thirds of the chickens and dairy cows, which are outside the Corn Belt, have been excluded from patronizing it? This was not equality for the livestock, neither was it equality for man. In the horse-and-buggy days, the Southerner who loved his hominy and corn grits, despite his much publicized economic woes, at least was able to beat the hog to the corncrib. Under price ceilings, he no longer eats at the first table. One of them mournfully observed: "If you want to eat corn, you'd better be a hog."

Our Livestock Policy — Feed 'Em and Weep

The administration has not been lacking in professional advice. One of the Corn Belt's prominent agricultural economists [2] agrees with the administration's livestock expansion policy, contending that this is the time to "scrape our feed bins." At present price ratios, and with the likelihood that the feed grain crops will not be so good as in 1942, there is little question that the bottom of the bin will be scraped.

The question may be raised whether this is a propitious time to scrape the bins. In normal times farmers carry most of their surplus crops from one season to the next in the form of livestock and not in the form of grain. Under the "ever normal granary" policy, the government accumulated considerable quantities of grain in corncribs, grain bins, and elevators. At recent price ratios, the government attempted to empty the bins and had little trouble in accomplishing that end.

In time of peace a livestock-producing nation should carry minimum stocks of grain and maximum numbers of livestock from one year to the next, because of the economy of carrying food in that form. In time of war this policy should be reversed. More than the normal amount of grain and less than

[2] Schultz, T. W.: "Let's Get This Straight!" *Iowa Farm Economist,* Volume IX, Number 1–2 (January–February 1943), page 16.

the normal amount of livestock should be carried over, because the important consideration is the number of people that can be fed. The present agricultural policy has been the reverse: store grain in bins in time of peace and scrape the bins in time of war.

The nation cannot continue an agricultural policy based on one-dollar corn and fifteen-dollar hogs, when hogs are normally worth only eleven times the price of corn. There will be relatively little difficulty in maintaining the fifteen dollars for hogs as long as war lasts, but it will be difficult to prevent corn from rising above one dollar. Two of the safest predictions that one might volunteer in these uncertain times are:

(a) The price of corn will rise above one dollar per bushel, and
(b) Corn prices will rise relative to prices of hogs and other livestock and livestock products.

Corn prices may be controlled on the major open markets, thereby controlling inflation by preventing the official index numbers of wholesale prices from rising. However, such action will not prevent corn prices from rising relative to the price of livestock at the crossroads in the Corn Belt.

It is certain that livestock production must be curtailed. There simply will not be enough feed for our tremendously expanded livestock population. Under our present policy, this will be realized when it is found that the grain bins are empty. The liquidation of livestock will be abrupt and disorderly.

General recognition of the impracticality of further livestock expansion will be delayed, however, until the hog, the hen, and the dairy cow have literally "eaten themselves out of house and home." Even after the impossibility of continued expansion is recognized by thoughtful folks, there is little that will be done about it until the damage has occurred. The nation has been thoroughly sold on the livestock

program. The consumer wants all the livestock products he can get, and the nutritionists have told him he should have them. Livestockmen are enjoying their place in the sun and can outvote the cash-grain farmers. OPA is for low corn prices, unwittingly thinking that it will help prevent inflation. Being popular with everybody, the livestock expansion program is popular with the administration. The likelihood is that the nation will keep pouring its feed reserves into livestock until they are gone. Our livestock policy, like our policy on farm labor, crop acreage, and machinery, will be changed the hard way.

Livestock Expansion Cannot Continue

The combination of rising prices, advancing purchasing power, increasing numbers, unusually good pastures, abundant supplies of roughage and grains for winter feed, and the unusually favorable feed-price ratios extending over several years for all the important types of livestock is unparalleled in the agricultural history of the United States. Much of this pyramid will topple like a house of cards during 1943 or 1944 unless a benevolent Providence provides an abundant supply of moisture properly distributed throughout the growing season for both pastures and feed crops for all the important pasture and crop-producing areas of the United States. The weatherman will name the date of the liquidation. The poorer the weather, the quicker the liquidation.

Such liquidation will be accompanied by an immediate increase in meat supplies. By many people this will be considered an increase in production and a cause for rejoicing. The increased supplies will not be due to increased production; they will be due to liquidation of the farmers' "ever normal granaries," livestock on the hoof. The increasing supplies will be the forerunner of decreasing production.

Our livestock policy contains the remnants of a scarcity

corn program and an animal expansion policy which cannot be maintained. It looks both backward and forward, and not very far forward.

Impending Livestock Liquidation

The corn-price problem is the administration's worst headache as far as livestock is concerned. The numbers of hogs and chickens are expanding rapidly. Reports from the Corn Belt indicate twenty-five per cent more sows farrowed in the spring of 1943 than the previous year. Apparently the greatest expansion in hog production occurred on cash-grain farms of the Corn Belt rather than on their typical hog farms.[3] In that event, market supplies of corn will be curtailed much more than the declining stocks or increasing disappearance would indicate. Since the cash-grain farmer was forced to sell his corn at a low fixed price on the regular market, he kept the corn and expanded hogs, which returned him more.

Normally the farm carry-over, which is in the hands of cash-grain farmers rather than livestockmen, provided the market with supplies of corn during September, October, and November. Since many cash-grain farmers are now hog-producers they will be loath to release their usual supplies except at much higher prices. Deficit areas outside the Corn Belt will suffer the most.

It has been estimated that 1943 fall farrowing will be about 25 per cent over a year ago. The War Food Administration recommended that the increase be limited to 15 per cent, but another arm of the government, through price, recommends that farmers increase hog production just as much as possible. Experience has shown that price is a more potent force than exhortation. To prevent hoarding, the government called outstanding corn loans, prevented corn-proces-

[3] Since they lacked equipment, lumber yards in these districts were busy making portable hog houses.

sors from having more than thirty days' supply, and raised future prices to release hedged grain. The government is doing everything possible to encourage the consumption of grain when the policy should be to encourage farmers to feed less and to hoard grain for future use.

As long as feed supplies increase, it is not difficult to set prices of feed in favor of livestock expansion. As the feed supply per animal unit decreases, normally the ratio of livestock prices to feed would narrow by feed prices rising and/or by livestock prices falling. This would automatically ration, with a reasonable degree of equity, the diminishing supplies of feed to the various classes of livestock in the best interests of the nation. Conditions are not normal however. Huge government purchases of livestock products for Lend-Lease and the armed forces tend to prevent adjustment by a downward revision of prices of livestock.

An adjustment could be brought about by a sharp rise in feed prices. Such an advance would undoubtedly be interpreted as inflationary, contrary to the "stabilization" order of the fall of 1942 and the "hold-the-line" order of the following spring. Since the government promised our allies huge amounts of highly prized foods and promised the citizens stable prices, the nation was confronted with a serious dilemma. It was politically inexpedient to attempt either to lower the prices of livestock or to raise the price of corn. This dilemma was well recognized by thoughtful people throughout the nation, by the United States Department of Agriculture, by the Office of Price Administration, and by the Office of Economic Stabilization, but everyone was loath to do anything to correct it.

As long as no action is taken, the only course the farmer has is to feed up all the grain just as rapidly as possible and then liquidate livestock just as disorderly as possible. The degree of disorder will depend on how much black-market

operations push market prices for corn above the ceiling prices.

If price-fixing programs are to be tried, they should be accompanied by rationing just as soon as shortages appear on the horizon. One way in which the government could ration corn would be to commandeer the farm stocks and pay the farmers $1.50 per bushel, say, and distribute it to livestock-producers and industry at, say, $1.00 per bushel. This would prevent the official index numbers of prices, the usual measure of inflation, from rising. If the rationing is not equitable, protest will immediately arise. Such a rationing program would require a reduction in certain types of livestock in certain sections of the country.

Under normal conditions a shortage of feed results in a more rapid liquidation of heavy grain-consumers, hogs and chickens, than of light grain-consumers. The great drought of 1934 reduced the production of corn and oats 45 per cent. The number of hogs declined 35 per cent; chickens, 11 per cent; and dairy cows, 1 per cent. The liquidation was not uniform for types of livestock or for different areas. In the Western Corn Belt, hogs, chickens, and beef cattle declined more than for the rest of the United States. Dairy cattle declined less than any other type of livestock, but even in the Western Corn Belt dairy cattle declined more rapidly than in any other area.

When expansion occurred, the rates were not uniform as to the type of livestock or the area. During recent years the most rapid expansion occurred for heavy grain-consumers in the Western Corn Belt states. From 1938 to 1943 hog numbers doubled in those states.

Administrative Liquidation

If prices were free to fluctuate, feed would be automatically rationed so that the most rapid liquidation of livestock

would occur for hogs, followed by chickens, beef cattle, dairy calves and heifers, and dairy cows in about that order. Furthermore, liquidation would be heaviest in the Western Corn Belt states and least in the dairy areas.

When administrative action is substituted for freely fluctuating prices, the same principles should be followed. Failure to make prompt adjustment in the hog-corn ratio will only increase the severity of the resulting disaster. The same general principles apply to prices of some of the other livestock and livestock products, but the hog-corn ratio is so far out of line and so important that it deserves first consideration at this time.

Under administrative action, it is difficult to devise a policy that would meet the tests of "equality of sacrifice," of "national interest," and of "political expediency."

"Equality of sacrifice" would call for a 10-, 20-, or 30-percent reduction in the numbers of all classes of livestock for all parts of the nation.

The "national interest" would call for a sharp reduction in heavy grain-consumers in all parts of the United States. This is exactly what happened in England. The number of hogs and poultry was reduced. Denmark reduced the number of hogs 50 per cent, but cattle only 13 per cent. National interest would call for a more rapid reduction of hogs in the Western Corn Belt than in other areas. Corn Belt hogs eat more grain than hogs of other areas, many of which are scavengers. National interest would call for a smaller reduction in cattle, which are largely fed on pasture and roughages unfit for human consumption. National interest would call for a more rapid reduction in the number of beef cattle than dairy cattle, because the dairy cow is the more efficient producer. Therefore there should be a minimum liquidation of livestock in predominantly dairy areas like Wisconsin, New York, New England, and the like. If there were any differ-

ences in the rates of liquidation of dairy cattle, the least liquidation should occur in those areas producing milk for direct consumption.

Administrators of an agricultural policy cannot ignore "political expediency." In fact, political strategy frequently overwhelms administrative tactics. In terms of feed and labor, hogs probably have been the most profitable type of livestock. The greatest expansion has occurred in the production of hogs in the Western Corn Belt states. If it were proposed that these producers liquidate their hogs more than other parts of the nation, or that their profitable hogs be liquidated more than other types of livestock, their opposition would echo throughout the nation. Political expediency would result in a type of liquidation that would be a compromise between "equality of sacrifice" and "national interest." Such administrative strategy would result in a greater liquidation of livestock in feed-deficit areas than would be the case under a freely fluctuating price structure. Hens and dairy cows, although very numerous, have few votes and could not withstand the tactics of hogs and beef cattle.

Freely fluctuating prices would automatically ration the diminishing supplies of feed and thereby reduce the different classes of livestock in the various areas of the United States in the best interests of the nation, with a minimum of administrative cost and of friction between all concerned.

CHAPTER 6

SHOCK ABSORBERS AND EQUALIZERS IN THE FOOD SUPPLY

PRODUCTION varies widely within the year and between years, whereas consumption is stable. Shock absorbers match this variable production with the stable requirements. In time of war the necessity for adjustment is far greater since many factors in the food picture change. Food production declines, requirements increase, transportation difficulties mount, and needs cannot be accurately anticipated. Shock absorbers are then especially needed to match erratic production with shifting requirements.

Adjustments are of several kinds. Foods which are produced seasonally must be made available throughout the year. Food supplies must somehow be made available in years of poor crops. Finally, there must be sufficient flexibility in the food supply to take care of long-time changes in population.

It is obvious that there is considerable flexibility in the food supply. Japan feeds 277 people per hundred tillable

acres; China, 216; India, 126; and the United States,[1] only 30.

There are four main types of adjustment:

1. that made possible by cold storage, warehouses, commercial elevators, and farm storage.
2. food in the form of livestock on the hoof.
3. equalization through imports and exports.
4. diversion of food to and from industrial uses.

Current stocks of food adjust our day-to-day and month-to-month needs and supplies.

Livestock adjusts our food supplies over periods of a year or two and over decades.

Imports and exports adjust food supplies from generation to generation, from year to year, and from month to month.

Diversion of products between food and industry also adjusts our food supplies over long and short periods of time.

Seasonal Stocks Adjust Short-Time Changes

Normally more butter is produced in the spring and summer than is consumed. As a result the nation developed cold storages to carry butter from these seasons of surplus to the seasons of deficit production. This equalizes the consumer's supply and his consumption of butter. The same general principles hold for other foods.

Nation Lives Largely from Hand to Mouth

One who sees pictures of the large number of beef carcasses in the meat cooler of a modern packing plant or the tremendous stocks of canned goods in the warehouses of a nation-wide food distributor might conclude that the nation could be fed indefinitely from its accumulated stocks of food. It is popularly believed that all the available stocks are surpluses. These normal carry-overs are not surpluses. Because produc-

[1] Mukerjee, R.: *Food Planning for Four Hundred Millions* (London: Macmillan and Co.; 1938), page 6.

tion is seasonal, and because of inevitable fluctuations in the weather, it is always desirable to have more food available than is currently consumed. This is particularly needed in wartime.

Only a small proportion of the crop is carried from one year to another. There are two good reasons for this: food supplies are generally perishable, and it is expensive to carry them from one crop year to the next. The nation lives largely from hand to mouth and depends upon current production for the bulk of its food.

One method of measuring the size of our stocks of food would be to compare them with our consumption. In 1939 the consumption of food in the United States aggregated 93 billion pounds of dry matter. The stocks of food exclusive of wheat at the end of the 1939 season were less than 6 billion pounds. These stocks were only about six per cent of the annual consumption, representing only about twenty-two days' supply.

In 1939 the nation consumed over 4 billion pounds of fats and oils. Stocks at the end of the year were sufficient for about ninety days. The same year the nation consumed more than 11 billion pounds of dry matter in the form of eggs and dairy products. Stocks of these products were sufficient for only six days' consumption. The stocks of fresh and cured meats and poultry were 204 million pounds. To the layman this sounds like an enormous amount, but it was equivalent to only eight days' consumption. There were fifty-two days' supply of wheat and only twenty-two days' supply of all other foods, such as meat, sugar, dairy products, and the like. This was the situation when the surplus idea was rampant.

These stocks were sufficiently large to be important in equalizing the month-to-month and season-to-season variations in production and requirements. Obviously, however,

such stocks of food represent only a small part of our Lend-Lease exports and an even smaller part of domestic consumption. Therefore the nation must look to current production for its own food supply or for any that it expects to give away.

Food Stored in Form of Livestock

Since the problem of unstable production cannot be met by storing crops, it must be met in some other way. This is done by storing food in the form of livestock on the hoof. Livestock serves to condense, to refine, and to store large quantities of cheap and bulky foods into small quantities of concentrated and expensive food, to be made available six months to two or three years later. Livestock numbers are increased after abundant crops and are liquidated in years of short supplies. Since time immemorial, without recognition and without subsidy, farmers have operated an "ever normal" granary in the form of livestock on the hoof. Livestock is usually the only feasible way of carrying excess food. In this form the food is immediately available in time of need.

There is no cheap way of carrying a surplus of food from one year to the next. Livestock on the hoof might appear to some folks to be a cheap way of carrying food. To carry much pork on the back of a hog after it reaches nine months of age is an expensive process. To carry much beef on the back of a steer after he is two years old, or to carry that type of beef for which New York and other dairy states are famous on the backs of old canner cows after they are eight or nine years old, is also expensive. Carrying food supplies in the form of livestock on the hoof beyond the period of efficient growth is not a cheap way of equalizing the food supply. The animals might be killed and stored in refrigerators, but there is not sufficient cold storage. Since we do not have sufficient

storage to hold over much grain, storing excess crops in the form of livestock is the only practical way. If it can be afforded, it is a pleasing way to insure against food shortages.

Livestock Serves as a Shock Absorber

During the drought of 1934 crop production in the United States fell 24 per cent and there was not enough food for man and beast. Man ate what he wanted and ruthlessly adjusted the livestock to the feed that remained.

With the good crops of 1937 to 1942, man ate what he wanted and increased the numbers of livestock in order to keep the remainder from going to waste.

Countries which have large numbers of livestock seldom suffer from lack of food, for the livestock serves as a shock absorber. If the supply of food is sharply curtailed, the livestock is slaughtered, adding to food supplies in two ways. First, the livestock is used as food directly, and second, the slaughter of the livestock releases for human consumption food that would otherwise have been fed to the livestock.

At the present time the European livestock population has been greatly reduced. The food strategy in occupied areas during this and all other major wars has been to liquidate the livestock. This is generally conceived to be a shortsighted policy. It is believed that present stocks of food are thus squandered at the expense of possible future supplies. In short, we accuse the invaders of killing the goose that lays the golden egg. On the contrary, however, the slaughter of livestock is a conservation measure. In so far as the animals consume grain, potatoes, and other root crops which otherwise might be fed to human beings, the animals are a luxury to be quickly disposed of like other luxuries in time of war. England and Denmark reduced the numbers of hogs more than cattle.

The high nutritive value of livestock products is not due

in any large degree to the nutrients which the livestock have added; rather it is due to the fact that in the process of building a nutritious human food, large amounts of less nutritious food have been, in a sense, wasted. The production of crops is a creative process so far as human food is concerned. The production of livestock products from grain is primarily a refining and condensing, not a creative process.

Generally speaking, poor crops mean famine for man or beast unless sufficient food can be imported from other areas. If a country has large amounts of livestock, it is the animals that would starve unless they were killed before they starved. In a country with little livestock, human starvation follows immediately on the heels of poor crops.

Europe is a heavily populated area with large numbers of animals. Normally a poor crop in Europe does not mean famine, for imports and livestock serve as shock absorbers. A part of the livestock population is slaughtered and eaten together with the grain the livestock would have eaten. China, however, is a heavily populated area with little livestock. A poor crop in China means starvation for many because there is little livestock and hence little flexibility in the food supply. The problem is also complicated by inadequate transportation.

One might conclude that the problem of famine could easily be met in all countries merely by keeping large numbers of livestock. It is impossible, however, to maintain a large livestock population in a country with a human population that is large relative to its crop production. Such a country is always near the borderline of starvation and cannot spare the food required to maintain livestock. Of course, a country with a small area of crops could maintain a large livestock population if it had some other source of income, such as diamond mines, with which to import grain for the livestock.

Thanks to its high standard of living, which allows huge amounts of grain to be fed to livestock, and to the large numbers of livestock available, the United States is now in a favorable position to make sizable adjustments in her food supply.

Human Population Tends to Outrun Food Supply

That population tends to outrun the food supply is well illustrated from our experience in this country. A rapid expansion in food production and population began when the Middle West was opened up. From about the middle to the end of the nineteenth century the production of food crops for man and beast increased more rapidly than population. From about 1900 to about 1914 population increased at about the same rate that the food supply increased, and since that time food production has continued to rise, but the advance has not kept pace with our expanding numbers of food-consumers.

Stated another way, prior to 1900 per capita food production rose; for the first fifteen years of this century declined slightly; and for the past quarter of a century continued to decline, but at a more rapid rate (table 1).

During all these years the per capita consumption of food has changed but little. Since the internal combustion engine reduced the physical effort required of the average man, it may have reduced per capita food consumption somewhat, but the amount of reduction can easily be exaggerated.

Stable consumption has been adjusted to a downward trend in per capita crop production in two ways. Our exports of food have declined and food imports have risen. In addition, the type of food we are consuming has changed. In earlier years, when crop production was large relative to population, we used food lavishly by converting edible grain into meat. As crop production declined relative to the popu-

lation, we ate less meat. Over long periods of time, the amount of grain fed to livestock tends to decline as population increases. This is one of the important equalizers in a nation's food supply.

Foreign Trade Equalizes Food Supplies

Prior to 1900 food production increased and exports rose (table 1). From about 1900 to the outbreak of World War I the production of food increased slightly less rapidly than population, and exports started to decline. Following World War I, food production did not keep pace with our expanding population and there was a drastic decline in our exports.

From 1923 to the outbreak of World War II the nation consumed more food than it produced, and a net import balance was necessary to equalize our food supplies (figure 1, page 153).

TABLE 1. CHANGES IN PER CAPITA PRODUCTION OF FOOD AND FEED CROPS AND FOOD EXPORTS, 1866 TO 1939

Period	General picture		Mathematical picture, per cent change	
	Production	Exports	Production	Exports
1866 to 1897	rose	rose	+ 1.18	+ 3.54
1898 to 1914	declined slightly	declined rapidly	− 0.26	− 6.80
1915 to 1939	declined	declined rapidly	− 1.47	− 7.19

With Rising Population, Our Exports Decline

As the nation's population has risen, the quantity of various foodstuffs available for export has dwindled. The proportion of the cottonseed-oil production that was exported declined from about fifty per cent in 1900 to practically noth-

ing during the twenties. During the past quarter of a century the nation has produced ten to twelve pounds of cottonseed oil per capita. With rising consumption, our per capita net exports of cottonseed oil were converted into net imports.

During 1935, 1936, and 1937 about three fourths of the world's exports of cottonseed oil were imported by the United States. These imports averaged 10 per cent of our production. In other words, our consumption was 110 per cent of our production.

Some forty or fifty years ago, the nation produced about 80 pounds of pork per capita, and in recent years 60 to 70 pounds. With relatively stable consumption, the proportion exported has declined. During the droughts of the thirties both production and consumption declined, but production declined more than consumption, and in 1937 imports exceeded exports. The per capita production and consumption of beef have declined, but consumption has declined less than production. Formerly we were an exporter of beef; now we are an importer. The production of wheat has declined from eight to six bushels per capita. Formerly we exported almost a third of our wheat crop. In recent years exports have been negligible.

The marvelous production of food during the past few years has enabled the country to expand its livestock and change from a net importer of food to a net exporter.

The nation cannot obtain large amounts of food from current stocks or livestock. Neither can imports be substantially increased. The only big reserve is of wheat and the grain fed to livestock.

Fats for Soap, Paint, or Food

There is still another shock absorber in the food supply: the use as food of articles frequently utilized in industry. Wheat may be used for making industrial alcohol as well as

bread. Soybeans may be used for paint and plastics as well as for cooking fat. Lard may go into the soap vat. Through the price system we determined how much of these commodities would be used by industry. If food was scarce, food-consumers bid up the prices of wheat, cottonseed oil, soybean oil, or similar products, choking off the supplies for the industrial users.

The food-consumers, urged on by hunger, outbid the manufacturers.

Lend-Lease a Shock Absorber

Food has always been an economic problem. It is now becoming a political problem as well. When economic and political interests clash, the short-run political interests usually win. How the conflicting interests of our allies, the occupied territories, and the American voters will be equated during the even-numbered years remains to be seen.

Population Always Equals Food Supply

The human population and the food supply will always be in adjustment. If the supply of food is ample, the excess will be exported or converted into concentrated livestock products, and all will be used. If the food supply is decreased, livestock production will be reduced, more grain will be eaten by man, and again all will be used. If the food supply is decreased below the subsistence level and imports are not possible, the harsh process of starvation will adjust population to the food supply.

About a hundred and fifty years ago Malthus observed that the population tends to outrun the food supply. Some say he could not foresee the improvements in the techniques of food production, the possibilities of shifts in the type of food consumed, and the voluntary restrictions on the growth of population, but the long-range soundness of his general conclusion is inescapable.

The Nation Has Changed Its Policy on Food Supplies

Formerly the national policy on food supplies was to carry stocks of grain in the warehouses, butter in the cold-storage places, and meat in the refrigerators that would be adequate to take care of day-to-day and month-to-month changes in production and requirements. The farmer's ever normal granary, livestock, was an important shock absorber in years of large or small crops. When we had a surplus of food we exported it, and when there was a deficit we imported.

During the Hoover regime the Farm Board accumulated huge stocks of wheat in an effort to halt the decline in prices. One of the first acts of the present administration was to attack the Farm Board and liquidate its stocks of wheat. A little later the New Deal liquidated the stocks of pigs. Still later it accepted the principles of the Farm Board and set up the ever normal granary. Steel bins were substituted for the farmers' ever normal granary, livestock. This was accomplished by a simple process. The farmer was loaned more for his grain than it would bring in the open market. This program retarded exports and retarded the normal feeding of grain to livestock.

With its "ever normal" granary the nation underwrote the storage of grain as a solution to the problem of unstable crop production. Until recently its books showed a net loss. It was supposedly patterned after the experience of Joseph in Egypt, who stored grain during the seven years of plenty for use during the seven years of famine which followed. We read, however, that Joseph had divine guidance. Whether Joseph also had a blank check from Pharaoh and how, in a warm climate, he succeeded in keeping the weevils out of the wheat for seven years are details not recorded in Holy Writ.

Since Hoover's Farm Board did not stem the world col-

lapse in wheat prices, the first act of the New Deal was to liquidate this ever normal granary. It was an unfortunate venture, and therefore was considered unwise. The present administration's storage of "surplus" grain was fortunate in that it provided large supplies of grain at the outset of the war. Since it was fortunate, it has been considered wise. Why was it unwise at one time and wise at another? The unpredictable fortunes of war change the point of view of some. Fundamentally, there was no difference between the two storage policies.

During the Third New Deal the policy on food supplies was reversed. To prevent inflation the nation set ceilings on prices. This caused the current stocks of butter and other products to be liquidated more rapidly than normal.

The feeding of wheat to livestock was encouraged. On January 29, 1942 the Commodity Credit Corporation announced the terms and conditions of the feed-wheat program, designed to release 100 million bushels of wheat for feeding purposes. By July 1942 about 38 million bushels were sold, when Congress and the President approved the sale of 125 million bushels of wheat at a price not less than eighty-five per cent of the parity price for corn. This wheat was fed by February 1943. In March 1943 Congress approved the sale of another 100 million bushels at the parity price of corn. In the middle of June 1943 the President authorized the War Food Administration to make 50 million bushels of wheat available for livestock and poultry to keep corn processing plants supplied with corn for the production of human food and munitions. The government paid relatively high prices to accumulate the stocks of wheat which are now being sold at relatively low prices to encourage the feeding of livestock.

Rubber from Wheat

The principal raw materials used in the production of synthetic rubber are alcohol and petroleum. The program calls for the production of over two thirds of a million tons of butadiene. About two thirds of this is to be produced from petroleum and one third from alcohol. This would require the equivalent of about 10 per cent of our annual production of wheat and 0.2 per cent of the petroleum. Although both petroleum and food are scarce, the rubber program has the greater effect on food and particularly grain. If all the butadiene synthetic rubber were made from grain, it would be equivalent to one third of the wheat, whereas if it were all produced from petroleum, it would represent only 0.3 per cent of the production.

The rubber-from-wheat program is another hangover from the surplus-food era. It will change but will be changed the hard way.[2]

Stocks of Food Are Running Dangerously Low

The only food supplies for which there are large stocks are wheat and livestock on the hoof. Of the two, wheat will feed the more people; it will feed seven times as many people as wheat than as the meat that might be produced from it.

The nation has been squandering its stock pile of wheat, the one optimistic spot in the food picture.

Synthetic rubber can be produced from petroleum or from grain alcohol. Someone should weigh the relative supplies and requirements for oil and grain. Both are apparently in short supply, and the requirements on both are high. It would not be surprising if we were shorter on food than on oil.

[2] It has been estimated that 150,000,000 bushels of wheat will be used for industrial alcohol during 1943–4.

There were reports current in the spring of 1943 that the government had halted construction on four alcohol-from-grain plants.

Our present policy is to encourage the feeding of wheat to maintain the production of livestock. This is an expensive and shortsighted policy. If there ever was a time in the nation's history when there should be large stocks of wheat and when such stocks should be increased, it is the present. A big supply of wheat is excellent insurance against droughts that are possible even though we hope that production will be abundant. Later, rehabilitation will make heavy demands on our stocks of all foods, and will depend particularly upon wheat, the staff of life.

The present policy is to feed the wheat reserves in an effort to keep livestock production at high levels, a policy doomed to failure despite our best efforts to prod it along. The inevitable result will be first the depletion of our stocks of wheat and then the liquidation of our livestock.

Sooner or later the nation will be forced to choose among grain for rubber, grain for alcohol, grain for livestock, grain for Lend-Lease, and grain for civilian consumption. There will not be enough to go around.

CHAPTER 7

CONSUMPTION

Food consumption is a compromise between what we can afford, what we like, and what we ought to have, in about that order.

Habit Plays an Important Role

Man is a creature of habit. This applies to his eating as well as to his other activities. Vermonters like apple pie for breakfast. Traditionally, New Englanders want hot baked beans for Saturday night and cold beans Sunday morning. In other parts of the country one or two meals of beans a month are too many. Year after year a man will eat the same breakfast, but will keep his wife on needles and pins to vary the main meal.

The Scandinavian eats five meals a day and never lets the coffee pot get cold. The American office worker lives on two lunches, one meal, and innumerable bottles of Coca-Cola. The Irish and the French both live on potatoes, but the Irish want them boiled and the French want them fried. Most people demand variety in their meals, but the Eskimo is happy with his blubber and the Arab with his dates.

Religion affects our food habits. The people of India will

not eat beef, and orthodox Jews retain their antipathy to pork.

Part of what we call food habits are more than mere habits; they are the evolutionary product of hundreds of years of dietary experiment, with survival as the reward and starvation as the penalty for failure. By this method man has adapted his diet to the whims of the environment in which he lives. This is the explanation for the Scotchman's dependence upon oatmeal and the Mexican's reliance upon cornbread, beans, and hot pepper.

For many years the consumer has been warned to substitute whole-wheat bread for white bread, and unpolished rice for polished. This may have been sound scientific advice, but man has not paid heed. Americans are not the only ones who resist change. When Chinese students come to the United States, they find difficulty in shifting from a vegetarian diet of rice, soybeans, and red-hot tea to a diet of meat, potatoes, and ice-cold milk. The resistance to change is so strong that it lasts not merely for generations, but for centuries. So far as food habits are concerned, folks cannot be pushed around much. Man is not the only animal that resists change. The Corn Belt farmer knows that it takes time to teach a grass-reared steer to eat corn. But someone has pointed out that animals show greater willingness to consume new foods presented to them than does man.

Americans are the best-fed people in the world. From this, one might conclude that the quality of our food could be much reduced in the war emergency. Biologically this is true, but politically it is difficult. The food habits of the nation have become so well established that any reduction is considered a privation. Food habits may be gradually changed by education. They can be suddenly changed only by force or by near starvation.

Consumption Is Stable

The first fact that impresses the casual observer is the variability in food consumption. Further investigation reveals that food consumption is really remarkably stable.

Man requires food for body maintenance, growth, and physical effort. The amount of food required for the maintenance and growth of our population is stable. The amount required to supply energy varies somewhat with physical effort and age. The total variation in the average amount of food consumed by each person in our population is small.

Consumption must be on a day-to-day basis. A man must have a relatively uniform amount of food three times a day, 365 days a year. The body can store very little food. It can store considerable vitamin A and some vitamin D, and only a limited amount of calories. Some excess calories may be stored on the waistline in the form of fat. This accumulated fat may be used for maintenance or energy, but it is a poor and limited substitute for the current intake of food. It supplies little but calories. A pound of fat will supply a man his calories for a little over a day; and ten pounds will be a greater source of comment than of energy.

The Indians' interpretation of the hereafter was a happy hunting ground. The importance of a dependable supply of food was well stated by one who had seen men in all stages of starvation in the Yukon.[1] "If a man misses his meals one day, he will lie. If he misses his meals two days, he will steal. If he misses his meals three days, he will kill."

Range between Feasting and Fasting Is Narrow

The lower limit of the amount of food that is required by a human being is the least amount that will sustain life. The

[1] Smith, J. R.: *The World's Food Resources* (New York: Henry Holt and Co.; 1919), page 3.

upper limit is the amount of food that his digestive tract can handle. The range between these two extremes is narrower than most folks realize.

A certain amount of food is essential. If it is not supplied in one form, it must be obtained in another or life will cease. On the other hand, there are rather definite upper limits to the amount of food that can be eaten. The human stomach holds about three pints, and food moves through the alimentary canal at the rate of about six inches per hour. An effort to overload the stomach results merely in indigestion.

Bread the Staff of Life

The American picks over almost one ton of food a year. Over half of this is water in one form or another; he eats about 680 pounds of dry matter. Grains represent 41 per cent of the total dry matter (table 1). Twenty-three per cent of the dry matter of the diet is represented by the highly prized meats and dairy and poultry products. Agitation regarding the food shortage in the spring of 1943 was concerned mainly with these highly prized foods.

Grain represents about 88 per cent of the Chinese diet, whereas it represents about 40 per cent of ours. Bread is truly the staff of life, though the American consumer leans upon it less heavily than do the consumers of other lands. The so-called highly prized foods, meat, eggs, and dairy products, represent only 1 per cent of the Chinese diet, compared with 23 per cent for the American.

Do We Eat to Live or Live to Eat?

If we ate merely to live, we would figure out a scientific diet, as a farmer does for his hogs and cattle, and stick to it. Competition forces the farmer to see to it that his animals eat to live rather than live to eat. The preparing of attractive dishes, variations in the diet, and the selection of

tasty foods are evidence that man lives to eat as well as eats to live.

The junior author holds that in time of war one should not indulge in unneeded pleasures, and that the nation should plan its food strategy on the basis of eating to live rather than living to eat. The senior author holds that since civilians have been deprived of so many of their other pleasures, they should get a higher proportion of their pleasure from eating.

TABLE 1. CIVILIAN CONSUMPTION OF VARIOUS FOODS PER CAPITA, 1935–9

Product	Pounds		Per cent	
	Wet	Dry	Wet	Dry
Meats	126	58	8	8
Poultry	59	19	3	3
Dairy	393	79	24	12
Fats and oils *	32	32	2	5
Fish	13	7	1	1
Fruits	206	34	12	5
Vegetables	414	74	25	11
Sugar	97	97	6	14
Grains	315	278	19	41
Total	1,655	678	100	100

* Excluding butter.

The difference is probably one of age as well as point of view. Youth finds greatest pleasure in all forms of physical effort, begrudging the time spent for eating and sleeping. Older people are less able to indulge in physical activity and derive more pleasure from the pleasant sensations of seeing, smelling, and consuming delicious food. The senior author confesses that his judgment may be biased because for more than twenty-five years he has been wedded to "the best cook west of the Hudson," who serves food so attractively that it would raise the eyebrows of Oscar of the Waldorf. To reduce

the art of cooking as he knows it to the scientific maintenance ration of a hog fills him with dismay.

Is There an Ill-Fed Third?

Some people think that the economic royalists and the princes of privilege who live on the Park Avenues and the Gold Coasts of New York and Chicago eat more food than the downtrodden third. Whenever one of the downtrodden third sees a picture, conceived in Hollywood, of the banquet table of a Gold Coaster, this conclusion is strongly reinforced.

Furthermore, students of consumer habits have made statistical studies of the question and almost invariably report that the wealthy eat more food than the poor, and conclude therefore that the poor get too little. Many of these studies are based on the volume of dollar purchases. Unquestionably the wealthy spend more dollars for food than do the poor, but they buy more cellophane, more delivery and other services; and strangely enough, they frequently require more credit. It does not follow from dollar comparisons that they eat more actual food.

Some studies, being more realistic, concern themselves with the volume of purchases in pounds rather than in dollars. Here again it usually appears that the wealthy buy more actual food than the poor. But still it cannot be concluded that the rich eat more than the poor. Much of this extra food is fed to the cook, the chauffeur, or the poor relatives. Some is trimmed away or left on the plate. The final answer to this controversial question awaits the ambitious researcher who will select one hundred of the wealthy and one hundred of the downtrodden third, weigh them before and after each meal for a year, and add up his results. He may well find that the rich eat less than the poor, since they are less active.

Both Rich and Poor Fill Their Stomachs

The difference between the diet of the poor and the diet of the wealthy is more in the type of food eaten than in the amount. The wealthy consume large amounts of expensive, out-of-season types of food. Choice cuts of meat, fresh fruits out of season, and rare dishes of all kinds find their way to the table of the wealthy. In fact, the diet of the wealthy is more remarkable for its taste, its expensiveness, its variety, and its attractiveness than for the nourishment and energy it provides.

The poor, on the other hand, eat staple foods in season. Their diet consists of hamburger instead of sirloin, apples in season rather than strawberries out of season, bread instead of an occasional cracker, eggs instead of caviar, and potatoes rather than avocados. The downtrodden third, at heavy work, consume more calories than the well-to-do, who are usually engaged in sedentary occupations. Both fill their stomachs, the poor with many calories and little water; the rich with few calories and much water. The so-called rich eat their water, and the so-called poor drink it.

Poor Man's Diet Is Ample and Economical

These differences have given rise to much concern regarding the adequacy of the poor man's diet. The three-M diet of the South — meat, meal, and molasses — is frequently charged with being inadequate. It is probably more adequate, and certainly more economical, than it is interesting. The diet of cheap meat, bread, cabbage, and potatoes consumed by the industrial worker is sharply criticized by nutritionists. But this group continues to supply more than its share of the nation's football heroes, as a glance at the names and addresses of most of the teams will show.

Rich Man, too, Has a Food Problem

The Main Liners of Philadelphia and the Gold Coasters of Chicago have no politicians to sponsor their food problem. Their problem is quite different, and in a certain sense more serious than that of the poor. They wish that they had stomachs lined with zinc so they could eat hot dogs, greasy fried potatoes, pancakes and sausages in the quantities and with the zest of the downtrodden third.

What Is an Adequate Diet?

A farmer once defined a fair price as one which was ten per cent higher than he could get. Similarly, an adequate diet probably is ten per cent better than that which one now receives.

The chief difficulty in a discussion of the adequacy of diet is the inability to agree on some basis of comparison. Various minimum requirements have been proposed by nutritionists and dietitians. For some thousands of years, however, the Chinese have been living and breeding on a food level substantially below the "nutritional minimum." The "adequacy of diet" is a relative term. By comparison with the diet of his employer, the diet of a city laborer is inadequate. But by comparison with the diet of a southern European, the diet of the American laborer is more than adequate; it is a feast fit for a king.

The adaptability of the human body to varying diets is amazing to those who have become accustomed to any particular diet. It is difficult for the American reared on roast beef, pasteurized milk, orange juice, and yeast tablets to believe that man can survive on the Eskimo's raw blubber and frozen fish, the Irishman's potato, the Scotchman's oatmeal, the Arab's dates, or the rice of the Chinese. They live on it,

they thrive on it, down through the ages they have reproduced themselves on it, and they love it.

Nutrition and Appetite Are Confused

Perhaps a part of the misunderstanding comes about because we decline to divorce the science of nutrition from the pleasures of appetite. The consumer wants tasty food, and the body needs nutrition. This confusion has caused nutrition to be sometimes a science, sometimes a crusade, and always the source of a good argument.

A diet of blubber and frozen fish may be abhorrent to most of us and yet be adequate. Thinking is influenced by emotions as well as by facts. The nutritionists report the facts regarding carbohydrates, proteins, fats, carotene, thiamin, ascorbic acid, iron, riboflavin, niacin, pyridoxine, pantothenic acid, amino acids, and fatty acids. We must know their relative effects under varying combinations of temperature, age, weight, physical effort, nervousness, metabolism, and many other variables of life. This is an enormous problem about which little is known. It would appear that nutrition, like economics and medicine, deals with a wide variety of highly complex variables, which can combine themselves in so many ways that it is difficult to know what is the truth. The problem is further influenced by emotions. If the facts do not agree with one's emotions, the facts are held to be wrong.

Even though progress has been slow, it will be more rapid when the facts are well established. It did not take the Wisconsin dairyman, the Iowa hog-producer, and the New York poultryman long to eliminate the "dead hand of the past" and recognize that there was something to the science of feeding animals and act accordingly. When man gets the facts and eliminates some of the emotions, he will recognize that

there is something to the science of human nutrition, and then enormous strides will be made.

Improvement in nutrition is being made, as is witnessed by the increasing average stature of the American people. But with each improvement the goals are pushed further forward, as perhaps they should be. The important thing to be remembered is that while we may be far short of the crusaders' nutritional goals, we still average well above a scientific minimum and are making progress.

An "adequate" diet is one slightly better than most of us now have, and it is generally concluded that the "absolute minimum" is a diet about like or slightly inferior to the one we now enjoy.

National Policy Shifts from Price Tag to Ticket

For a great many years the policy was to eat what one pleased and hope that it was good for him.

National policy on food consumption is of recent origin. For only a few years has much attention been given to a policy regarding the consumption of food. In those few years the nation has run rapidly through the successive stages of education, persuasion, coercion, and finally rationing.

Food Fads Arise from Fact and Fancy

During the past quarter of a century great scientific advances have been made in the matter of feeding beast and man. The agricultural experiment stations have made rapid advances in the efficient and economical feeding of livestock. The science of human nutrition followed. Vitamin A was discovered and milk was rediscovered. Milk was once baby food; now a he-man can drink it and be respected. Other vitamins were discovered, and hormones became known. The white rat and the guinea pig moved from the pet shop to the laboratory.

The public was poorly prepared to evaluate these nutritional discoveries or to incorporate them into the diet. The distance between the scientist and millions of consumers is far greater than folks think and the food expert is willing to admit. Consequently a whole crop of food fads arose, some of which had a sound nutritional basis and some of which were merely promotional schemes.

First it was "an apple a day keeps the doctor away," which caused the wits to observe that an onion a day would keep everybody away. Then came a period when liquid foods came forward; orange juice, tomato juice, and grapefruit juice were in vogue. There was a burst of interest in bulky roughages such as lettuce and garden greens, and more recently a reversion to the concentrates such as vitamin tablets. Cod-liver oil was one of the unique fads. The question arose whether to take it straight or with orange juice, and whether to take it before or after meals. We counted first our calories and then our vitamins. Scores of dietitians urged us to eat spinach, but we resisted. PopEye the Sailor kidded millions, including the senior author, into eating it and liking it, but never had any effect on the junior author.

On some of these fads one might survive longer than one would care to live.

Apparently most nutritionists detest the puns, jokes, radio skits, and exaggerated advertisements about their work, but such methods are much more effective in selling the results of their work to the millions than scholarly articles in scientific journals or so-called popular articles in respectable highbrow magazines. The American public dearly loves to be sold something. This holds true for food as well as other things. A quarter of a century ago the public wanted to be sold the milk program; today it is vitamins, and tomorrow it will be something else.

Fads, like Fulton's steamboat, are good things to laugh

about, but they are progress. The research workers in the field of nutrition, the processors of food, and the consumers of food are constantly exploring new possibilities. Some are good and some are poor. But they must be tested in the laboratory of human experience. This is the hard way, but it is the way most progress is made. Tomatoes were considered poisonous until some daredevil ate one, or perhaps someone attempted suicide and cured his scurvy instead. Carrots were once horse feed, now they are food fit for man.

We Have Tried to Abolish Poverty

It is frequently felt that, by some panacea or other, all wants could be eliminated and all could live like kings. Food is a popular commodity for such schemes. Two chickens in every pot is a good rallying call for any political faith.

The era of the "ill-fed" came during the middle thirties. Food was given away. The Blue Stamp Plan was introduced to attack underconsumption and malnutrition, the "Black Plagues of the Twentieth Century." The plan was assumed to kill no less than four birds with one stone. It attempted to help (1) the farmer who sells the so-called surplus through (2) the grocer, who thereby increases his volume of business, to (3) the low-income families, whose health is bettered, and finally (4) the nation, which gains all around through solving acute economic problems and lifting the standards of health of the downtrodden third.

Subsidized improvement of the diet of the downtrodden third is popular politically since it has the support not only of the prospective recipients but of some food-producers as well, who think they see the possibility of a new market. Together the farmers and the underprivileged consumers make a majority in any country.

The industrial recovery, the rapid rise in wages, the pressure of Lend-Lease, and the food shortage, all contributed to

the demise of our Blue Stamp Plan. Some contend that it did not die; "it merely sleeps" and is peacefully resting in a state of coma, awaiting revival. Others contend that it is being expanded to include the world.

The Consumer Can't "Pull in His Belt"

World War II brought on the "sacrifice" and the "pull-in-your-belt" policies, popular expressions for reducing the consumption of food.

With the nation's industries and agriculture running at capacity, men are putting forth greater physical effort than during the latter phases of the Hoover regime and much of the Roosevelt administration, when unemployment was widespread. Therefore it is reasonable to assume that they need more food. They have been asked to reduce the amount of fuel they use. This can be accomplished only by increasing the amount of clothes or food or both. With the restrictions on gasoline consumption, increasing quantities of food are required to provide the energy formerly supplied by gasoline. When a nation is taken off its gasoline and central-heat standard and is asked to turn out more products, the consumption of food will increase. The consumer cannot "pull in his belt."

As the food scarcity developed, one arm of the government urged the consumer to "share the meat," to use the butter sparingly, to reduce the consumption of canned goods, and the like. Another arm of the government fixed low ceiling prices for these articles, which encouraged increased consumption. Still another raised the sights of minimum standards for adequate nutrition.

John Q. Public was in a dilemma. He did not know that he could not pull in his belt. He wanted to respond to the government's patriotic appeal and reduce his consumption of food, but he could not resist the temptation to eat increas-

ing amounts of the highly prized foods which the government offered him at low prices. John Q. Public observed two conflicting signposts: price and exhortation. He followed the example of history and chose the former. Unwittingly, but with governmental approval, he did his best to help create a shortage of the highly prized foods.

Since the consumer did not react to the exhortations as expected, the government handed him a ticket, and the government now determines what, when, and how much of the highly prized foods he shall eat.

If the pull-in-your-belt policy merely means eating less milk, meat, and poultry products and substituting the unrationed cereal grains instead, this policy is the solution to the food problem. However, this is not John Q. Public's interpretation of the tighter-belt policy; to him it means eating less food. In this respect it is not the solution.

The rationing program will reduce our consumption of certain types of food, but that reduction will be accompanied by an expansion in the consumption of the unrationed foods. It is practically impossible really to pull in the belt without increasing the death-rate.

All sorts of unique solutions for the food problem have been proposed. It has been suggested that the coffee shortage be solved by substituting a glass of milk for a cup of coffee. During 1939 the nation consumed about eighty billion cups of coffee. The problem would be to find enough milk to substitute for the coffee. The forty billion additional pounds of milk that would be required are equivalent to more than a third of the nation's production of all dairy products.

Food a Weapon of War and a Tool of Peace

Military strategists contend that we should send our allies planes, tanks, guns, and food. This idea is embodied in Lend-Lease. It is also contended that food will write the peace, and

many believe that the United States will be called on to feed large numbers of distressed peoples after the war.

That food is a weapon of war is beyond doubt. It has been so treated by warring nations since time immemorial. Our Lend-Lease policy is a departure from the time-honored method of transferring food by payment at the time of purchase.

The use of food as a weapon of war and as a tool for maintaining peace on the Lend-Lease basis raises questions with broad implications in the minds of some persons. They cannot understand why billions of dollars' worth of food should be transferred from one country to another without monetary remuneration or a promise to pay. Consequently Lend-Lease has been challenged as a "Lady Bountiful," "Santa Claus," "Solomon" type of international philanthropy. In one respect this is true; we are giving away food and are not being reimbursed. During World War I we did not deliberately give food away; we loaned money to the Allies and they purchased foods of their own choosing and paid on the dotted line with the borrowed money. Therefore, at the time of purchase we were reimbursed. But they did not pay back the money they borrowed from someone else.

Some folks think that after this war the food given away under Lend-Lease will be paid for. Whether it be World War I or II food, the probability of reimbursement is small.

In time of peace it is difficult to invest in a productive enterprise and then later to collect on the interest and principal. It is practically impossible to invest in destruction and expect to collect the interest and principal. What you collect is what you can get; it never has been much, and is likely to be less before it is more. Consequently the question of final payment should not be the criterion on which the doubting Thomases challenge the Lend-Lease program.

Food is one of our effective weapons of war, just as im-

portant as men and munitions. No one thinks that the United States should be reimbursed for men lost in combat. Remuneration cannot be measured in dollars; it is measured in victory.

We may raise some questions as to the kinds and amounts of food involved, and explanations offered to justify the Lend-Lease program, but that food is a part of military strategy there is no debate.

The Nation Has Sold Itself Short on Food

The nation has little comprehension of the number of people that it has committed itself to feed. If the commitments are kept, the death-rates in the United States may rise. If they are not kept, the death-rates in Europe will rise. The most probable result is that our death-rate will not rise, and that the nation's food record will be strewn with broken promises.

Many Guests Invited to Our Table

In addition to unlimited promises to feed people, we presumably plan to feed them highly prized foods. A program to supply protective foods may appeal to the sentimentalist, but not to the realist.

For about two decades the nation has been eating about two to four per cent more food than it has produced. There have been surpluses of some foods and shortages of others, but on balance the nation has been a net importer of food. Although this experience would seem to make it difficult to expand food exports, the nation has now embarked upon a policy of supplying food not only to our military forces and our civilian population, but also to our allies and for the rehabilitation of depressed peoples throughout the world. According to the press, the Secretary of Agriculture estimates that the requirements for our own military forces and for

our allies represent one fourth or more of the estimated food production of 1943. A considerable proportion of the additional food requirements represented by Secretary Wickard's estimate will go for Lend-Lease and not to our own military forces, and represents a net addition of fifteen to twenty per cent. Our Lend-Lease commitments are equivalent to increasing our 136 million consumers to 155 or 160 million.

Since a certain amount of food is required for body maintenance, growth, and physical effort, none of these new demands can be met by reducing civilian consumption unless it is assumed that in the past we have eaten too much.

The plans for such large exports of food raise many problems. How much food will be exported? For how long a period will these shipments continue? To whom will the food be sent? Is the objective the improvement of diets or the prevention of starvation? What types of food can be exported? What effect will the program have on civilians? Though these and other questions cannot be answered at present, all indications are that large amounts of food will be required for an extended period of time. One of the questions that can be examined at the present time is possible sources of additional food supplies.

Where Can We Get Additional Food?

There are at least four sources of additional food for Lend-Lease and rehabilitation:

1. increased production;
2. present stocks of grain and animals;
3. reduction in civilian consumption of livestock products with no change in their production;
4. a curtailment in the production of livestock.

We Cannot Increase Production

There is practically no hope of feeding additional people under Lend-Lease or rehabilitation solely from increased

production. The farm plant operated at a level during 1942 that is not likely to be exceeded for several years.

Stocks of Grain and Animals Soon Exhausted

On July 1, 1943 the United States had about 500 million bushels of wheat in excess of normal stocks. This supply would feed the equivalent of about 40 million people on wheat alone for one year. The nearest approach to this diet is that of the Chinese coolie, who consumes about ninety per cent of his diet in the form of cereals.

Canada has about 500 million bushels of surplus wheat which might be imported and reshipped. This would also feed 40 million people for one year. The stocks of wheat in the United States and Canada together would feed about 80 million people for one year. After these stocks had been exhausted, there of course could be no further contribution from this source.

There are large stocks of food in the form of cattle on farms. If these stocks of cattle were reduced, they would add to food supplies by that amount. However, reducing inventories of cattle would be accompanied or followed by a reduction in the current production of meat and milk. Consequently the liquidation of livestock would in itself make little net contribution.

Our excess stocks of horses might feed 50,000 to 75,000 for a few years.

We Can Feed a Few Millions on Livestock Products

The United States can feed people by reducing its standard of living. This is the method currently followed. If the American people reduce their standard of living by ten per cent — that is, if they reduce their consumption of the highly prized foods, meat, milk, and eggs, by ten per cent and substitute grain — the nation could feed about 3 million more

people each year for about fourteen years, until the shift from livestock products to grain would deplete our stocks of excess wheat.

With a twenty-per-cent reduction in the consumption of highly prized foods, the nation could feed about 6 million persons for about seven years. With a thirty-per-cent reduction, it could feed approximately 9 million for about five years.

We Can Feed Many Millions on Grain

If livestock production were decreased ten per cent, the nation could feed about 17 million additional mouths, and this could be continued year after year. Reductions of twenty and thirty per cent in our livestock production would enable us to feed 35 and 50 million additional mouths respectively for an extended period of time. Such a stretching of the food supply would be due to the efficiency of consuming cereals directly rather than indirectly in the form of livestock products. It takes about seven pounds of dry matter in the form of grain, in addition to hay, forage, and pasture, to produce a pound of dry matter in the form of livestock products. This is a luxury which few nations can afford even in time of peace. War is a time when luxuries are usually curtailed.

A ten-, twenty-, or thirty-per-cent reduction in our production of livestock would involve the same sacrifice on the part of American consumers as a ten-, twenty-, and thirty-per-cent reduction in the consumption of these highly prized products with no change in their production. In either case the American consumer would be called on to reduce his standard of living. However, the number of mouths fed under Lend-Lease or rehabilitation would be quite different. If livestock production were continued and the excess above our restricted consumption were shipped, there would be

sufficient food for 3 to 9 million people. If livestock production were curtailed and cereal grain were shipped, there would be enough food for 17 to 50 million people.

Another important consideration is the length of time the two plans could operate. A twenty-per-cent reduction in the consumption of livestock products, with no change in their production, would enable us to feed 6 million people for about seven years; a twenty-per-cent reduction in livestock production would enable us to feed 35 million people indefinitely.

If, owing to a decrease in production, our civilian population decreased its consumption of the highly prized foods to the Chinese standard, the nation could feed about 170 million additional people.

These estimates were based on a continuation of 1942 production, which is not likely. A material reduction in crop production would not change the principle; it would merely reduce the numbers that could be fed.

Present Policy Will Not Meet Commitments

Although these estimates are general approximations, they indicate clearly that reducing the standard of living — that is, curtailing the consumption of highly prized foods with no change in their production — fills the stomachs of only a few million additional people. This is the current policy and apparently that contemplated for the future. Such a policy can be continued only as long as abundant feed is available for livestock, and wheat is available to compensate for the decline in the civilian consumption of livestock products.

Our agricultural policy has been to expand livestock production and stimulate the feeding of wheat. If the nation assumes that there is an overproduction of grain, that crop production will continue at the high levels of 1942, that our Lend-Lease and rehabilitation programs will not expand

much, and that the paramount problem is to provide an attractive diet for the few rather than to fill the stomachs of the many, a continuation of our present agricultural policy is justified.

If the problem is to feed the many rather than the few, the most effective way of making large amounts of food available for export year after year is by reducing livestock production. In that case our present policy cannot be continued.

The forecasts would indicate that there are tentative plans to export fifteen to twenty per cent of our 1943 food production, which is equivalent to feeding about 25 million additional persons at our dinner tables. If this is merely a temporary palliative, it could be accomplished by (a) exporting part of our surplus wheat, (b) exporting wheat imported from Canada, or (c) exporting some combination of grain and highly prized foods. Of course such plans would be of a temporary nature. If the program were to be of extended duration, it would be necessary to reduce livestock production by about fifteen per cent.

Only by feeding its cereal grains directly to human beings rather than to animals can the United States provide large amounts of food to distressed peoples over an extended period of time.

War is not the time to shift from energy foods to protective foods. *Time* concluded that "The U. S. decision to upgrade the feeding habits of the world . . . will turn out to have been one of the costliest decisions of World War II." [2]

Civilians Must Learn to Eat Grain and Like It

The army understands the relationship between high morale and a well-filled stomach and does its best to supply the soldier with an ample, attractive, nutritious diet. The ris-

[2] *Time,* Volume XLI, Number 19 (May 10, 1943), page 21.

ing needs of the army, together with Lend-Lease, necessitate shifts in the diet of the civilian population. Changes in the purchasing power of different income groups within the civilian population cause further changes in civilian food habits. Rationing makes for still further shifts.

These shifts in the diet might be diminished or postponed for a short time if bad weather should result in a sudden liquidation of the country's livestock. This would increase our meat supplies, but the increase would be only temporary and would be followed by drastic reduction later. The weather will influence the timing of our dietary changes, but cannot prevent them.

As the amount of highly prized concentrated animal foods has declined, a substitute must be found. People have difficulty getting enough turnip greens, lettuce, potatoes, and other healthful, watery foods into the stomach to replace the concentrated foods. Therefore these concentrated foods must be replaced by another concentrated food, which inevitably is grain.

The sudden shift to grain will raise problems other than dietary ones. Our cereal industry is not equipped to operate on the scale that will be necessary if the consumer suddenly changes his diet. In these days of scarce materials and labor, it may be difficult for the flour mills, the breakfast-food manufacturers, and the corn-products plants to expand their operations sufficiently to fill the gap that will be left by diminishing supplies of highly prized foods.

Increased grain consumption need not be monotonous. Grain can take many forms — more of the Scotchman's oatmeal, more of the Indian's corn meal, more of the Oriental's rice, more Pennsylvania Dutch buckwheat pancakes, or more fortified bread from Kansas wheat. For varity there is the possibility of more of Chinese sprouted soybeans produced in

Illinois, or more of New York's red kidney and Boston baked beans.

In making the change in his diet, the American consumer will have little experience and few signposts to guide him. He will need to depend upon the advice of nutritionists and food processors, whose knowledge of his problem will help minimize the difficulties of the shift.

CHAPTER 8

DISTRIBUTION

Nobody Loves the Middleman

WHEN a farmer eats in a restaurant, which is seldom, he sometimes orders a glass of milk. He is likely to receive a small glass, for which he is charged a nickel. He may be a dairyman and possibly may be drinking milk that he himself produced. Elementary arithmetic tells him that he received about one cent for producing the glass of milk that cost him a nickel. The middleman got the other four cents.

Similarly a man in the city may hear that a friend of a friend in the country has just sold his cabbage for 8 dollars per ton. The city man may recently have bought some cabbage over the retail counter and may have paid two cents per pound for it, which means a rate of 40 dollars per ton. The consumer paid the grocer five times as much as the farmer received.

Nobody loves the middleman. He is alternately accused of robbing the farmer and gouging the consumer. The general opinion is that he has somehow inserted himself between the farmer and the consumer and takes toll from both.

With passing time, the middleman takes a larger share of the consumer's dollar. It is believed that he is taking a bigger profit, or is becoming less efficient, or both.

The Marketing Problem Is a Depression Phenomenon

Over a period of many years the middleman takes a bigger share of the consumer's dollar, but within shorter periods of time the middleman's portion rises and falls. The costs of distribution tend to be stable, and with a given change in the price level do not change as much as retail prices. Consequently, when prices fall, the costs of distribution remain approximately at previous levels and the middleman takes a larger share of the consumer's dollar. The middleman therefore is extremely unpopular with the farmers in hard times. The problems of marketing seem most acute in time of depression.

When prices rise, the costs of distribution rise less than retail prices, and the middleman takes a smaller share of the consumer's dollar. In 1942 the costs of distributing food took about half of the consumer's dollar compared with two thirds in 1932. In time of rising prices the middleman is also unpopular, but at such times it is the consumer's ire that is aroused.

Little Is Known about the Middleman and Much Is Suspected

The farmer and the consumer know little about the middleman, and, knowing little, they suspect much. The farmer's interest in his product ceases when he takes it to market. He has used all his energy and ingenuity in production, and he is glad to turn his product over to the manufacturers, processors, and distributors. The consumer gets his food from the last link of a long distributive chain. He usually doesn't know where his potatoes came from or whose hands they have gone through.

Nor do the farmer and the consumer know much about each other. The farmer cannot see why the consumer in-

sists on preferring eggs in the winter, when the hens want to lay them in the spring. The consumer fails to understand why the farmer continues to grow poor-quality produce when he wants good quality.

There are few things upon which farmers agree among themselves, and still fewer upon which they agree with consumers. The one thing upon which they can agree is that they are both exploited by the middleman.

In the minds of consumers and dairymen the inefficiency of the middleman is typified by the five milk wagons on a street. To them this means five times the necessary cost to deliver milk. Scientific studies indicate that the cost of delivering milk depends more upon the number of quarts the driver delivers each day than upon any other factor. It is not at all certain that he will deliver more under the "post-office system" than when he is competing with four other drivers all striving to increase their sales and commissions.

Mistrust of the meat packers, the grain markets, and the milk distributors has always been an effective rallying call for politicians. The high and rising costs of distributing food provide a seemingly sound basis for charges of inefficiency and profiteering. There is always one question, however, that should be asked when an industry is charged with taking a large share of anybody's dollar: What services does it render?

What Does the Middleman Do?

The high and rising costs of distributing food come about largely because increasing specialization is driving the producer and the consumer farther apart. More services are required to span the gap between them.

A century ago the farmers in a community produced about all the food that the community used. In fact, the producer and the consumer frequently were the same person. Much of the marketing that was done was done directly and costs

were low. Transportation, grading, processing, and packaging were kept at a minimum. The problem of storage was reduced by consuming foods in season when possible.

With industrialization, city industries became specialized. Folks moved off the farms and away from the local community. The city population began to rise, and the simple methods of distributing food no longer would serve.

Not only did the city man specialize, but the farmer specialized as well. The New York farmer no longer raises his own pork, as he once did. He buys bacon produced by the hog specialist of Iowa. Potato production has moved into those areas with favored soils and climates. Formerly almost every farmer had a few apple trees. Now most farmers buy apples produced by the commercial growers of the Northwest, New York, or the Shenandoah Valley.

It is expensive and difficult to do all the tasks necessary in order to make frequent deliveries of small quantities of a wide variety of foods to an apartment dweller in a large city. The rising cost of distribution is a measure of service and quality rather than of inefficiency or excessive profits.

Middleman Matches Production with Consumption

The middleman performs many tasks. He purchases the raw product from the farmer, assembles, grades, transports, stores, processes, and distributes the final product to the consumer. His livelihood depends upon doing this as cheaply as he can, and competition forces him to take a relatively narrow margin.

One problem that the middleman has is to provide a stable supply throughout the year of foods that are produced seasonally. Some products, like wheat, are produced but once a year, while bread, the finished product, is consumed each day of the year in fairly constant amounts. This calls for a system of local grain elevators, terminal storage facilities,

grain markets to feed the supply to the millers as it is needed, and a system to deliver various grades of flour to the bakers, bread to the grocers, and finally to the consumers.

Potatoes are produced intermittently throughout the year. The Florida, Louisiana, and Texas crops come on the market in the early spring. They are followed by the crops from the Carolinas, Arkansas, Oklahoma, the Eastern Shore of Virginia, New Jersey, Long Island, and Missouri. Finally, in the fall, the Maine, Minnesota, and Idaho crops are harvested. The same general supply situation occurs for strawberries, peaches, melons, and other fruits and vegetables.

The handling of highly perishable food products requires an intricate and expensive system of assembly points, transportation facilities, refrigeration, and the like. There must be an efficient pricing system to move food through a busy market before it spoils, or to call in additional food from the country if the supply is short.

Milk is a product that is produced continuously but not uniformly throughout the year. Seasonally, it is not produced in the quantities in which it is consumed. The same is true of meats, poultry, and eggs. Storage and manufacturing, aided by a sensitive price system, level the peaks and fill the troughs of production.

The middleman has not only the problem of adjusting consumption to seasonal production, but also the problem of converting inedible products to edible form. In its natural state buckwheat is far from appetizing, but by a process of milling and refining it becomes buckwheat flour ready for the cook. Some products, such as potatoes and carrots, involve little processing, while others, such as ice cream, require a great deal.

Costs of distribution are high because a wide variety of services is performed and because these services are performed by the highest paid labor in the world. The food sup-

plies are better protected, better packaged, and delivered with greater promptness than in any other country in the world.

Consumers Demand Service

It is sometimes assumed that these services have been thrust upon the American consumer. On the contrary, he asked for them, got them, and paid for them. This was because he could afford them.

From time to time the consumer will agree with the reformers that the costs of distribution are too high and that something should be done about it. But as long as his standard of living is high, he will continue to demand clean, wholesome, attractive food products wrapped in cellophane and delivered to his door promptly. His resistance to "economy" was demonstrated by the furor that arose with the discontinuance of sliced bread.

Waste Is More Apparent than Real

Every so often there are renewed discussions of the tremendous amounts of food lost through waste. Ideas of waste originate with the poor boy looking in the rich man's window Thanksgiving evening, with photos of the Jacksonian dinner table at a hundred dollars a plate in Washington's Mayflower Hotel, and with moving pictures of the medieval banquet table showing the baron pulling a leg off a turkey, taking one bite, and throwing the rest over his shoulder to the dogs and common folks. It is human nature to observe and draw conclusions from the unusual.

Whether waste be great or small, one thing is certain: when prices of food are high, the avoidable waste will be less than when prices are low. Any argument contending that there is a great waste of food is really an argument for higher food prices.

Farmers Waste a Minimum of Food

Apples, peaches, and cherries sometimes go unpicked and rot on the ground. The consumer cannot understand why the farmer lets so much good food go to waste. It goes to waste because nobody wants it, nobody will buy it, and no one will even pick it. Since such products cannot be fed to farm animals, there is no way of disposing of them except to let them rot.

Much of this apparent waste is really insurance. Due to the uncertainties of weather, the apple crop may be good in one locality and poor in another, or good in all, or poor in all. Fortunately, there are more apple trees than are normally needed. Therefore the shortage is not acute in the poor crop years, and some apples rot in the good years.

Farmers produce much more corn than human beings can eat. This excess corn is not allowed to rot; it is fed to hogs and other livestock. Since it takes about seven pounds of grain to make a pound of meat, this is, in one sense, a waste of food. In terms of such waste, the rotten tomatoes and vegetables, the unpicked fruit, and the frozen cabbage pale into insignificance.

The hog is mighty good insurance. When there is an abundance of corn, man eats what he wants and the hog eats what is left. When the corn crop is short, man eats what he wants, kills the surplus hogs, and keeps only sufficient numbers of hogs to eat the remaining corn.

The consumer need not worry about the waste of food on farms. The farmer will make certain that the minimum amount of food goes to waste on his farm.

Distributors Waste a Little to Save a Lot

In the transportation of food there is some waste. Hogs die in transit. Tomatoes are frozen in the winter and rot in

the summer as they are transported from the farm to the terminal market. Carloads of food are smashed up in railroad wrecks. These losses are an insignificant part of the consumer's food supply. To try to prevent most of these losses would be more expensive than the losses themselves.

The processing of food is accompanied by losses. A striking case is the making of wheat flour. In the milling of flour the outer layer of the wheat kernel, containing valuable nutrients, is ground off and sold to the dairyman and poultryman for animal feed. That this is a great waste of food there is no question, but the American public wants white bread and agrees with the wag who comments that the most important use of dark bread is to make a man appreciate white bread.

Grocery stores waste food. Grocers pull the outer dirty or wilted leaves off the heads of cabbage. They throw away the apple or the potato with rotten spots. The average consumer, watching this process, concludes that large amounts of food are wasted. The consumer may rest assured that the groceryman wastes a minimum of food. If he didn't waste some food, the consumer wouldn't buy his fresh fruits and vegetables, and all would be lost. He wastes a little to save a lot.

Food Is too Valuable to Be Wasted

Some folks get agitated over the large losses of food that accompany the process of preparing food for the table. It has been estimated that the average housewife peels away one fourth of the potato. This apparently wasteful process occurs in all homes all the way from the Main Liners to the downtrodden third. The only ways to reduce this waste are to learn to like potatoes boiled with their jackets on, or to educate the housewives to pare the potato peelings. This would drive them to distraction or require additional labor, when they already have plenty to do.

One of the most knotty food problems is the age-old and

unsettled controversy of whether the poor apples should be eaten first to keep the good ones from spoiling or whether the good ones should be eaten while they are still good. The senior author, being Scotch, eats the poor ones against his better judgment. The junior author follows his better judgment and eats the good ones, rationalizing that he thereby always enjoys the best.

Someone is always pointing to the huge amounts of fat that go "down the kitchen sink." They, too, are greatly exaggerated. The housewife fries the bacon and uses the excess fat to fry the egg sunny side up, and then re-uses it to grease the skillet for the pancakes. After having worked this grease over several times, the amount that is left is a very small proportion of the original amount and is probably best fit for the sink. Hotels and restaurants have large amounts of grease, which are collected and sell at a low price. It is not wise to assume that because hotels, restaurants, and the like save their fats, the housewife should do likewise. The household quantities of such fats that are unused are so small that they do not command attention except in time of war.

Consumers waste some food. There is, of course, uneaten food left on the plate. The unattractive remains on most plates consist of such items as the broken back of a chicken, indigestible gristle, inedible bones, unsightly potato skins, and soggy spinach. This leads some people to believe that consumers waste huge amounts of food. Some of the "waste" goes to the pets — and thereby saves tinned meat and biscuit labeled "dog food."

The amount of food wasted by the farmer, the processor, the distributor, and the consumer is an insignificant proportion of the total and should be assigned to the dogs, cats, and chickens.

We Adopt New Slogans for an Old Policy

A new national policy is to reduce the waste of food. This has always been the consumer's policy.

Since time immemorial our policy has been to attack the processing and distributing machine. The present administration is no exception. It merely applied new slogans — "streamlining distribution," "rolling back the squeeze," and "wringing the water out of the distributor" — to the age-old unsolved problem of reducing the costs of distribution.

Wastes and Costs of Distribution Will Rise

Waste of food will undoubtedly increase before it decreases. Some food will be sunk en route to our armies overseas. Some will be captured by the enemy. Some will be wasted after it reaches its destination, because of the inevitable difficulties of supplying armies in the field. Fighting forces waste unusually large amounts of food. To attempt to save the food might lose battles.

At home additional food will be wasted as transportation grows more difficult. The difficulties of civilian logistics for 125 million consumers will result in inevitable pile-ups and delayed administrative orders. With a perishable product like food, delays mean waste. The civilian may attempt to compensate for these wastes by cleaning his plate better than he once did, but he wasted only a small amount of food even in normal times. Food is too valuable a product to be wasted by civilian consumers. Those who seek a solution to the food problem by the elimination of civilian and military wastes are doomed to disappointment.

Little Water Can Be Wrung Out of the Food Industry

The high cost of distributing food has constantly been under criticism by the farmer and by the consumer. With the

advent of OPA, the government also commenced firing. Retail price ceilings were imposed by the "big freeze" of 1942. Retailers protested the difficulty of maintaining the ceilings when wholesale prices continued to rise, thereby reducing their margins. They aptly referred to the situation as a squeeze and were told by OPA that their solution was to "roll back the squeeze" by reducing their costs of doing business. This blithe advice indicated an attitude which is quite generally held: that the food industry takes a rather wide margin, which it can easily reduce if it is so minded. On the contrary, the food industry is highly competitive. It has been forced to pay high wages, and for this reason men in the trade have been constantly on the watch to see where they could save a dime.

Efficiency of Labor Will Decline

We are told that the costs of distribution can be lowered in three ways: labor can be made more efficient, wages can be reduced, or services can be eliminated.

With many of the experienced food handlers in the Army, with rising red tape, with increasing transportation difficulties, and with rationing, efficiency is likely to go down despite efforts to improve it.

Wages cannot be reduced in wartime; in fact, the practice has been to endorse wage increases.

Only through the elimination of unneeded services can manpower be saved. The number of unneeded services is fewer than is widely assumed. A few frills irk the food controllers, but they are so small a part of the total job of distributing food that to eliminate them would save but little manpower and would not cut down costs.

Some "Frills" Make the Consumer More Efficient

Many of the so-called frills are really an effective means of saving the consumer's time. In this category is the much-maligned delivery system. Despite some abuses, it makes the consumer more efficient and saves his time for productive effort on a war job. The administrators withhold rubber from the retail distributor to cut down delivery. Another agency of the government assigns the consumer a gallon and a half of gas a week. Still others order him to work more hours. If the consumer does not have enough gas to get his food and can't have it delivered, he may work less for the war effort. To get the highest efficiency in the war effort and reduce the consumer's gasoline consumption, it may be necessary actually to increase the costs of distribution.

Some efforts to cut distribution costs may backfire or turn out to have raised costs rather than lowered them. The case of sliced bread was in one or both of these categories.

Progress Is Slow

It is easy for the Washington administrator to look down the groceryman's aisles and tell him how to clean them up. Usually the costs are greater than the savings. This is particularly true when the recommendations are based on an aerial reconnaissance, from an altitude of 30,000 feet, traveling 300 miles per hour.

Here and there a spectacular saving may be possible. Sometimes such savings can be made only by strong-arm methods over the protests of organized labor. Most of the progress that will occur will be slow and gradual.

There is much discussion of eliminating private brands and substituting government grades. This may eliminate some individual's lifetime efforts to give the consumer a better product. Its elimination will not reduce costs. The same

kind of salmon will be caught in the same way in the same place by the same crews, cleaned, cooked, and processed in the same way, packed in the same kind of tin can, but stamped with the government's "AAA brand" in red letters, instead of "Chinook" in gold.

The hope is sometimes expressed that revolutionary efficiencies in distribution will come about because of changes forced by the urgency of war. Such a supposition assumes a great deal of inefficiency in the present system and sees war as the means of improvement. The shortcomings of the present distributive system have been exaggerated, and war, inefficient in its very nature, has probably led more industries into the woods than out.

Any savings which the nation can make through "streamlining distribution" or "wringing the water out of the distributive trade" would be savings in manpower, but not in dollar costs or in food. Those who would solve the food problem by reducing the costs of distribution are doomed to disappointment. Costs of distribution will continue to rise.

CHAPTER 9

PRICES

FARMERS phrase their worries in a great many terms. They speak of the high cost of labor and equipment, overproduction of certain products, the loss of markets, and the high cost of distributing food. What they really mean is that farm prices are lower than they would like to see them.

Consumers similarly have adopted phrases that express their concern. They fear declining farm production, they mistrust the farm bloc, and they resent the gouging policies of the food distributors. They really mean that the retail price of food is higher than they would like to pay.

Price Is the Fundamental Issue

No matter how it is phrased, price is the real issue for both producer and consumer. To agriculture as a whole, price virtually means income, since production times price equals income, and production is largely beyond control. To the consumer, the price of food determines how much money will be left for the other things besides food that are desired.

The Subject of Prices Is Controversial

Every price at which goods change hands is the result of a controversy, either mild or violent, between buyer and

seller. Similarly, the whole subject of prices is controversial. Much of the present difficulty regarding farm and retail prices of food comes about because the farmer cannot see the viewpoint of the consumer, who in turn cannot understand the position of the farmer. Neither of them understands the fundamental forces which establish food prices, either on the farm or in the city. To this confusion is added the political maneuverings of farmers, laborers, and many other pressure groups, and the contradictory price policies of numerous government agencies.

Prices Are Related to One Another

The price problem is not marked by utter confusion, as one might think from reading the papers. The general level of prices is an understandable sort of thing; it is an average of all prices, which are related to one another. Everyone has seen a swarm of gnats hanging stationary in the air, while the individuals within the swarm constantly change places with respect to one another. The relationship of the position of individual gnats to one another and to the swarm resembles the relationship of individual commodity prices to one another and to an average of all prices when the general level of prices is unchanged.

Frequently, however, the whole swarm of gnats moves up or down. The individuals continue to change positions relative to one another within the swarm, but in addition the entire swarm changes its position. Such is the relationship of commodity prices to one another and to an average of all prices when the general level of prices itself is changed.

Rising Farm Prices Are a Result of Inflation, Not a Cause

It is generally believed that rising farm prices cause inflation. It would be as correct to say that a rising thermometer causes a warm day. What has happened is that

the general level of all prices has risen, and farm prices have risen with them in exactly the same manner that the individual gnat rose when the whole swarm of gnats rose. Rising farm prices have not caused inflation any more than one gnat, by himself, caused the swarm to rise.

Inflation is an upward movement of prices in general. It is merely another way of saying that goods and services are now more valuable relative to dollars than formerly. In wartime we have greater use for goods and services than we formerly had, and it is not surprising that their prices should rise.

Those who contend that rising farm prices cause inflation note that since the outbreak of the war, farm prices of food have risen 96 per cent, while retail prices of food have risen only 40 per cent. It is concluded that farm prices have somehow shot up of their own volition and have dragged the more reluctant and patriotic retail food prices up with them. It is not unusual that farm prices should respond more violently to a general price change than do retail prices. During the depression, farm prices of food fell 68 per cent, and retail prices fell only 46 per cent.

The fact that the tip of a whip cracks sharply with a slight movement of the butt does not mean that the tip of the whip is responsible for the motion. Similarly, the fact that farm prices fluctuate more violently than retail prices does not mean that they cause the changes in the retail prices. The farmer, like the man in the back seat of a roller coaster, gets more of a ride for his money than anyone else.

Farm Prices Are Largely Made over Retail Counters

When prices in the retail trade strengthen for whatever reason, the retailer is willing to pay the wholesaler more in order to get his supplies. The wholesaler is willing to pay the commission man more, who in turn raises the price to

get the supplies from the farmer. The cost of handling food between the farmer and the consumer, which consists largely of labor and other inflexible items, does not change much over a short period of time. The farmer is out at the tip of the whip.

The relationship of retail and farm prices of food might be illustrated, using potatoes as an example. Farm and retail prices might be in equilibrium as follows:

	Per peck
Retail price	$0.75
Retailer's margin	0.15
Transportation, storage	0.25
Commission, inspection, bags, tags, etc.	0.10
Farm price	0.25

If conditions in the retail trade improve, the retailer charges $0.80. Then the most likely price situation would be about the following:

	Per peck
Retail price	$0.80
Retailer's margin	0.15
Transportation, storage	0.25
Commission, inspection, bags, tags, etc.	0.10
Farm price	0.30

In this case retail prices rose 7 per cent and farm prices rose 20 per cent, and the price controllers would tell us that farmers were to blame for the rising cost of living.

Farm Prices Fluctuate More Widely

With passing time, and with the addition of more and more inflexible charges for food distribution, the fluctuations in farm prices have been increasing. Farm prices are a residual. Rising costs of distribution make the residual a small part of the consumer's dollar. If the farm price is a

small part of the consumer's dollar, a given change in the retail price results in a large percentage change in the farm price. As the whip gets longer, the farmer feels the crack of the whip more than he once did.

City folks who fear a ten-per-cent rise in the retail cost of food because there has been a ten-per-cent rise in farm prices make two errors. First, they have mistaken cause for effect, and second, a ten-per-cent rise in farm prices was accompanied by only a three- or four-per-cent rise in retail prices of food.

Overproduction Was a Myth

During the thirties farm prices of food were low and it was generally believed that they were low because of the loss of our foreign market and an overproduction of food. The overproduction argument ran as follows: through improved machinery, better breeds of livestock, and better farming practices, the techniques of food production had outrun our need for food and we had entered a new era of abundance.

In a sense this was a double error. Farm prices were low, not because of overproduction, but because of a low general level of prices. In fact, the production of food per capita was lower during the thirties than during the twenties. There is no evidence to indicate that at any time during the past quarter of a century there has been an overproduction of food.

The bureaucrats did a marvelous job of selling the overproduction idea to the country. It is a credit to their journalism, though not to their economics. Since time immemorial, farmers have observed that a big corn crop brought low prices, and that a small crop brought high prices. This simple principle has been observed throughout history and has been demonstrated to the satisfaction of all.

Since this principle held for an individual crop like corn, the regimenters had little difficulty in convincing the nation

that a general decline in the price of everything was due to a general overproduction of everything. Here and there a few persons raised a simple but important question: Could there be an overproduction of everything with untold millions of people unemployed? Their voices were not heard. The nation plowed under its cotton, killed the pigs, restricted the production of wheat, and, before Pearl Harbor, reduced the beet-sugar acreage about twenty per cent.

The overproduction argument has been eclipsed by present high farm and retail prices of food. The idea that all can have more if all produce less is currently in disregard. But if prices fall during the post-war adjustment, from whatever cause, the overproduction argument will probably be revived.

Low Farm Prices Not Due to Loss of Foreign Markets

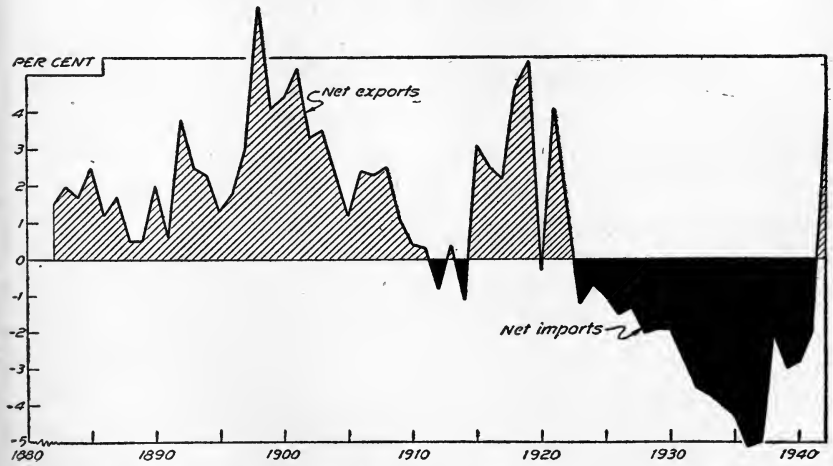
A companion argument to the overproduction idea that prevailed during the thirties was the concern regarding the loss of our foreign market for food, which, it was contended, piled up burdensome surpluses and depressed farm prices. Foreign trade in food, tariffs, trade agreements, quotas, and gold movements have played and always will play an important role in our political, economic, and agricultural discussions. The difference between the high-tariff policy of the Republican Party and the high-but-not-so-high policy of the Democratic Party has always kept these issues alive.

During the thirties there was no question but that our exports of food were declining. There was no question but that farm prices of food were falling. The two indisputable facts were linked as cause and effect. The public, always willing to accept an explanation that lays the blame on the foreigner or on the international banker, subscribed wholeheartedly. The big question that arose was whether we should try to stimulate our exports by some form of subsidy or whether we

should curtail food production and "adjust to the domestic market." The crop controllers won and a restriction program was inaugurated. Strangely enough, acreage restrictions were imposed on sugar beets and other commodities for which we have little foreign trade or which we actually import.

There is considerable evidence to indicate that the low prices of agricultural products during this time were due, not to a loss of our foreign market, but to the world-wide price deflation, which practically no country escaped, whether it imported, exported, or was self-sufficient. Furthermore, our lost foreign market was not a depression phenomenon. It had been going on, with interruptions, since 1900 (figure 1). "The loss of our foreign market" was merely another way of saying

FIGURE 1. THE VALUE OF NET EXPORTS OR IMPORTS OF FOOD IN PER CENT OF FARM INCOME, 1882 TO 1940



From about 1880 to about 1900, net exports mounted relative to production. Thereafter exports declined, then vanished, and imports became the rule. This downward trend in exports and the rising importance of imports have been confused by World Wars I and II, which temporarily reversed the normal trends.

that, with population increasing faster than our food supply, we needed to keep an increasing proportion of our food products at home in order to supply our own needs.

Constant emphasis on our export market for food has led us to the popular conclusion that our foreign trade in food shows, and always has shown, a large export balance. It is true that we normally export considerable amounts of certain foods, including lard, fruit, and tobacco (which may be considered a food only if it is chewed). But we also import large amounts of non-competing foods such as coffee, cocoa, tea, bananas, and spices. In addition, we normally import competing foods such as beef, sugar, and vegetable oils. Changes in the quantities of these exports and imports related to changes in our population over a period of years indicate that foreign trade is more a result than a cause of economic changes in this country.

Normally We Eat More Than We Produce

In general, during the past quarter of a century, the agricultural production of the nation has not kept pace with its population. From 1910 to 1914 our imports of food approximately equaled our exports. Even under the pressures of World War I, net exports reached a maximum of only about 5 per cent of our production. When relieved of this pressure, an excess of imports was quickly re-established. Thereafter, our agricultural imports exceeded exports most of the time. From before World War I to the twenties and early thirties the net excess of food imports over exports rose from 0.2 to about 2 per cent of our production. From the more or less normal crops of 1923–32 to the good crops of 1937–40, the net imports of food rose to about 3 per cent of our production. From the twenties to our participation in World War II, there was a continual excess of food imports over exports. Prices rose and fell violently. The loss of our foreign market and rising

imports were due to the fact that we ate more than we produced. Food prices fell and rose because of the forces of world-wide deflation and inflation. Our dwindling exports were no more than a scapegoat and a whipping boy.

General Price Level Affected by Monetary Factors

Changes in the general level of the farm prices of our food come about mainly with changes in the general level of all prices, in this country and in the world.

The general level of prices of all commodities is affected by two groups of factors: those concerning the commodities and those concerning the money in which the prices are expressed.

Factors that Make Price

There are five factors affecting the general price level: the supply of and demand for commodities, the supply of and demand for money, and the amount of precious metal in the monetary unit. These factors are constantly fluctuating, and rarely fluctuate by the same amount at the same time. At one time the fluctuations in the five factors may be compensating, and at others non-compensating. If the fluctuations in the factors are compensating, the price level is stable. If not, deflation or inflation occurs.

The five factors that make price are relatively simple. When one considers the innumerable possible combinations of fluctuations in each of the factors, there are a myriad possible answers. For simplicity, let us assume that each of the five factors could fluctuate by only five similar amounts. In that case there could be 3,125 different prices.

Irving Fisher once said that if you taught a parrot to say "Supply and Demand" he could answer any economic question. But the parrot does not know the factors that affect supply and demand, the amount they can vary, or the innu-

merable ways in which these variable factors may combine. Even if the parrot knew, he would not have sufficient vocabulary to tell us all the answers. Man may have the vocabulary, but he does not know how these factors combine to influence prices. For this reason market prognosticators and the price-fixers are essentially erroneous forecasters.

In Wartime All Factors Make for Higher Prices

The factors affecting the price level are always fluctuating, but in time of peace they fluctuate little and the fluctuations frequently compensate. There is considerable variation from year to year in the supply for one commodity, but the supply of all commodities ordinarily is relatively unchanged. Similarly there are changes in the demands for various products, but the demand for all commodities normally changes little. Usually, also, the supplies and demands for money are relatively stable and the amount of precious metal in the monetary unit is also stable. Under such conditions the general price level fluctuates much less than in time of war.

During major wars both commodity and monetary factors affecting the price level change decidedly. World-wide changes occur in the supply of and demand for commodities and in the supply of and demand for money. Sometimes warring nations get into financial difficulty. Then the exchange value of their currencies may fall.

An appreciation of the behavior of these five factors in time of war will help one to understand how a major war causes an upheaval in commodity prices.

Supplies of money in time of war normally do not diminish.

War restricts the supply of commodities. It is impossible to draft fifty million men from the world's productive machinery for military activity and maintain normal produc-

tion. Even the widely heralded German efficiency has not been able to devise a plan whereby men can work and fight at the same time. Declining production and the interruption of transportation reduce the supply of commodities. Since time immemorial any force that has reduced production has been a price-raising force.

In time of war, gold, silver, paper, and credit money depreciate in terms of other things. This decreased demand for money is a price-raising force.

On the other hand, there is an increase in the demand for commodities. Normally the world's civilians individually consume most of the goods that the world produces, and only a small proportion of the goods is consumed by individuals collectively — that is, by units of government. In time of war the governments become great buyers and consumers of goods and services. Since there is no other source, the governments must take the goods away from the individuals. Almost regardless of the method used, the result is a net increase in the demand for commodities. This is a price-raising force.

Some persons contend that the change is not due to decreased demands for money alone or increased demands for commodities alone, but that the two demands are inseparable. In time of war, individuals and nations prefer goods to money. Goods are better adapted to the waging of war than is money. Since people regard goods more highly and money less highly than they formerly did, they are willing to give more money for a given amount of goods. This is another way of saying that prices rise.

Sometimes the world loses faith in the future of a warring nation. Defeat or the inability to meet its debts are suspected, both within and without the country. Under such circumstances the exchange value of its currency may fall. Since its money is worth less than formerly, it takes

more money to buy a given quantity of goods, and prices rise.

In time of major wars decreasing supplies of and increasing demands for commodities, increasing supplies of and decreasing demands for money, and decreasing exchange value of currencies are all price-raising factors. There is not one factor depressing prices.

TABLE 1. CHANGES IN WORLD PRICE LEVEL DURING MAJOR AND MINOR WARS

Major wars		Minor wars			
Conflicts	Prices, per cent rise	Conflicts, United States involved	Prices, per cent rise	Other conflicts, United States not involved	Prices, per cent rise
				German-Danish	− 2
				Crimean	9*
Napoleonic	64	Mexican	7†	Austro-Prussian	− 3*
				Franco-German	2*
World War I	138	Civil	8*	Chinese-Japanese	0
				Boer	6*
World War II	?	Spanish-American	8*	Russo-Japanese	3
				Spanish Revolution	− 6

* Generally rising prices due to causes other than wars.

† A sharp upturn in prices following the disastrous rains, the Irish famine, and the repeal of the English Corn Laws.

Price Advances Depend on the Magnitude of the War

Major wars have always been accompanied by rising prices and followed by falling prices. Local wars have little effect on the world price structure (table 1). The Napoleonic Wars and World War I, both world conflicts, swept the whole world price structure upward and then downward. Prices rose in all countries because of world-wide changes in supplies of and demands for commodities and money which were beyond the control of any one country. During World War

II prices are advancing for the same reasons. Our Revolutionary, Civil, and Spanish Wars, and the minor conflicts of other countries, however, had little effect on the world price structure (table 1).

The Revolutionary and Civil Wars had a decided effect on our prices, but our Spanish War had little effect (table 2).

TABLE 2. CHANGES IN UNITED STATES PRICE LEVEL DURING MAJOR AND MINOR WARS

Major wars		Minor wars	
Conflicts	Prices, per cent rise	Conflicts	Prices, per cent rise
Revolutionary War	Wild inflation		
War of 1812	54		
Civil War, North	145	Mexican War	− 1
South	Wild inflation	Spanish-American	0
World War I	149		
World War II	?		

During our Revolutionary War there was wild inflation due to the depreciation of the Continental paper currency. The expression "not worth a Continental" dates back to that period. During the Civil War, prices rose in both the North and the South — moderately in the North and wildly in the South. These advances were not due to world-wide changes in commodity prices. They were due to depreciation of paper currencies in the United States. Northern greenbacks depreciated until they were worth about forty cents on the dollar, and the Southern Confederate notes until they were worthless.

Wars, if small, may have no effect on the prices of a nation or the world. Larger wars may affect the prices of the warring nations and not the world; or if large enough, they affect prices of all nations.

The present war is a world-wide conflict. A certain indi-

vidual with heavy eyebrows, who is said to be interested in the labor movement, apparently knows his price history and aptly summarized the effects of the five factors on prices during a major war:

"Inflation to some degree is a definite concomitant of any war. It [war] . . . destroys material . . . [and] manpower . . . creating . . . higher values of remaining manpower and materials. To think now that a war can be fought of the magnitude of this globular effort without resultant inflation to some degree is to fly in the face of history and all known economic facts." [1]

Food Prices Fluctuate with Other Prices

Food prices fluctuate with the general level of commodity prices because they are affected by the same forces that affect other prices. This is true in time of war and in time of peace. During the Civil War all prices rose 117 per cent and food prices rose 112 per cent. During World War I all prices rose 128 per cent and food prices rose 113 per cent.

During the deflation that followed the Civil War food prices fell 52 per cent and all prices fell 53 per cent. When peace was re-established at the close of the Civil War, prices in the United States fell for two reasons: the return of the depreciated greenbacks to their gold parity, and a general decline in world prices.

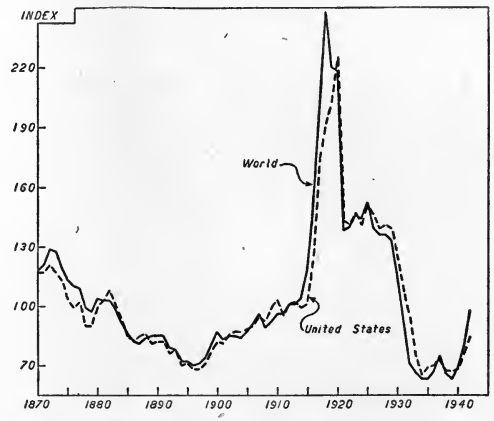
After World War I food prices fell 55 per cent and all prices fell 58 per cent. Since the United States was on the gold standard following World War I, most of the decline was due to declining world prices.

Most of the variations in prices of food products are due to the same forces that cause the nation's whole price structure to move upward or downward. Similarly, most of the variations in a nation's price level are usually due to the

[1] *New York Times*, April 11, 1943, page 32.

same forces that cause the world price structure to move upward and downward (figure 2). If a certain combination of forces causes the whole world price structure to sweep upward or move downward, these forces in turn will cause comparable changes within a nation's price structure, and the food prices of a country will fluctuate with the movement of all prices in that country. Contrary to popular opinion, the generating forces do not begin with the nation's food prices and then proceed to a nation's price level and finally to world prices.

FIGURE 2. INDEX NUMBERS OF THE WORLD AND UNITED STATES PRICE LEVELS, 1870 TO 1942
1910–14 = 100



For three quarters of a century commodity prices in the United States have followed the world price level.

Local Factors Affect Food Prices

The price of any individual farm product may be high or low relative to the level of farm products in a given country or in the world. At any particular time the price of wheat may be low relative to the general level of world food prices because the world supply of wheat is large.

The price of wheat in a given country may be a little high relative to world prices of wheat and relative to food prices in that country because of unusual changes in local supplies. Such a condition could exist in a country that had less than normal supplies at a time when the world had more than normal supplies. A drought in China might result in a trebling of the price of rice and other foods in the interior of China and not affect the price of food in the United States. Our droughts of 1934 and 1936 did not affect food prices in Europe as much as in the United States.

Every Tom, Dick, and Harry knows that a big crop of corn sells for a low price. Since few know that world forces also affect the price of corn, they jump to the conclusion that the only force affecting the price of corn is a big crop in their community.

Prices are therefore affected by world-wide forces affecting all prices, world-wide forces affecting food prices, and local forces affecting the price of an individual product.

Changes in the price of an individual commodity in a particular country are a good deal like a water-skipper on the ocean. His activities produce only a whirl on a wave on a tide. This insect is immodestly and unduly impressed by the ripples that he creates and can see. He does not realize the importance of the other forces even though he is almost drowned by a tidal wave.

Price Affects Production, Consumption, and Distribution

Prices are both a cause and a result. Food prices in the United States are largely a result of world forces, but changes in our food prices cause all manner of changes in the production, distribution, and consumption of various foods in this country.

Price Tells the Farmer What, Where, and How Much to Plant

Under the capitalistic system of the horse-and-buggy days the tremendous task of adjusting the complicated supply problems was left to the price system and thereby to farmers individually. Production was wisely guided by price. Whether a farmer produced cabbage or potatoes rested on a basis of price. Whether a farmer sold corn or turned it into pork was determined by price. Whether the range country produced cattle or sheep was determined in part by price.

Public desire for more grapefruit and orange juice found expression in public willingness to pay high prices for these foods, or to buy more at the same price. This made it profitable for the farmers to increase the acreage of citrus fruits. Through price the nation had told the farmers that more citrus fruits were wanted, and the farmers responded. As the horses on farms and in the cities were replaced by tractors and trucks, less timothy hay was needed. The nation paid less for hay. Farmers noted the falling prices and reduced the acreage.

With the improvement and cheapening of transportation, the price which could be obtained for potatoes rose in areas distant from market, and a part of the commercial production shifted from near-by areas to Maine and Idaho.

By the price system the production of an article can be increased, decreased, or shifted from one farm to another, or from one area [2] to another. Since time immemorial high prices have encouraged the production of food that was

[2] A few years ago three states, Nebraska, Montana, and Wyoming, raised about one half as many dry beans as New York. In 1943 they planted twice as much as New York. Formerly there were price differentials based on location. The regimenters did not approve and for the last year or so ceiling prices were the same for all shipping points.

scarce, and low prices have discouraged the production of food that was in abundance.

The way the farmer's son determined whether society wanted him to be a farmer, a coal miner, or a doctor was on the basis of price. In fact, price always was the major criterion by which the producer could learn what society wanted. This principle is thoroughly ingrained in all producers.

Prices affect supplies in many ways. A twenty-five-cent rise in the price of hogs on Tuesday increases the run of hogs the following Thursday. A one-cent drop in the price of eggs in Boston relative to the price in New York diverted eggs from Boston to New York. The government's low ceiling prices on red kidney beans discouraged New York farmers so much that they decreased the 1943 acreage about 20 per cent. The government's price policy regarding sugar resulted in a 39-per-cent contraction of sugar-beet acreage. The effects of abnormally high prices for hogs may be felt two or three years later. This is about as soon as the price telegram can get from the consumer to the producer and the reply, in the form of more pork chops, sent to the consumer. Changes in the price of beef cattle have their effect seven to eight years later.

Very few realize the myriads of different effects fixed prices will have on production a week, a month, a year, or a decade hence. It is gradually dawning on some of our administrators, however, that they cannot get food in the quantities desired at artificially low frozen prices.

Price Guides Distribution

Price has always been the primary force guiding goods through the channels of trade. Whether milk should be consumed in its natural state, churned into butter, pressed into

cheese, evaporated, condensed, or dried has been determined by price. Whether the butter moves to Chicago, Pittsburgh, or New York City has been determined by price.

Since the butter is not produced uniformly throughout the year, periods of feast and famine would occur if butter were eaten as soon as produced. In the periods of high production, prices fell and the distributive trades carried over large quantities of the low-priced butter to the winter months when the price was high. This helped both the farmer and the consumer. It returned to the farmer a greater income than he would otherwise get. The large spring-summer production at the somewhat higher price brought more income. It also helped the consumer. In the winter months, when the production was low and the price rose, the out-of-storage movement of butter prevented consumer prices from rising unduly. It reduced the violence of the fluctuations of the consumer's prices, stabilized his supplies, and raised the farmer's income.

Price very efficiently guided the flow of grain. The majority of farmers sold their grain shortly after harvest, while the consumers demanded their bread in constant supply. Huge terminal elevators were built to store this grain. Normally, the movement of grain in and out of these elevators was largely determined by the relationship of the cash prices to future prices of wheat at Chicago. When the cash prices were low relative to the future prices, the elevators were encouraged to store grain. When the cash prices rose above the future prices, the elevators were encouraged to sell their holdings. A small change in the relationship between cash and future prices told the small country elevator and the large terminal elevator whether society wanted grain withheld from consumption or forced into consumption. The Chicago Board of Trade, popularly believed to be a den of

iniquity, was the place where the important but little-understood spread between cash and future prices automatically regulated the flow of grain to the consumer.

Consumption Wisely Guided by Price

The housewife with the market basket on her arm chooses foods on the basis of price. Whether one should buy hamburger, rump roast, or T-bone steak is largely determined by their prices. Whether a person should buy peas, peaches, and pineapple by the case during the autumn sales, or whether to buy from hand to mouth is largely determined by price. If the case-lot prices are sufficiently low, the frugal consumer "hoards" during the fall.

Consumers decrease the consumption of high-priced articles and increase the consumption of low-priced articles.

We should all like to eat porterhouse steaks and fresh strawberries, ride in Cadillac cars, and live in modern ten-room houses, but these products require so much human effort that it is not possible to produce enough for all. High prices eliminate from the market those buyers who want them least or are least able to pay for them, and the scarce supply is rationed by price to the remaining buyers.

Hens lay more eggs in the spring than at any other time. The price falls, thereby encouraging those who would not otherwise buy eggs to enter the market and take up the large supply.

In years of short crops prices of wheat are high. These high prices tend to limit consumption in the early part of the crop year so that enough wheat will be saved to last until the next harvest. When pork is scarce, high prices of pork cause the consumer to shift to other types of food so that the diminishing supplies are not exhausted before production can be increased.

During a famine in India the government set prices of

grain at a low level, and most of the crop was consumed long before new crops were available. Little or no grain was shifted from other areas. One third of the population died. During a later famine the government did not fix prices and in fact encouraged speculation. Prices advanced immediately, the pressure of the shortage was spread equally over the year, and grain was brought from other areas.

In 1916 the world began to feel some shortage in food supplies. Prices promptly rose. This decreased the purchasing power of consumers and served to shift our consumption so that the war effort was not hampered by malnutrition or famine in the Allied countries. If prices had not risen and especially if crops had been poor or had failed in the later war years, the food supply for any one year would have been consumed long before the following harvest.

Importance of Rising Prices during War

The price mechanism is an effective tool for changing the nation's economy from a peacetime to a wartime basis. During wars it is highly essential:

(a) to stimulate food production,
(b) to shift a large part of industry from the production of civilian goods to armament, and
(c) to reduce the standard of living of civilians.

Advancing prices were the time-honored way of obtaining maximum food production. Price incentives were an effective way to shift industry from a peace to a war economy. Rising prices reduced the standard of living of civilians individually and collectively.

During World War I salaries of public school teachers rose 8 per cent while the cost of living rose 50 per cent. Therefore the purchasing power of these incomes declined 28 per cent. The purchasing power of salaries of university professors declined 27 per cent; of government employees, 19 per cent;

of bonds and mortgages, 30 per cent; and of rents and royalties, 15 per cent. If direct taxes had been included, the decrease in the civilian standard of living would have been even more. But this is not all; the collective standard of living was also reduced. The purchasing power of municipal and state taxes declined 20 per cent; state, municipal, and school bond issues, about 50 per cent.

Since the purchasing power of a considerable part of the population declined, people were forced to reduce expenditures. This took the form of cheaper types of food and clothing, less travel, entertainment, and education, less expenditure for housing, and so on. Since the bare necessities of life, food and clothing, can be reduced by only a limited amount, the first and greatest reduction must come in other types of expenditures. With decreased purchasing power, individuals cannot afford to maintain their homes in as good condition as formerly. They cannot afford to make improvements, let alone to build new homes.

During World War I the depletion of capital took the form of failure to repair dwellings, churches, hospitals, factories, power plants, railroads, and the like. It also took the form of the postponed construction of new homes, churches, hospitals, power plants, telephone lines, sewers, streets, highways, universities, schools, and the like. These sacrifices released huge amounts of materials for tanks, guns, airplanes, ships, and other fighting equipment.

Most people think that major wars are fought with armament created by expanding the total production of the country. The most important source of material for war, however, is obtained by reducing the production of civilian goods, and depleting capital. World War I cost the nation about $32 billion of which $3 to $4 billion came from increased production; $8 to $10 billion from decreased consumption; $18 to $21 billion from depreciation of capital.

The existing wealth of the nation was a more important source of fighting materials than either increases in total production or reductions in consumption. During a war total production may increase but little, but the production of war materials must increase greatly. In other words, there is a great shift in the type of goods produced. There could be little or no shifts in the production of food and clothing, which are normally produced and consumed on a current basis. Contrary to popular belief, current stocks are relatively unimportant. The important reduction must come in that type of production which can be postponed because of very large inventories. Producing war materials at the expense of reducing inventories of capital goods is equivalent to utilizing production of the past.[3]

With rising food prices, each consumer reduces his purchases of items other than food. War, through advancing prices, inevitably reduces the standard of living; the real cause of the lower standard is war and not, as is almost universally assumed, the rising prices.

During World War II many proposals have been advanced for painlessly depriving civilians of goods and services. The nation is using decrees, support prices, priorities, price-fixing, rationing, subsidies, and the like to increase food production, shift industrial production, and reduce the civilian standard of living. Under this system our problem seems to be how the most goods can be taken away from the most people with the minimum amount of squeal — regardless of the cost in terms of human labor.

War reduces the standard of living of civilians. Formerly the task was accomplished by price. Now it is undertaken by administrative action, but price is so potent that it

[3] Of course, when inventories are reduced in an emergency, they must be built up again afterward if the pre-war standard of living is to be restored or raised.

rules supreme despite the efforts of the administrators to prevent it.

Rising Food Prices Do Not Mean Malnutrition

Since prices guide the consumption of individual foods, most persons jump to the conclusion that rising prices of food in general curtail the consumption of all food. If this were the case, there would be a striking relation between the death-rate or the amount of sickness and the retail prices of food. No one has yet presented a chart to show that in this country they now are or ever have been associated. The explanation is clear. If food prices rise faster than income, food consumption is maintained at the expense of drastic reductions in the consumption of articles other than food. If the prices of various foods change relative to one another, consumption shifts from one food to another and total food consumption changes but little. If prices of all foods rise together, total food consumption changes but little and the consumption of many non-food items declines. This is a necessary reduction in time of war.

A rising scale of prices of cars from the Ford to the Cadillac automatically reduces the consumption of the higher-priced cars. A rise in the price of different qualities of beef from hamburger to T-bone steak automatically curbs the consumption of the higher-priced cuts. This simple principle is ingrained in the thinking of 125 million Americans. From these observations millions of them generalize and convince themselves that a rise in the price of food is accompanied by a diminution in its consumption. This is an erroneous generalization. Many able public-spirited persons hold this view, and it was an important reason for the country's efforts to stabilize the cost of living. The rising cost of living has not caused malnutrition. With even a greater rise, food consumption would have been maintained by absorbing a larger pro-

portion of the country's buying power. This would have eliminated some of the unspent income that comprises the "inflationary gap" about which a few are much concerned.

One Way to Lap Up Excess Purchasing Power

The Russians apparently have one solution for the problem. They fix prices and ration food, but do not attempt to control all prices or ration all foods or even all the supply of one kind of food.

TABLE 3. RATIONED AND MARKET PRICES OF FOOD IN RUSSIA *

Article	Rubles, prices per kilo † for		Dollars, prices ‡ per pound for	
	Rationed foods	Market foods	Rationed foods	Market foods
Bread	1	140 to 150	0.10	12 to 13
Sugar	5½	800	0.50	70
Herring	10 to 20	——	0.85 to 1.75	——
Potatoes	——	60 to 70	——	5 to 6
Cereals	6 to 20	150	0.50 to 1.75	15
Cooking fats	20	——	1.75	——
Butter	50	1,000	4.25	85

* Kerr, W.: *New York Herald Tribune*, May 18, 1943, page 21.
† One kilo equals about two and one-fifth pounds.
‡ Based on regular exchange rate when the ruble is worth 19 cents.

Walter Kerr, the *New York Herald Tribune's* able correspondent, presents a vivid picture of a typical Moscow working family [4] in time of war. They are paid according to the piecework system. The family income varies from 1,330 to 1,940 rubles per month, which at the regular exchange rates is equal in amount to about $250 to $375 per month. The family spends about half of its income for the usual non-food items in the cost of living. The other half of the income is

[4] The father is a lathe operator; the wife, a textile weaver; the sixteen-year-old son an apprentice in a machine shop, and the twelve-year-old daughter goes to school.

spent for rationed and unrationed food. Since the family cannot get along on its food ration, it purchases the remainder on the open market, where farmers sell their produce after having sold a given proportion to the government at fixed prices. This family found that its monthly rationed food lasted from fourteen to twenty days. About one third to one half of the food had to be purchased on the open market at competitive market prices.

A comparison of the prices of rationed and market foods indicates that market prices are 15 to 150 times the rationed prices (table 3). A loaf of "rationed" bread costs about 10 cents, but "market" bread costs $12.

Joseph Stalin may not have solved all the problems, but he has learned — possibly the hard way — that high prices for food lap up excessive purchasing power, which is in the public interest in time of war.

We Have Experimented with Many Panaceas

The price policy of the horse-and-buggy era was to let prices rise and fall; every man for himself, and the devil take the hindmost.

Here and there attempts were made to alter the general trends. William Jennings Bryan attempted to counteract the deadening effects of the price decline during the eighties and nineties by the substitution of the silver for the gold standard. McKinley proposed a tariff on food as the solution to the problem. The Underwood Tariff Act of the Woodrow Wilson days removed the agricultural tariffs to protect the consumer against rising prices. The Emergency Tariff of 1921 was passed to protect the farmers against the post-war deflation. Tariffs cannot change the upward and downward trend of world prices.

Mr. Hoover's Farm Board was more vigorous but equally ineffective. The Farm Board purchased huge amounts of

wheat to stabilize the price of wheat in this country. The Board did not know it, but it committed itself to stemming a world-wide collapse in wheat prices.

The present administration put an end to the Farm Board, but not to its basic principles, which were later revived under the "ever normal" granary policy.

The greatest changes in our national price policies occurred during the present administration. During its earlier years the policy was to raise prices in this country when world forces were holding them down, with the altruistic aim of aiding food-producers. More recently, the policy has been to prevent prices from rising when every economic force has been driving them up, with the avowed purpose of protecting the consumer. The objection to these changing policies is not their inconsistency, but their ineffectiveness.

During 1933, food prices and incomes of both food-producers and food-consumers were raised by the unpopular but effective method of devaluing the dollar. This gave way to the rather popular but very ineffective program of controlled production. The theory was that incomes of farmers could be raised by reducing supplies, plowing under cotton, restricting the wheat acreage, and killing the pigs. Since reducing the supply did not raise incomes, farmers were given benefit payments for conserving the soil, curtailing the acreage, and the like. The ever normal granary, the parity conflict, easy credit, the stamp plan, and other price panaceas flashed across the horizon.

Present Policy Is a Dilemma

The present national price policy is somehow or other to get the farmers to increase food production despite low ceiling prices, protect the consumer's pocketbook with low frozen retail food prices, and protect all of us from the wild inflation that is universally believed to be just around the corner.

A policy of low ceiling prices repeals the law of supply and demand as far as supply is concerned. It restricts future production. It also repeals the law of supply and demand as far as demand is concerned. Low ceiling prices speed up the rate of consumption.

All Cannot Have More if All Produce Less

The New Deal brought to life the age-old belief that the nation could have more by a redistribution of wealth. This general philosophy has a strong political appeal. Most of the improvement in the standard of living of the common man historically has been due to a rise in the standard of living of all people rather than through a redistribution of the existing wealth. There is only one way to raise the standard of living permanently, and that is through increasing production of more goods and services.

Since increasing production lowers price and decreasing production raises price, there is a widespread belief that by producing smaller crops, all can have more. We all know that we are individually better off with a high price or wage. We all know that a high price is associated with a small output. Therefore many erroneously reason that the way to get more is to produce less. This general philosophy may be summarized as follows:

Crop	Price [5]	Income [6]
80	140	112
100	100	100
125	70	88

There is an almost universal belief that if the production of a crop is reduced 20 per cent, prices will rise, say, 40 per cent,[5] resulting in an income 12 per cent [6] above normal. On the other hand, if the crop is 25 per cent above normal, the

[5] Erroneous assumption. [6] Erroneous conclusion.

price is assumed to decline to perhaps 30 per cent [5] less than normal, in which case the farmers' income would be 12 per cent [6] below normal. Since time immemorial, proposals have been made to raise both prices and incomes by reducing production. This was the basis of our AAA program and of innumerable other restriction programs so widely accepted throughout the world during the thirties.

In recent years scientific studies and practical experience have disproved this age-old axiom. It is true that any force which reduces production raises price, but it does not follow that reducing production raises income. On the average, a big crop brings agriculture just about as much income as a little crop. The known facts may be summarized as follows:

Crop	Price	Income
80	125	100
100	100	100
125	80	100

A 20-per-cent reduction in the production of a crop raises its price about 25 per cent, and a 25-per-cent increase lowers prices 20 per cent. In each case the income is approximately unchanged, 100. Normally, decreasing the production raises price, but it does not raise a nation's agricultural income.[7]

Much of our muddled thinking is due to the fact that, although reducing production raises price, it does not raise

[5] Erroneous assumption. [6] Erroneous conclusion.

[7] Of course, the relationships for individual crops vary somewhat from this generalization. A 20-per-cent reduction in the supply of some crops raises the price sufficiently to bring the farmer somewhat more dollars than a big crop at a low price. For instance, a 20-per-cent decrease in the production of potatoes raises prices 29 per cent and brings farmers a slightly greater return than does the large crop at a lower price. The short crop brings farmers 3 per cent more income than a normal crop and 6 per cent more than a large crop. Similarly, a short crop of corn brings farmers a few more dollars than a large crop. But small crops of oats, hogs, and apples bring the farmers higher prices, but slightly less incomes than large crops.

price and consequently income as much as many erroneously reason.

Since this general principle was not well known, the man with the hoe throughout the world attended the meetings during the depression of the thirties and approved of the national policies to raise incomes by restricting production. During the meetings his enthusiasm for the restriction program was unbounded; when he went home and planned his farming operations to comply with the program, he unconsciously tried to devise ways to live within the letter of the law but produce more, because he knew it was good business for him to do so. The records of production indicate that he succeeded quite well. Farmer Jones knew that he, individually, could do nothing about price, and if price was controlled, the only way he could get more income was to produce more. His general philosophy might be summarized as follows:

Crop	Price	Income
80	100	80
100	100	100
120	100	120

At any price level, high or low, the only way the individual farmer could get more income was by producing more crops. Obviously, there was a conflict between group interest and individual interest. The farmer unconsciously sabotaged the program by restricting the production on the poorer land and stepping up production on his good land.

Price Level More Important to Income than Variations in Production

The most important factor affecting the incomes of farmers is changes in the general level of prices, and not whether farmers produce a large or a small crop.

The value per acre of large crops of wheat was about the

same as the value per acre of small crops. Over the sixty-six-year period from 1873 to 1938, small crops of wheat brought $12.47; and large crops, $12.38. The difference, $0.09, was less than one per cent of the average value of the crop. In the nineties, when the price level was very low, wheat was worth about $9 an acre; during World War I, when the price level was very high, $23 an acre; and in the twenties, almost $15 an acre (figure 3). The difference due to the price level was much greater than the difference due to large or small crops. The same holds true for other crops.

Variations in the supply and the price of wheat and other food crops for any given year tend to be compensating. Consequently, the farmers' income varies less than one would expect by looking at either price or the size of the crop alone. The effect of the price level on the value of the farmers' crop, and consequently their income, is not compensated. Therefore most of the variation in the farmers' income is due to the forces that make all prices, and not to changes in the size of the crop.

Man is unable to observe and measure the effect of the general price level. He is able to observe the effects of large and small crops. Therefore it is universally but erroneously agreed that the supply of a commodity is the overwhelming factor affecting incomes of food-producers.

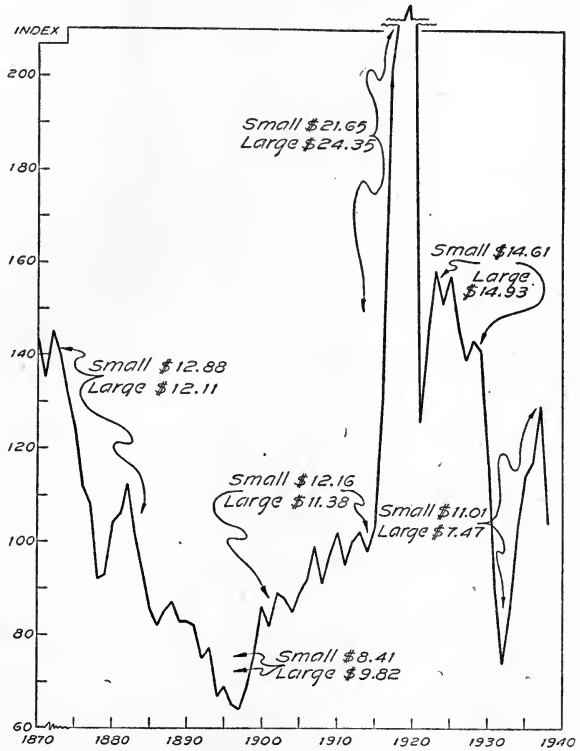
Food Prices Made by Economic, Not Political Laws

Violent changes in farm and retail prices of food have led to demands that something be done to prevent such changes. We have been attempting in a large way to fix farm prices by legislation for about ten years. We have resorted to legislation in order to control retail prices of food only recently.

The American people have great faith in legislation as the solution to any problem. Legislation regarding farm prices

centered on a legal abstraction called "parity." "Parity" is a term which denotes an equality between an index of prices received and an index of prices paid. During seven years of general deflation, 1933–9, expensive and unsuccessful efforts

FIGURE 3. EFFECT OF LARGE AND SMALL CROPS AND THE PRICE LEVEL[8] ON THE VALUE OF THE WHEAT CROP PER ACRE, 1873 TO 1938



When the price level was high, the value of both large and small wheat crops was about the same, but much larger than the value of either large or small crops during a low-price period.

[8] The solid line represents the index numbers of prices of thirty basic commodities. The words *small* and *large* refer to small crops and large crops.

were made to bring farm prices up to parity. With three years of general inflation, parity has been reached and passed; the nation is now attempting to hold prices down.

Whether farm products sell above or below their parity ratios at a given time is essentially a question of general inflation or deflation.[9]

During the seven years 1933–9, when billions were spent in an effort to restore parity, the average of all farm products brought 77 per cent of parity. Since 1939, with a rising price level, it has increased to 114 per cent.

Wheat is a product which has been subject to rigorous controls. The government purchased, through loans, huge amounts of wheat, and large payments were made to producers to curtail production. During this seven-year period the average purchasing power of wheat was 6 points below the average of all farm products. At the beginning of the period it was 3 points below; and at the end, 16 points below. Cash payments increased the income of wheat-producers, but the other phases of the program did not improve their prices relative to the average of prices of other farm products. In fact, those products which were not under control rose relative to wheat.

The acreage of corn was also curtailed, and the government purchased, sealed, and stored large amounts of corn and paid producers substantial amounts to curtail production. At the end of the period the purchasing power of corn, like wheat, was less than at the beginning.

Butter, which was not subject to controls, averaged a little better than all farm products.

[9] Most of the change in farmer's prices expressed in terms of parity were due to world-wide inflation and deflation, and the rates of change were uniform. With the deflation of the twenties and thirties, a 1-per-cent fall in prices caused 0.61- and 0.67-per-cent declines in parity. With the inflation of World War I, the twenties, and the thirties, a 1-per-cent rise in prices was accompanied by 0.77-, 0.85-, and 0.83-per-cent advances in parity. With World War II inflation, the rate was 0.68 per cent.

During these seven years man's efforts to attain parity were of little avail. Whether the efforts were in the form of loans or restricted production or both, and regardless of the efforts of the farm bloc and farm organizations, the net result was that parity was not restored.

The general inflation of the last three years has increased prices of all farm products, and by April 1943 they had risen to 14 per cent above parity. From August 1939 to April 1943 there was a striking increase in the purchasing power of farm products. The percentage increases were as follows:

Potatoes	140	Barley	54
Hogs	105	Chickens	52
Corn	90	Cattle	43
Wheat	63	Butter	31
	All farm products	61	

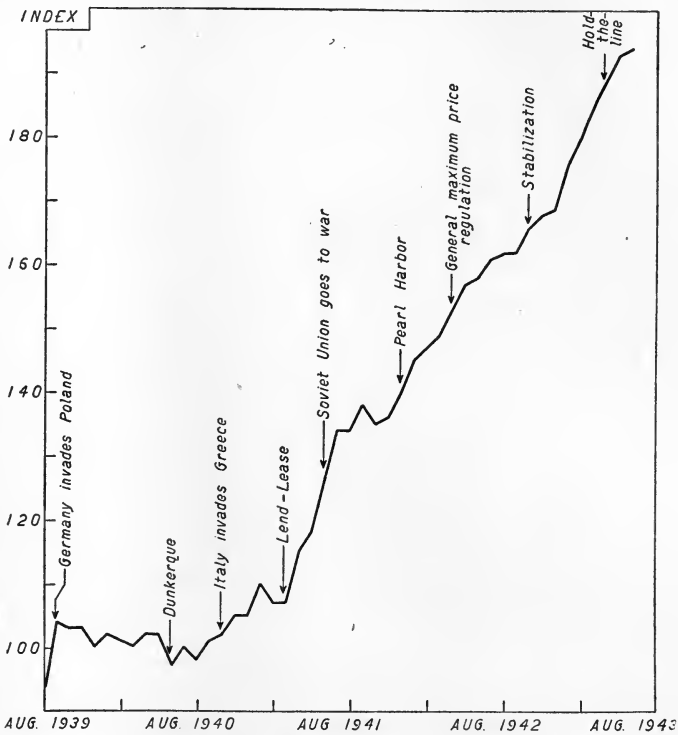
Most of this improvement was due to the fact that, during inflation, farm prices rise more than articles farmers buy. The price whip swung in favor of the farmer, as is usual with rising prices. Three years of moderate inflation brought about what seven years of legislation and administrative controls failed to accomplish.

Formerly parity was thought to mean equality. Now the man on the street thinks parity is a method by which farmers are attempting to get more than they deserve for their products. Formerly parity was the goal to which farmers hoped that prices might rise. Later, parity was a limit beyond which city folks hoped food prices would not rise.

Despite hopes, plans, and legislation, farm prices react in accordance with economic laws. The efforts to hold farm prices down during the past two years probably have been no more effective than the previous efforts to push them up. During the past two years farm prices have continued to rise despite price ceilings, "stabilization," and the fortunes of war (figure 4).

FIGURE 4. INDEX NUMBERS OF UNITED STATES FARM PRICES OF FOOD 1939 TO 1943

1910–14 = 100



Since the spring of 1941, food prices have risen at a rather uniform rate of about three points per month, regardless of general maximum price regulation, price stabilization, and the like.

During World War I the farmer was heralded as a patriotic citizen who was encouraged to expand production and put forth every effort to meet wartime demands for food. He was not accused of attempting to raise prices or to profiteer. During World War II the government prevented the farmer from expanding the acreage of wheat, corn, cotton, and some other crops. Some persons accused farmers of profiteering,

others of attempting to raise prices unduly, and still others blamed them for the rising costs of living. These accusations have been propagandized so effectively that there is a large number of intelligent people who firmly believe that farmers are or will be the cause of "inevitable" inflation.

Incomes Have Risen Faster than Taxes

Heavy taxes on industry, distributors, and the moderate-salaried groups reduced their purchasing power. The greatest increases in income went to the low-income groups; since taxes were not applied in proportion to the increase in their pay envelopes or in proportion to the decrease in consumable goods, they had more income than that to which they had been accustomed. Most persons in this group spent their incomes on a current basis and saved little. Since this was a large group, their newly created purchasing power exceeded the decreases in the purchasing power of the higher-income groups, which were subject to heavy taxes. The net result was an increase and a shift in the demand for commodities. Higher prices have accompanied and will continue to accompany such programs.

Price Control Is Difficult

Under a system of freely fluctuating prices, the price of a food in a country is determined primarily by world conditions and secondarily by its internal conditions. The effect of these world forces has been merely modified by government regulations. Each country is attempting to operate a more or less isolated economy which reduces to some extent the importance of external forces on its internal price structure. This is a larger undertaking than is generally realized. Normally the general price level responds to world rather than to national influences. It would be as difficult for the United States to do business at a price level differing from

that of the rest of the world as it would be for the corner grocer to try to do business on a set of prices either above or below those that generally prevailed. The difficulty of understanding exchange rates, the temptation to make long-run conclusions from short-run observations, and the tendency to become absorbed in the institutions of one's own country have led many people to the belief that price stabilization was possible without regard to world influences. Most of these efforts enjoy little success. Some hobble along in a strait-jacket of rigid government control.

These methods of price control have not been very effective in the United States; they have been somewhat effective in Canada, very effective in England, and seemingly faultless in Germany. It would appear that the believed effectiveness of controls is inversely proportional to the amount of information available and directly proportional to the distance between the countries in question.

Price Control Is Expensive

To police the country's distributive machinery rigidly enough to maintain prices at fixed levels would take a huge amount of human effort. Such an expense would be extravagant in time of peace and prohibitive in time of war because it would be a net deduction from the war effort. Since the cost of complete control of the distributive system is prohibitive, nations undertake varying degrees of partial control. A skeleton of official pronouncements is buttressed by pleas, threats, and coercion. This method achieves some degree of success while there are still plenty of goods on the shelves and the bluffs are not called. The complete cost of a system of rigid and thoroughgoing controls has not yet been realized; and the final effectiveness of a partial system such as our present one has not yet been measured. The nation is still in the honeymoon days of price control.

The net result of the first two years of price regulation in the United States was to retard rather than to halt the rise in commodity prices. Some folks refer to it as a delaying action; others, as a disorderly retreat.

Inflationary Gap vs. Statistical Gap

Recently some people have become alarmed about the existence of an "inflationary gap." This "gap" is the calculated difference between the number of dollars in the pockets of consumers and the amount of consumable goods multiplied by their ceiling price. The difference between the two supposedly represents idle dollars in the hands of consumers and the threat of inflation. The "inflationary gap" is calculated in billions of dollars, the amount depending upon the individual who makes the calculations and the purpose for which the calculations are made.

Others say that there is no inflationary gap; it is merely a statistical gap, and that the official index numbers do not measure the amount of inflation. They contend that such index numbers contain automobiles not now made, and crude rubber at a ceiling price instead of the cost of synthetic rubber, which is above this ceiling. There is a deterioration in the quality of clothes, meat, and many other goods and services. Trade discounts have been eliminated, black-market prices are not included, and the general tendency is to report the ceiling price. A large part of the military end-products are not under control. The index numbers do not include the increasing importance and rising prices of second-hand goods. All of these factors indicate that prices have risen more than the official indexes show.

This should not be construed as a criticism of the makers of official index numbers. They are just as well acquainted with this problem as the critics. Furthermore, they cannot control all the uses that are made of their index numbers.

In addition, there is strong pressure against changing the measures in the middle of the game.

For these reasons it would appear reasonable to assume that we have had more inflation than the official index numbers indicate, and that the inflationary gap is less than it is generally assumed to be.

Rolling Back the Cost of Living

It is one job to roll back the *official* index of the cost of living and another to roll back the *real* cost of the consumer's living. There were proposals to spend $100,000,000 to roll back the prices of seven commodities, to cut the cost of living 2.3 per cent. Stated another way, it was proposed that the Federal government spend $100,000,000 and save about $2,000,000,000. If the zeros are confusing the proposal may be stated still another way. For a 5-cent expenditure the government proposed to save the consumer $1. Why not give these supermen a billion dollars and let them roll back the cost of living 20 billion dollars? The answer is simple. There is a limit to the credulity of the American people.

All Signs Point to Higher Prices

Food prices will continue to move with the forces that influence all prices. They will respond to all the influences making for a higher level of prices in general and, in addition, will respond to the probability of decreasing supplies and increasing requirements. The government's bulwark against price rises is probably weaker as regards food than as regards other segments of its price-control policy.

Many of the activities of the Department of Agriculture were aimed at higher prices, but some of its programs were aimed at lower prices or stabilization at present levels. OPA attempts to maintain rigidly fixed prices, to roll back prices, and, if not successful, makes grudging concessions to ris-

ing prices. Government purchases of large and increasing amounts of food for Lend-Lease and rehabilitation have a strong upward influence on farm prices. Any force that decreases the supply of food in this country is a factor tending to raise farm prices.[10] The net effect of these various government policies is toward higher prices.

Among the many factors affecting prices, there is not one that points to stable or lower prices. In the United States, as in the rest of the world, the most important forces affecting prices are changes in supplies and demands for commodities. The available supplies of commodities are short, and the demand for these commodities, relative to the demand for dollars, is high.

It would appear that the forces making for higher prices in the world, in the nation, and in the food industry outnumber and outweigh those tending to depress prices.

[10] The government recognized this principle when it tried to raise farm prices by the scarcity program under the AAA.

CHAPTER 10

CEILING PRICES, RATIONING, AND SUBSIDIES

WHEN the nation committed itself to setting ceiling prices, it unthinkingly bargained for a rationing system. Then, with production discouraged because of low prices, subsidies were inevitably called for. Price-fixing, rationing, and subsidies are the three-legged stool of a regimented economy. The first, the announcing of fixed prices, is relatively painless and costless. The second, rationing, is both painful and expensive. The third, subsidy, is an expensive intoxicant that results in a nation-wide hangover.

These Are Methods of Buying Off the Public

The consumer always wants low prices. Through price ceilings he got them. The downtrodden third has always wanted equality with the princes of privilege. Through rationing the bricklayer now gets as much meat and gasoline as the banker. Laborers have always wanted high wages for their labor. Through hidden subsidies the country is moving in that direction.

These crutches do not lead to economic well-being any more than the process of taking in one another's washing.

When these methods are used, unspent incomes and government debt, both of which are inflationary, rise to new and greater heights.

Patching market prices with ceiling prices, patching that patch with rationing, and patching that patch with subsidies do not solve the problem. They merely postpone the day when the tire blows out.

We Have a Two-Money System

Bimetallism was the original two-money system. It did not always work, because it was impossible to control the supply of and the demand for silver and the supply of and demand for gold, or to keep the legal ceiling prices of the two metals in equilibrium with their market prices.

The present rationing system is also a two-money system. One must have dollars to get the property and one must have coupons to get title to the property. There is no lack of dollar money; there is a shortage of coupon money. With the supply of dollar money greater than the supply of coupon money, it will be hard to keep commodity prices at their legal ceilings. The difficulties of accomplishing this objective are enormous.

Ceiling Prices Are Inflexible

Ceiling prices, unaccompanied by the other phases of a regimented economy, retard production, stimulate consumption, and interfere with the movement of goods through the channels of trade. These difficulties are likely to be greatest in large cities in deficit areas. This is due in part to the inflexibility of ceiling prices.

Price ceilings tend to be based on differences in freight rates. This operates to the disadvantage of large urban centers like New York City. The difference between the price of a chicken in Missouri and New York is greater than the

freight rate. New York City has a great social system [1] to be maintained, which means high taxes and high operating costs for the middlemen. The difference between the cost of a chicken in Missouri and in New York is the freight rate plus the higher distributive costs in New York. With rising incomes and with ceiling prices, the local consumers can outbid New York. Hence food shortages are greater in the large urban centers in deficit areas. The large cities have neither a weapon nor a magnet to attract food under relatively rigid ceiling prices — unless through the black market.

Price Rations Goods

Many people, when they were handed War Ration Books, assumed that this was the first time they had been rationed. Food has always been rationed. Goods never have been and never will be passed around indiscriminately. Under the free economy of the horse-and-buggy days, more commonly known as the capitalistic system, price rationed goods.

A freely fluctuating price mechanism was the pivotal and

[1] New York City has a huge police force, and the Missouri farmer an old rifle:

Service	*New York City*	*Western farm*
Police	Huge	Old rifles
Fire department	Very large	Neighbors and buckets
Telephone	Buried in rock	Strung on poles
Water	Hot and cold on tap	Cold at pump
Light	Electricity, house and street	Kerosene, house
Hospitals	Many	None
Parks	Many	None
Swimming	Expensive pools	Creek
Playgrounds	Many, supervised	Pasture lot
Labor unions	Many	None
Social security	Much	None
Transportation	Elevated, subway, bus, streetcar, and taxi	Bus — five miles away
Schools	Many, expensive	Cheap
Total	*Very large*	*Not much*

highly essential rationing device of a capitalistic economy. Price was the dominating force influencing production, directing the distribution of goods through the channels of trade, and guiding consumption.

This system did not work perfectly, but it worked. It was ruthless and was no discriminator of persons. Those who did not respond to its mandates were deemed socially undesirable and were prevented from interfering with society's best interests by the harsh process of bankruptcy. In one respect the system was charitable. It punished those who did not obey its mandates, but it did not deprive those it bankrupted of the opportunity to make a new start in life and continue to be productive.

The price-rationing mechanism had the advantage that it was practically automatic and therefore very efficient. The system had the further advantage that in one sense it was costless. It did not require a large amount of human effort to regulate those who produced, distributed, and consumed.

Under the price mechanism the black market did not exist.

The price-rationing mechanism did not solve the problem of inflation and deflation, nor did it presume to do so. In fact, the price system historically has invoked a certain amount of inflation as a stimulus to production and a deterrent to consumption in time of war.

Although the price-rationing system was ruthless, it did have definite standards of equity. The system rewarded men in proportion to their relative performance. In general the individual who produced the most received a higher income and, if so disposed, could purchase more of the good things in life. Price incentives spurred the individual to greater efforts in the interest of the group. Despite its shortcomings, this measure of equity stood the test of time. It produced more plenty for the many than any other system.

Ticket Rationing a Substitute for Price Rationing

Our national rationing policy is to substitute a frozen ceiling price and a book of tickets for the fluctuating price mechanism. There are striking contrasts between the two systems.

In a capitalistic system the individuals collectively tell the individuals through prices what they want them to do. In a collective society some individual decides and tells other individuals what they, individually and collectively, must do.

In a regimented society price plays a minor role. Production, consumption, and distribution are controlled by edict. Priorities, ration cards, tickets, and stamps become the currency that dictates production, moves goods from the producer to the consumer, and determines how they shall be consumed.

The regimented system does not work perfectly, but presumably it can be made to work. Where it has been used, it has proved ruthless and no discriminator of persons. Those who did not respond to its mandates were prevented from interfering with society's best interests by the simple process of turning them over to the firing squad, a cheap and efficient way of liquidating those who do not obey. In totalitarian states, under this system, if an individual makes a mistake, he does not have an opportunity to make a new start in life. Those who are liquidated cease to be productive.

The ticket system is not automatic and not efficient. It has the disadvantage that it is very expensive. Large amounts of human labor are required in central offices and scattered throughout a nation to supervise the production, distribution, and consumption of goods.

Rationing increases the operating costs of distribution. It also inconveniences all consumers and decreases the efficiency of many war workers.

The ticket-rationing system operating in conjunction with a hobbled price mechanism inevitably tolerates black markets because it cannot help itself.

The ticket system was assumed to solve the problems of both inflation and deflation. In fact, one of the important sales points of the ticket sytem of rationing is the prevention of inflation. Inflation has been used to scare people, as has the ghost in the cemetery. Many have been effectively scared, but it has not yet been demonstrated that this system of rationing will prevent inflation.

In a rationed economy the state is supreme and the individual does not count for much. The government tends to be of the state, by the state, and for the state.

Equality Is Not Equity

The ticket-rationing system has certain tests of equity. In its kindergarten state the test of equity is for all to share alike from the cradle to the grave. Each person, whether an infant, munitions worker, farmer, bank clerk, bar-tender, or octogenarian, receives title to the same amount of meat, sugar, and canned pineapple. Either the baby and the octogenarian are overfed or the war worker is underfed or both. This measure of equity is a far cry from that established by price rationing. This test of equity has not and will not stand the test of time. It is already breaking down. Some unused tickets are given to friends or sold to the neighbors without any pangs of conscience. Such activity upsets equality as a measure of equity and attempts to re-establish equity as it was under a price economy. In many rural communities unused tickets are given to the groceryman, who is thus enabled to sell extra food to those who want it. Rural areas eat well, even under a rationing system. All are given equal numbers of tickets; since the farmers and townspeople live in part off the land, the tickets are a supplement rather than a ration.

Equality for all has but one justification in a rationing system — that of apparent simplicity. Equality as a test of equity makes it easy to write the rules. The administrators know that equality is not equity, but despair of attempting the more complicated problem of distributing goods in accordance with any other measure. Consequently, the keynote of most rationing programs is equality for all, and the program is sold to the public on that basis. The assumption is made that there is some particular virtue in equality.

Though equality may be the battlecry of the regimenter, both man and nature bear testimony to its non-existence. Variation is the basic law of nature. No two leaves are alike. They do not receive the same amount of sunshine nor would they make equal growth if they did. No two men contribute exactly alike to the war effort. Equality is a fetish; the law of nature is that everything should vary, and that the most productive should be encouraged.

The Russians may once have tried to supply everyone from the cradle to the grave equally with the good things of life, but as they accumulated experience, and especially as they became involved in war, they discarded this early test of equity and rewarded people in proportion to their effort, which was the old test of equity under capitalistic price rationing. Russians at heavy work get X amount of food. Those at less heavy work, X minus one; the next group, X minus two, and so on. It has been reported that those that contribute nothing to the war effort look out for themselves.

Sooner or later this nation must decide whether the war worker should have, say, three pounds of meat per week, the newborn babe none, and the octogenarian one pound. Perhaps a war worker should have had two cups of coffee at each meal. The farmer in western Kansas who cannot grow a garden should have a larger allotment of canned fruits and vegetables than a farmer in other parts of the United States

where climatic conditions are more conducive to gardens and orchards.

Equal numbers of ration tickets do not result in equal treatment or equal sacrifice. The sooner the nation changes from "share and share alike from the cradle to the grave" to rewarding people in proportion to their contribution to the war effort, the better for all.

Rationing Cannot Be Made Easy

The difficulties of rationing are not imaginary. They are very real. Even our simplified and streamlined system of rationing butter, meat, fats, and cheese on a share-and-share-alike basis is beset by innumerable difficulties. The consumer does not group butter, lard, vegetable fats, and meat into one category, as do the rationers. Butter is an expensive product used to grease a cheap food, bread. Cooking fats are a somewhat less expensive product used to keep a very cheap food, potatoes, from sticking to the skillet. Meats are high-priced, highly prized, and highly palatable food that supply proteins and other nutrients to the diet.

Obviously, complications will arise because of the difficulty of substituting one of the rationed products for another. When the nation finally goes on the bread standard, as appears likely, someone will go without butter under this program.[2]

The products have varying degrees of perishability. Meat spoils quickly and becomes poisonous. Butter becomes rancid

[2] The first effect of rationing butter was to reduce the consumption of bread. The one pat of butter allowed in the restaurant curtailed bread consumption. The housewife, the guardian of coupons and the real rationer of butter, contributed her bit. The husband and the children unknowingly curtailed the consumption of bread because unbuttered bread is neither pleasant to the tongue nor easy to swallow. Sooner or later the nation must increase the consumption of grain directly, rather than indirectly by feeding it to livestock. The first effects of the rationing of butter were to decrease rather than increase the consumption of wheat in the form of bread.

and, although not harmful, highly unpalatable. Vegetable fats can be kept longer than lard, and lard longer than butter.

Quality is another problem not solved by the butter-meat-fat-cheese program. Since there is little variation in the grades of butter, lard, and vegetable fats, changes in quality of these products are not an important problem. In the case of meat, however, there is a wide range in quality. Some cuts are lean and others fat. Calves' liver is 100-per-cent lean. A standard number of tickets for a particular cut of meat, regardless of quality, has caused sharp changes in the cutting of meat. A pork chop is not what it used to be. Good old horse-and-buggy hamburger once was about 20-per-cent suet; now it runs from 20- to 40-per-cent suet or even more. T-bone steaks and rump roasts can be cut from a steer, a heifer, a canner cow, or a bologna bull at equal points per pound, but the quality is not the same. Some are tender, and others are tough.

It is not possible to meet the many community preferences and keep the supply and demand for butter, meats, fat, and cheese all in equilibrium. If there were several kinds of tickets, it might not be so difficult to keep the supply of a particular commodity and the number of coupons in adjustment.

To complicate the problem further, the supplies of meat coming to market vary throughout the year, while the supply of tickets is uniform. Consequently the amount of meat available to the consumer may be at wide variance with the uniform number of coupons, with the result that some go without meat.

Another inequity in the rationing system is that the early bird gets the low-point cuts and the late one is stuck with the high-point products.

The problem of administering the program is very complicated. It would be necessary to keep profit margins alike for

all classes of products in order to allocate supplies in proportion to tickets.

It is difficult to obtain equity by rationing a part of the meat supply and leaving the balance unrationed. Pork and beef are rationed by the ticket system. Poultry has a price ceiling, but is being rationed by market prices above the ceiling prices. Theoretically, poultry should be rationed by the ticket system as are other meats. Administratively, the case for rationing poultry is not so simple.

Even by the summer of 1943, rationing had not eliminated meat shortages in deficit areas like New York City. Under a ticket system, a shortage is likely to be more severe in deficit than in surplus areas.

The butter-meats-fat-cheese program may have been an easy way out for the OPA officials, but it made rationing a highly complex conundrum for 125 million civilians.

It remains to be seen whether a government which grants increases in incomes has the knowledge and ingenuity to maintain equitable ceiling prices throughout the channels of trade, control the volume of coupons, and vary their point values in such a way that the diminishing supplies of food will be distributed equitably.

Much misunderstanding arises from the difficulties of distinguishing between the illusions of theories and the disillusions of their administration.

Ticket Rationing Means Strict Controls

To make ticket rationing of meat work with low ceiling prices, it would be necessary to inaugurate strict controls from the farmer's farrowing pens to the consumer's stomach. It would be necessary to plan in advance the correct number of pigs that should be born. This would require considerable foresight on the part of both the administrators and the pigs. The gestation period for hogs, 112 days, is considerably

longer than the foresight of most planners. However, even if the correct number of pigs could be determined and the correct number of farmers could be authorized to breed the correct number of sows, which in turn would farrow the correct number of pigs, the troubles still would only have begun. At birth, every pig would have to be numbered and recorded in the county recorder's hog files. In case of death, the local veterinarian would have to certify to the pig's death, pull the numbered ring from its ear, and return it with the proper records to the county recorder. It would be necessary for the administrators of this program to make it illegal for the farmer to slaughter animals for his own consumption. And this regulation would have to be enforced.

Some inspector would tell other inspectors, who in turn would tell the farmers when the hogs were ready for market. After the necessary papers had been filed, the farmer would be advised to turn his hogs over to some trucker, who, at a ceiling rate, would deliver the hogs to the market designated by the regimenter. The hogs would be weighed by one inspector, graded by another; and the farmer would be reimbursed by still others at the price established by the government.

The hog would be slaughtered under inspection, turned over to the jobber who had the *necessary* number of ration tickets, always under the watchful eye of a government inspector. The meat would move through the wholesale and retail houses under the supervision of other inspectors, always accompanied by the *correct* number of coupons.

To prevent inequities, the consumer, including the farmer, would register for a period of six months to one year at one meat shop and be assigned a given number of beef, pork, mutton, lamb, veal, and poultry coupons. The same principle would have to be applied to all other food products.

Complete Rationing Is Prohibitive

Under some such system, ticket rationing might be made to work. This would be very wasteful of manpower. To ration all the activities of 125 million people adequately would probably require the time of, say, about four million others. If they received, say, $3,000 in salary, transportation, heat, light, and office rent, the net cost would approximate ten per cent of the nation's effort. Complete rationing under such a program would reduce the net product of the nation.

Cost-of-living studies indicate that food, clothing, and fuel represent more than fifty per cent of the nation's business. Despite "pull in your belt" programs, the net reduction in the consumption of these articles is likely to be small. Any considerable reduction would occur only at the cost of a rising death-rate. If the nation spends fifty per cent of its income for these indispensable items, then the nation can spend only fifty per cent of its income for the war effort.

The nation's program is to feed, train, and equip eleven or twelve million fighting men; construct, man, and operate a two-ocean navy; export billions of dollars' worth of Lend-Lease foods and other instruments of war; and spend billions for a huge merchant marine. If it does all these things, it will have spent half the national income.

If the nation attempted a thoroughgoing system of ticket rationing, its cost would be a deduction from the war effort and not from civilians. Even a nation as rich as the United States cannot afford the luxury of an expensive new system of ticket rationing. We could afford a rigid system of regulation if we did not have a Lend-Lease program, or if ten per cent of our food could be imported at no expense, as is the case in England, or if it were possible to bring in a few million slave laborers as in Germany.

Since the nation will not press labor into slavery, cannot import free food and other materials, and dares not curtail the Lend-Lease policy of supplying instruments of war to our allies, it cannot afford the luxury of a completely regimented economy.

Subsidies Are a Stopgap

Our national melodrama is now in its third act, subsidies. In acts one and two, Price-fixing and Rationing tried and failed to save the heroine from the inflationary villain. The script now calls for a new hero, and Subsidy makes an entrance.

A subsidy for farm products is merely a device whereby the government buys the crop at a price that will ensure high production and sells it to the consumer at a low price. The objective is to bolster the price-fixing policy and pacify everybody. The first cost of the system is borne by that part of the population which pays the taxes.

The call for subsidies is an admission that low ceiling prices have impeded production and have not protected the consumer as it was assumed they would. Rising prices and shortages are the symptoms of an economy disrupted by war. Subsidies, like price-fixing and rationing, are an effort to treat the symptoms rather than to diagnose the malady. Subsidies are as attractive to the imagination as the pot of gold at the end of the rainbow, and are equally elusive.

Theoretically, a low ceiling price plus a subsidy under a regimented economy would have about the same effect upon food production as would rising prices under a free economy. It might also be contended that a low ceiling price under a subsidy would have about the same effect upon the consumer as would rising prices if the cost of the subsidy system were fully met by equitable taxation. However, these contentions

overlook the huge direct cost of administering the subsidy program and the indirect costs due to administrative errors in directing production, distribution, and consumption.

The problem is further complicated by the fact that the direct costs are only partially met by taxation and that these taxes are based upon what can be collected and not on what should be collected. The greater part of the cost is met by borrowing, which of course, like taxation, is inequitable. To the extent that the government borrows and borrows inequitably in order to pay subsidies and maintain low ceiling prices, it merely deducts income from the small number who save and adds to the incomes of the large number of spenders, thereby impounding a larger inflationary lake behind the weakening dam of fixed prices. Rising prices of food would soak up much of the unspent incomes; low prices, insufficient and inequitable taxation, and payment of subsidies put more money into people's pockets at a time when goods are scarce.

Incomes are now the highest in history. The advocating of subsidies in order to keep the cost of food low is an admission that even with his high income and at a time when sacrifice is in order, the consumer lacks the moral fiber, though not the money, to pay a competitive price for the food that goes onto his table. Subsidies do not in the least deal with basic causes. They are like cleaning a room by sweeping the dirt under the kitchen sink, to appear later in a more dignified form as a deficit in the United States Treasury. They merely postpone the appearance of inflation.

It is impossible to combat inflation by keeping down prices through subsidies while at the same time granting increases in incomes to consumers and failing to inaugurate a taxation policy that wipes out increased purchasing power. Under such a subsidy policy, the government is in reality encouraging increased consumption, which is antisocial in

time of war. Such a program would result in a delayed inflation. The nation would then experience all the disadvantages of inflation and none of its benefits.

Subsidies do not operate automatically and are not impersonal as are freely fluctuating prices. They are not doled out by a miracle man. Political abuses, errors in judgment, and discrimination are inevitable. Subsidies are a habit-forming narcotic that spreads and becomes a necessity. In the words of William Pitt,[8] "Necessity is the argument of tyrants; it is the creed of slaves."

Subsidy programs to pacify the consumer and prevent inflation are merely one of the many blueprints of an unobtainable economic Utopia.

England's Subsidized Food

England has kept her official index numbers of food prices from rising. Many contend that this has been possible because of the extensive use of subsidies, and argue that the United States should do likewise.

During 1939 and 1940 England's food prices rose much more rapidly than those for the United States (table 1). During 1941–3 food prices in this country rose rapidly,

TABLE 1. PER CENT CHANGE IN RETAIL PRICES OF FOOD FOR ENGLAND AND UNITED STATES PRIOR TO AND DURING THE LEND-LEASE ERA

Country	Per cent change in retail food prices during:		
	Pre-Lend-Lease era *	Lend-Lease era †	
		First half	Second half
United States	rose 3	rose 21	rose 21
England	rose 22	fell 5	rose 3

* Nineteen months, August 1939 to February 1941.
† Twenty-seven months, March 1941 to May 1943.

[8] November 18, 1783.

whereas in England they declined slightly. Many agree with the conclusion that "price controls have been better devised and more firmly applied in England than they have been here." [4]

There is a general belief that England's price control, combined with a £150 million subsidy, kept food prices down. An even more effective but less widely discussed subsidy was the free United States food shipped under our Lend-Lease program. Had England been forced to create goods to be exported in payment for this food, her retail food prices would probably have advanced from 1941 to 1943 and the subsidies would not have been considered so effective.

Our food prices rose following our subsidizing Britain's foods.

Since the United States inaugurated price controls but did not use subsidies, it has been argued that we should emulate England's experience by the use of subsidies. Had the United States inaugurated a subsidy program of billions of dollars and had it not been necessary to ship food to our allies and had it been possible to import large amounts of costless food, our retail price of food would not have risen so rapidly.

When a food-deficit country gives large amounts of food to a second food-deficit country, subsidies are likely to appear more effective in the receiving than in the giving country.

Supreme Court Warning on Subsidies

In its early stages regimentation begins as a benevolent welfare organization. It pays the farmers more for their products than they are worth; it provides consumers with food at less than it is worth; it provides work or insurance for the unemployed, and pensions for the aged. It rations food, rolls

[4] Cleveland Trust Company Business Bulletin. Vol. 24, No. 2 (February 15, 1943).

back prices, and subsidizes this and that group by direct payment or by hidden increases in incomes. Gradually the individual becomes dependent upon the State from the cradle to the grave. The extension of these State benefactions soon becomes synonymous with the extension of State powers.

For a time a beneficent AAA paid the farmers more for wheat than it was worth. Ultimately, an autocratic AAA devised ways of "liquidating" the non-co-operator. They fined farmers who did not comply with the program. An Ohio farmer, who was fined forty-nine cents a bushel for producing too much wheat, took the case to court under what is known as the "due process" clause. Our Constitution states that property cannot be taken from an individual without due process of the law. The lower courts sustained the farmer, but the Supreme Court overruled them and rendered a decision in favor of the AAA, handing down a very significant opinion: "It is hardly lack of due process for the Government to *regulate* that which it *subsidizes.*" [5]

Different values are placed upon liberty. Some people fight and die for it; and others sell it for a mess of pottage.

[5] Italics by the authors.

Supreme Court of the United States, Number 59, October term, 1942. Claude R. Wickard . . . vs. Roscoe C. Filburn: November 9, 1942, page 14.

CHAPTER 11

BLACK MARKETS

Black Markets in Currencies

ALTHOUGH this generation of Americans is unfamiliar with the so-called black markets, they are as old as the centuries. Black markets in currencies and precious metals are world-wide and history-old. A black market exists when the market price for a commodity is higher than the legal, fixed, ceiling price.[1]

Our First Dollar

In determining the value of currencies such as the United States dollar, the English pound, the French franc, and the like, each country fixes by law the metallic content of its coins. By that process it sets the legal price at which it will buy and sell the precious metal.

Alexander Hamilton, an idol of the Republican Party, was a bimetallist. He proposed to Congress that our currency be called a dollar. On April 2, 1792 the dollar was fixed as follows:

Dollar	*Pure metal, grains*	*Price per fine ounce*	*Ratio*
Gold	24.75	$19.39	15 to 1
Silver	371.25	1.29	

[1] There could also be a black market by sales at prices below the fixed price.

The silver dollar, 371.25 grains, was 15 times as heavy as the gold dollar, 24.75 grains. This was a bimetallic currency at the ratio of 15 to 1. At that time the world ratio of silver to gold was about 15 to 1 and our gold and silver dollars both circulated.

In a few years, however, silver became abundant and it took 15.5 ounces of silver to buy one ounce of gold. This was the market rate. The legal rate was still 15 to 1. The result was about as follows: One could go to the treasury with 15 ounces of silver and get an ounce of gold. One could take the ounce of gold to the bullion market and get 15.5 ounces of silver. On the next trip to the treasury, the 15.5 ounces of silver would exchange for 1.033 ounces of gold. After four trips between the treasury and the bullion market, one could make ten per cent as follows:

Trip	*To treasury*	*To bullion broker*
First	15 ounces of silver exchange for 1 ounce of gold	1 ounce of gold exchanges for 15.5 ounces of silver
Second	15.5 ounces of silver exchange for 1.033 ounces of gold	1.033 ounces of gold exchange for 16.0 ounces of silver
Third	16.0 ounces of silver exchange for 1.067 ounces of gold	1.067 ounces of gold exchange for 16.5 ounces of silver
Fourth	16.5 ounces of silver exchange for 1.100 ounces of gold	

It would make no difference whether one exchanged ounces of silver for ounces of gold or exchanged silver dollars for gold dollars. It was a profitable operation to draw gold out of the banks and treasury. It was not long before gold coins

no longer circulated and the United States was in reality on the silver standard. The "black market" operators took the United States off the bimetallic standard and put the nation on the silver standard.

The black market did not exist when the legal rate, 15 to 1, was the same as the market rate. As soon as the market rate rose above the legal rate, a black market existed. The market price of gold in terms of silver was higher than the legal "ceiling" price the treasury paid. This was a violation of the intent of the law.

Off Bimetallism and on Gold Standard

During the 1830's the situation was reversed. The monetary laws were revised; the content of the gold dollar was reduced and the silver dollar was left unchanged. During 1837 the legal ratio was fixed at 16 to 1 as follows:

Dollar	*Pure metal, grains*	*Price per fine ounce*	*Ratio*
Gold	23.22	$20.67	16 to 1
Silver	371.25	1.29	

The market rate for silver was higher than the legal rate; therefore it paid folks to take gold to the bank or treasury, draw out silver, and sell it on the open bullion market. It was not long before the black-market operators took the United States off the bimetallic standard and put the nation on the gold standard. This again was a violation of the intent of the law.

Down through history black-market operators thrived on bimetallism because the market ratio of gold and silver changed faster than kings or legislators could change the legal ratios. During the past half-century the gold standard was substituted for bimetallism. That step reduced the activities of the black-market operators, but did not stop them.

Civil War Experience

When the United States set the legal gold content of the dollar at 23.22 grains, it fixed the legal price of gold at $20.67 per ounce.[2] During our Civil War the market price of gold rose to $30 to $40 to $50 per ounce and averaged $53.35 per ounce during July 1864. Government officials and loyal folks jumped to the conclusion that these advancing prices were a "nefarious act." The operators were called "gold speculators," "Shylocks," "money-changers," and "disloyalists." The first reaction was to blame the black-market operators for bidding up the price of gold. It gradually dawned on thinking people that the difficulty was due to the paper money; the greenbacks were depreciating. The market price of gold rose above the legal ceiling price because too many greenbacks were issued.

Experiences during the Thirties

During the period between the two great wars there were black markets in currencies in many countries. They were due to the fact that legal prices for gold were not changed with changing market conditions.

During our bank crisis of 1933 there were millions of black-market operators. Some walked into their local banks and drew out their money. Others walked into the Federal Reserve banks and drew out the gold; still others transferred money and gold to London. These activities took the United States off the gold standard. It was a violation of law to whisper about the solvency of a bank, but it was done. Some were afraid of the bank; some were afraid of the dollar, and others of the nation.

Regardless of the time or the country, when the market

[2] An ounce, 480 grains, divided by 23.22 grains to the dollar = 20.67 dollars per ounce.

price of a currency is above the legal price, a black market in that currency will develop in that country. If it is not permitted to develop in that country, it will develop outside the country.

Foreign Exchange

One of the frequent methods of circumventing the fixed official exchange rates is for the owner of foreign currency to sell his private check for local currency. An Englishman leaving England is allowed to take with him only £10. If he is coming to the United States, he will need more. One practice is to go to an American living in England and offer pounds for a United States dollar check. The Englishman is willing to pay above the official price in order to get the much needed dollars. When he arrives in New York, he cashes the dollar check.

Others smuggle out English paper money to be sold in the New York market. During the summer of 1943 it was reported that such notes brought $2.50 per pound whereas the official rate was $4.04. The number of ways of getting around pegged exchange rates are no doubt legion.

Black Markets in Commodities

There have been innumerable illustrations of black markets in commodities as well as in currencies. It was the operation of smugglers and free traders in black markets that broke up the English government-granted mercantile system typified by the East India and Hudson's Bay trading monopolies. American clipper ships during the 1790's sailed around the world to out-of-the-way ports of the East Indies and bought pepper from the natives at higher than the monopoly's "ceiling prices" to producers, and sold it in the world's markets at less than the monopoly's "ceiling prices" to consumers. These were very profitable black-market operations and it was reported that the descendants of some

New England Puritans who owned the clipper ships made unusual profits. To those with legal monopolies, such activities were a violation of the law. Producers and consumers of the products in question did not look at it that way. They patronized the black-market operators and broke the monopoly.

Occasionally black-market operators have been one of the best protections that the public had against monopolies. Men have combined and agreed to restrict production of a commodity in order to raise the price or to gain an advantage. If such operations were *not* in public interest, other individuals, who were considered chiselers and black-market operators by the vested interests, expanded production and/or sold at lower prices. If the black-market operations *were* in the public interest, sooner or later the black-market operators broke the monopoly and were lauded as public benefactors.

Modern Black Markets

Under our present program of widespread price-fixing, there are two sets of prices, (1) market prices for commodities, and (2) legal or ceiling prices for these commodities. If the supply and demand for the product, and hence the market price, is in equilibrium with the legal price at all points from production through distribution to final consumption, no black market exists. If the supply and the demand, and hence the market price, are in equilibrium at a level *below* the ceiling price, a black market does not develop.[3] A black market is likely to exist when the supply and demand for a commodity are brought into equilibrium at a market price that is above the legal ceiling price. It makes no difference whether the farm price, the wholesale price, the jobber's price, or the retail price is above the legal ceiling.

[3] The government does not consider it illegal to buy and sell below the ceiling price.

In the spring of 1943 there was a black market in poultry in New York City because the market price was *above* the legal ceiling price. At that time there was no black market for milk in New York City because the market price was below the legal ceiling price. When this occurs, the ceiling price is ineffectual and might as well not exist.

NRA tried to fix the price of used cars. The dealers offered the blue-book allowance and bet the customer $50 he couldn't spit beyond his toes.

With the present policy of fixing innumerable price ceilings, black-market operators breed faster than they can be caught. An honest soul walked into a wholesale market in New York City and innocently asked a produce broker where the black market might be found. The response was immediate: "Look around, New York City is a black market." Our black markets are not organized institutions that can be easily observed. They are a good deal like "chiggers," which the Indians call "no-see-um bugs."

Black markets take many forms. Some are large and some are small. Some are no more than short cuts around red tape and others are malicious. Some violations are committed unknowingly and others willfully. Many of the activities are simple and some are intricate.

To most people, the black-market operator is typified by the two-gun masked cattle rustler in the West. In reality he is more likely to be, say, a steel worker rustling a piece of beef in one of a dozen devious ways, so as to make his red coupons go farther. There are many more of the latter than of the former.

Price ceilings on used machinery are neatly circumvented by selling two articles together. A used tractor with a price ceiling of $500 is auctioned off together with a bale of hay worth perhaps a dollar. The combination brings $800 and the clerk's records show this innocent entry:

tractor	$500.00
hay	300.00
Total	$800.00

The same general method is used in avoiding ceiling prices on potatoes. A shipment of potatoes is sold with a bunch of horse-radish, which is then tossed back. A durable bunch of horse-radish will serve to smooth a good number of such transactions. In the market place it is practically certain that somehow there will be a meeting of minds of buyer and seller, in spite of the word of the law.

Rationing coupons are traded back and forth by housewives despite rules against such activities.

Accumulation of coupons becomes a problem for the retailers, the jobbers, and the wholesalers. They are packaged and transferred through the channels of trade without opening the packages. Some of the packages are short of coupons, but it is too laborious a job to count them.

Wage ceilings are nullified by the simple process of paying men for more hours than they work. Unable to pay higher rates and unable to hold men at present rates, employers give their men nine hours' pay for seven hours' work.

Ceiling prices on early cabbage were established on a hamper basis. Formerly the hamper was filled with a "bulge" pack. In the spring of 1943 the hamper was "flat"-packed with lightweight small heads of cabbage. The ceiling price per hamper was unchanged, but the price per pound rose.

Formerly lettuce was trimmed and shipped largely in crates of five to six dozen heads. The ceiling prices were set on a crate basis. Since supply was short, trimming at production points was dispensed with and the crates contained four to five dozen. With fewer heads at the same ceiling, the consumer paid twenty to twenty-five per cent more per head than before the ceiling was established.

One arm of the government establishes the conditions that

create the black market. Another arm of the government sets the rules to kill the black market, and a third arm of the government finds ways to evade the law. It has been reported that one unit of government paid one third more than the ceiling price for dressed meat under "a very prudent and intelligent purchasing plan."

Not all these people can be crooks, but the opportunities thus set up are a happy hunting ground for the real crooks.

Causes of Evasion

People patronize black markets when they have an excess of purchasing power and when they feel that they have been treated inequitably. The consumer goes along with the ceiling prices and the rationing as long as his groceryman's or butcher's supplies are not too far out of line with his coupons, his purchasing power, and his usual food habits, and as long as he is convinced that he is being treated reasonably equitably. If he feels that he has been discriminated against on any of these counts, he is a potential customer for the black market.

Retailers, wholesalers, and jobbers operate black markets as a means of self-preservation. Casualty rates in the distributive trade are high. Most operators enter the field on a shoestring, and a high percentage are forced out without even a tip of the string. If equitable prices are not fixed for each step in the distributive trade, black markets inevitably will spring up. The motive is economic survival. Few black-market operators knowingly sabotage the war effort. The propensity to survive in business will keep men violating the spirit of the law as long as the ceiling price is below the market price and as long as the ingenuity of man can outwit the law. The marketing mechanism is so complicated that it is very difficult to write an order that does not permit evasion — if men are forced to evade.

Who Are the Violators?

Most people think that the black market is a "dive" operated by the "scum of the earth," "crooks," "chiselers," "scoundrels," and "saboteurs." There is, of course, a certain number of such operators who have no consideration whatever for the letter or spirit of the law. The fly-by-nighter who tries anything he can get away with is of this type.

However, if the black market flourishes, violation becomes widespread. The fly-by-nighter and the professional crook are then joined by the legitimate businessmen who enter into black-market operations as the price of survival. If consumers feel that they are not being treated equitably, a point is reached at which respectable folks participate in the black market.

Most farmers, most businessmen, and most consumers are patriotic citizens who want to do their bit for the war effort and live up to the letter and the spirit of the law. They see others violate the law, however, and see the volume of violations expand. Sooner or later they rationalize and believe that they should get the benefits from equal violations and be on a par with other violators. Finally they make equal violations of the law to obtain parity.

Large and Small Operators

Although they get little credit from the government, the large handlers, the large processors, the big distributors, and the chain grocers do their best to comply and carry out the spirit and the letter of the law. There is a widespread belief that the big, powerful corporations are the violators of the laws, that they fight endlessly through the courts to protect their profits. It is charged that they throw up clouds of vicious propaganda to befog elementary issues. The big fellow goes

along with the law as long as he can, but he will not sit tight and go under. In the early stages experience has taught him that the best thing to do is to squawk and hope for the best. When he finds that squawking is ineffective and the black market continues to eat into his business, he looks into the letter of the law and finds ways of recapturing his share of the trade. The medium-to-large concerns are the last to violate the law. They violate its intent, but not its wording. The escape centers in the letter of the law. There is no escape from its intent.

The market mechanism is so complicated that it is difficult to write an order that does not somewhere have a loophole that permits legal violation of the letter of the law. The little fellow finds the loophole quickly and acts quickly. The big fellow finds the hole just about as quickly, but he does not act until he is forced to do so.

Simplicity of Regulations Does Not Eliminate Black Markets

Some persons cry loudly for simplicity of regulations so that people can understand the law and therefore comply. Simplicity of regulation may contribute to understanding, but it does not meet the basic black-market problem. Simplicity multiplies the inequities in the channels of trade; some prosper, others are forced to violate the law or are forced to the wall. Simple regulations of a complicated mechanism merely create a healthful environment for the growth of black markets.

Stopgaps to Black Markets

A certain percentage of a commodity can be sold through the black market without seriously disturbing the producers, distributors, or consumers. Let us say it is 20 per cent of the product. When the volume rises to, say, 30 per cent, there

are violent protests by one or more groups and the government must act. The usual procedure is to write an amendment to the original order. This stopgap retards the black-market operations and the volume declines to, say, 20 per cent of the trade of the product in question. Later the same or other fly-by-nighters expand their activities and ultimately force others into the black market or into bankruptcy. This results in a second stopgap, an amendment to the amendment. As long as the ceiling price is below the market price, the government is forced to continue this practice or wink at black markets.

These amendments are usually merely attempts to restrict, curb, check, or divert demand. Since no one knows what demand is, how it operates, how to measure it, or how to curb it, each successive amendment can be little more than a temporary stopgap.

Policing the Black Market

It is a relatively simple process to write the orders, amendments to the original orders, and amendments to the amendments, but the administration of the order and its policing are enormous undertakings. The first steps are pleas and threats and pronouncements that price controls will be extended to every important commodity in order to roll back prices. Such exhortations can be only a temporary expedient. Bold words must be followed by bold action.

Since the government cannot officially countenance black markets and must attempt to eliminate them, it attacks the flagrant violations and ignores a certain amount of "legal violations" of "legal intentions." A few of the first group can be fined or put in jail. If the conditions that created the violations continue, there will be many in the second group. It is possible to indict an individual, but you cannot indict a nation.

The OPA does not have either the appropriations or the manpower to police even a small proportion of the price and rationing regulations that have been issued. Therefore they appeal to the patriotism and good citizenship of labor unions and consumers' organizations. This is not likely to be effective because people are not quite convinced that there is anything particularly wrong in one person having a little more of this or that food than another.

Folks react in all sorts of ways to their laws. They do not oppose Sunday baseball. But they are unanimously opposed to kidnapping. They not only will report it to the police, but will go out and help catch the culprit. People are unanimously opposed to those who drive through a red light. Their ire will rise and they will blow their horns, but they will not report it to the policeman or help catch the violator.

In a land of abundance, people are not easily convinced that they should report the man who bought meat in the black market. That one neighbor has more meat than another produces no resentment. One is much more likely to ask: "Where did you get it?" and "What did it cost?" than to report it to the police or to the OPA. If some get around a food regulation, others want to do the same thing, and feel little sense of impropriety.

To suppress black markets in food, it is necessary to have a high percentage of the people willing to report, accompanied by a real police force willing to enforce. Furthermore, there must be unanimous agreement that the practice is bad for the community. One reasonably safe prediction which one might offer in these uncertain times is that John Q. Public is not likely to be a snooper reporting black-market operators, nor is he likely to be a policeman helping to catch violators. People have difficulty convincing themselves that it is inherently wrong for some to have more meat than others. There are many who legitimately have lockers full of

frozen fresh meats, cured meats hanging from the rafters, chickens in the yard, canned meat in the cellar, and coupons which entitle them to buy still more meat.

If the ceiling prices are to be maintained and enforced and black markets are to be kept at a minimum, it will be necessary to expand many times the OPA personnel and budget. The War Manpower Commission has not put OPA policemen on the deferred list. Neither has Congress exhibited an interest in expanding OPA appropriations.

The hopeless situation was aptly summarized by *Life* and by a farmer. "One difficulty is that OPA has been trying to police its myriad price ceilings with a staff of about 2,500 agents (now being increased to 4,000).This, in P. G. Wodehouse's famous phrase, is like a one-armed blind man trying to shove a pound of melted butter into a wildcat's left ear with a red-hot needle." [4] The farmer compared OPA's enforcement task to "picking weed seeds out of a manure pile with boxing gloves on."

Occasionally Compliance Has a Bad Effect

In some cases it may be in the public interest to violate the law, but it may not be in the interest of a particular butcher to be a black-market operator. There are newspaper stories of, say, 1,500 pounds of liverwurst destroyed here and, say, 3,000 pounds of spoiled hot dogs there because someone lived up to the letter of the law. All will agree that the liverwurst and hot dogs should have been eaten instead of destroyed. The amount lost is nothing, but assumes huge proportions in the minds of the millions who never owned at one time more than a pound or so of either one. Losses of food due to compliance are magnified out of all proportion to their importance. However, they tend to weaken the faith of folks.

[4] *Life*, May 24, 1943, page 26.

Compliance resulting in the loss of time is frequently more serious than the loss of food.

A group of lawyers drew up recommendations for the repairs of a perishable food plant in the event of a fire, and at the end included a paragraph that reads more or less as follows:

"If procedure as outlined above is followed, and steps are taken to effect the necessary repairs . . . in all probability the work will be completed before the applications have been acted on in Washington."

One executive commented that this was the way he operated all the time. Another person added that this was the only way an efficient executive of a company dealing in perishable foods could operate.

Black Markets Will Be with Us

All through history, black markets have prevailed when the market price was above the ceiling prices, and it makes no difference whether the declaration against them was made by kings, emperors, führers, or New Dealers. Market prices arise from a series of complex factors which are more easy to become conscious of than to explain. The number of variables and the innumerable ways in which they can combine are beyond the comprehension of the businessman, the price-analyst, and the regulators. The power of market prices is greatly *underrated.* On the other hand, the power of ceiling prices is greatly *overrated.*

A black market is the inevitable accompaniment of fixed prices in a regulated economy. Since the administration cannot change the rules as fast as the conditions change, commodities will be bought and sold at other than the fixed prices and in quantities other than those prescribed by priorities and rationing.

There are only two alternatives: (a) permit the black

market to exist and in effect shrug our shoulders about its illegality, or (b) raise the ceiling price to the market price. The latter would call for official approval of higher ceiling prices and would cause the official index of prices — our national barometer of inflation — to rise. Since this is not likely to happen in the near future, black markets will continue to be with us.

CHAPTER 12

ADMINISTRATION OF FOOD

In the horse-and-buggy days the story of food could be told under four simple headings: Production, Consumption, Distribution, and Prices. Widely varied governmental activities under a regimented economy do not fit nicely into this outline. The setting of goals on a national basis, the fixing of quotas, the allotting of priorities, rationing, ceiling prices, rollbacks, and the like have recently become important parts of the food problem. Administrative control has been thrust into the foreground and into any complete discussion of the food problem. It makes no difference whether the control program was deliberately chosen by the people or thrust on them by an administration inclined toward regulation.

Military vs. Civilian Logistics

"Logistics" is a military term dealing with the problem of obtaining supplies and of transporting them across land and sea to munition dumps, to divisions, to regiments, and finally to the individual soldier on the firing line. This is a complex problem and men in the armed forces spend their lives studying it. Although military logistics is highly complicated, it can be turned over to military men with a reason-

able degree of confidence because they have been trained to meet such problems.

There is the problem of logistics for civilians as well as for soldiers. The 125 million civilians must have food, provided at the proper time and place and in the required amounts. Although this nation trains thousands of men in the logistics of moving military supplies for a few million men, it has not trained the millions of men required for the logistics of food supplies for 125 million civilians under a system of price-fixing, priorities, rationing, and subsidies. The nearest approach to such training was a short course in regimentation during the early stages of the New Deal under the direction of General Hugh Johnson, Leon Henderson, and others of NRA.

In time of peace the logistics of civilian food supplies was a relatively simple problem because these supplies were automatically allocated by the price system. Furthermore, there were plenty of persons experienced in civilian logistics. Armour and Company, General Foods, Standard Brands, Quaker Oats, the Great Atlantic & Pacific Tea Company down to Mr. Perugilla, who with his wife runs the corner grocery store, all know their logistics under a price mechanism.

Another distinction between military and civilian logistics is cost and wastage. Military logistics tends to ignore costs and wastage because it is so important not to be short of food anywhere any time. Military logistics is a problem of having more food than is needed regardless of cost or wastage. It is a physical rather than an economic problem.

Since military logistics involves a small part of our population, the nation can carry such costs and wastage without "cracking up." In time of war we tolerate these high costs and wastage because it is necessary and excusable if we are to win the battles. On the home front it is not possible to

ignore cost and wastage. Experience has taught us that price was an efficient administrator of civilian logistics. Costs and wastage were kept at a minimum. It has not been demonstrated that a regimented economy can keep costs and wastage at so low a level.

The armed forces are a completely regimented economy. If the civilian economy were completely regimented, certain advantages would no doubt occur, but there would be many disadvantages. Furthermore, regimented civilian logistics runs counter to freedoms which civilians are unwilling suddenly to give up.

Our national policy is to substitute a controlled economy operating under priorities, subsidies, and ticket rationing for the price mechanism. In a modern industrialized nation like the United States, civilian logistics is as important as military logistics, and certainly much more expensive, inefficient, and difficult to administer. If civilian logistics becomes disrupted, military logistics is likely to be hampered.

Administrators Are Untrained

The main disadvantage of a controlled economy is that it is not likely to be successful. Men have not been trained to administer such a system, and it takes a long time to train them. Some contend that the difficulty is that we are not using the experience which individuals have accumulated over generations. That is true, but only a part of the experience acquired under a price economy is of value under a regimented economy.

American business does not place executives in charge of its food industries until they are well trained and acquainted with most of the details. Such experience requires the greater part of a lifetime. It takes years to train the men who run Swift and Company. No one would suddenly appoint an economist or the manager of a corner grocery store, no mat-

ter how successful he had been, as chief administrator of the Great Atlantic & Pacific Tea Company of America.

The wise man who does not know asks the man who does. This explains, in part, the flood of questionnaires. The administrators were taking a correspondence course in the affairs of the food business, about which they knew little but were hired to administer.

Furthermore, it is necessary for the administrators of a controlled food economy to get current information which was formerly available in the form of prices in the market place. Under a price economy all distributive agencies get such information all the time. They carry it in their heads and act upon it at once. It is therefore not necessary for them to use questionnaires. If they did they would soon be out of business. The questionnaire has been unjustly abused. It is a vital cog in the logistics of a regimented civilian economy.

The administrators who write the rules of the game are without experience. The most difficult task an administrator has is to attempt to teach the 125 millions what he himself does not know.

Even if he did know, he has the impossible task of averaging out the wants of people. He cannot write 125 million sets of executive rules — one for each civilian. They usually fall in one category; and at best only two or three. The administrator's task is very difficult because he cannot meet the economic requirements of our freedoms and at the same time force people into two or three economic strait-jackets.

Under the price mechanism there can be millions of patterns as easily as three.

New Bureaucracy Necessary

Some persons point out the disadvantages of the multiplication and overlapping of Washington agencies which

accompany a regimented economy. However, when new programs are to be inaugurated, new agencies must be created. The personnel must be sold on the program. Old-line departments have difficulty in mothering a new idea; they have other activities and, furthermore, they may not believe in the new program.

The revolutionary agricultural programs of the early phases of the present administration were not left to the United States Department of Agriculture. A new organization called the Agricultural Adjustment Administration (AAA) was formed by people who believed that restriction of production would raise farm income. The Office of Price Administration was rightly a new and separate agency; it should not have been in the Department of Agriculture, the Department of Labor, or the Department of Commerce. The War Food Administration should not be a part of the United States Department of Agriculture nor of the Agricultural Adjustment Administration.

The administration generally operated on the correct principle when it made new agencies for the new programs. It was not operating on the correct principle when it gave responsibility for a food expansion program to those who formerly sponsored the restriction programs.

Conflict among Bureaus and Policies

Some contend that the newly created agencies have not always been given sufficient authority. Others contend the difficulty is due to a division of authority, between an old-line agency that is not sold on the new program and a new agency that is.

OPA was set up to keep down prices today in the interests of the consumer. It gradually dawned on some folks that the consumer's interest today may conflict with his interest tomorrow. One solution might have been to change the OPA

policy. It was deemed advisable, however, to continue the old OPA policy and use the knowledge of the old-line Department of Agriculture. It has the farmer's interest at heart, which of course is related to the consumer's interest tomorrow. This led to a division of authority over food and price control between Henderson and Wickard and between Brown and Davis. The price administrators wanted abundant supplies of food today at low prices, and the war-food administrators wanted high prices for food today to assure an abundant supply of food tomorrow.

The AAA policy was to reduce the production of wheat to raise price. OPA wanted cheap bread. OPA favored low prices of wheat to prevent inflation. The War Food Administration wanted higher prices to increase production. One arm of the government wanted a stock pile to feed distressed people in Europe; another, to grind wheat for synthetic rubber; and still another, to feed it to livestock. Obviously such conflict of policies was not in the best interests of the nation.

Conflict within Bureaus and with the Public

Not only is there conflict among the new agencies; there is serious conflict within them as well. Much of this arises from a conflict between bureaucratic policy and public opinion.

Henderson was directed to keep prices down and attempted to carry out that direction mainly by thumping the table with his fist and riding roughshod over all opposition. He was accused of bringing in the "slide-rule boys," the 1943 name for the 1934 "braintrusters."

Since folks did not like to be pushed around and shouted at, Brown replaced Henderson and was supposed to "humanize" price-fixing. This was much easier to state than to accomplish. Obviously, a policy of relaxing controls did not set well with the OPA staff, nor was it correct in principle.

If the policy was to prevent inflation by administrative action, there should have been more controls, and they should have been more vigorously enforced. In a regimented food economy it is difficult to make appeasement work.

The problem of an effective reorganization of OPA is a difficult one. There may be a few long-haired economists, an occasional star-gazer, and some young, inexperienced lawyers; but most of them are able, conscientious, public-spirited individuals. For this reason it would be easy to change and regroup the personnel, but difficult to improve it. The difficulty is not the personnel, it is the jobs they have been assigned to do.

The leaders or the people see a new situation arising and clamor that "something be done." In haste, "something is done." Progress is often measured by the number and degree of changes that are proposed and inaugurated. Occasionally the best thing to do is to do nothing. Change is not all progress; it can be retrogression. Some of the world's most rapid progress has been made by those who stood still while others exploded into atoms by too rapid revolution.

Conflict among Czars

With the coming of new agencies, a food czar, a rubber czar, an oil czar, and a price czar appeared on the horizon. These czars are essentially in conflict with one another. During the rapid expansion of administrative controls, there has not been the distinct limitation on authority that might develop over a period of time. With overlapping authority, decisions are based on conference. There is only so much steel. The policy of each czar is never to admit that he has enough, for if he does, his allotment is sure to be cut. This leads to interminable conflicts over the amount of steel to be allotted for rubber plants, for battleships, for tanks, and for the production, processing, and distribution of food. Untold

numbers of items must be fished out of the pool by fishermen whose main bait is overestimation. If the administrators do not fish out a sufficient amount to pacify the particular group whose interests they represent, they must blame the farmer, the consumer, the soldier, Lend-Lease, the laborer, or else they themselves will be blamed. In the case of food, the peculiarities of weather are so widely understood that as the food problem becomes more acute, food administrators will probably try to shift the blame onto Providence. In that event the weatherman will be used to whitewash administrative mistakes. The real mistake was to place confidence in the weatherman, who is known to be unreliable.

The Baruch report made the suggestion that the synthetic-rubber program should be "bulled through." Newspaper reports indicate that the rubber czar did just that. However, there is a limit to the number of programs that can be "bulled through." When the number of programs becomes too large and the conflict among them becomes too great, "bulling them through" results in bull fights — aptly called the "Battle of Washington."

The career of the swashbuckling administrator is more likely to be brief than brilliant. Sooner or later he offends someone and is eased out.

Some administrators do not run their organizations. In fact, some are run by their organizations, and there is little that they can do about it. The administrator who is the most likely to be "successful" is the man of inaction, who does nothing and offends no one. For others, resignation is the only means of escape.

Most administrators face a strange dilemma. If they succeed in carrying out a policy, someone suffers and their job is in danger. If they fail in their charge, their original backers turn them out of office.

Job Too Big for One Man

Some say the conflict among czars has a logical solution — one-man control. That is not the practical answer, however, because the job is so big that no one individual has sufficient knowledge to make all the necessary wise decisions. Furthermore, there are not enough hours in the day to do all the essential things. Only a superman would have the physical stamina necessary for such a task.

One czar is no solution and only time can reduce divided authority. The conflict of authority among the new czars increases with the square of their number.

Public Not Trained for Regimentation

The problems of a regimented food economy are laid in the lap of the administrator and it is usually assumed that the fault is his. However, the problems are too great to be explained away as a lack of wise leadership or the shortcomings of administrators. A more complete explanation would be that the entire nation lacks experience with a regimented economy.

The producers, distributors, and consumers have had no experience with and do not know how to operate under priorities, rationing, ceiling prices, subsidies, and the like. They have always followed the dictates of relative prices. When this age-old guide is suddenly taken away, people are thrown into confusion. Price, the equalizer between production and consumption, is tossed away much as a mariner's compass might be dropped into the ocean.

Maladjustments among production, consumption, and prices make for friction. This friction produces needless privation and breeds discontent. People would rather be told what to do by an abstract force such as price than by an administrator.

We Personalize Trouble

John Q. Public always personalizes trouble. He blames the administrators rather than the principle under which they operate. The Henderson-to-Brown and the Wickard-to-Davis-to-Jones administrative changes are illustrative of such personifications. In reality, price and food administrators were victims of circumstances over which they had no control. Since John Q. Public will continue such personalizations, resignation is the only avenue of escape for those who attempt to administer the impossible. Instead of heaping his wrath upon the administrator, however, John Q. Public should heap his wrath on the system under which the administrators operate.

Advice to Administrators

Though not skilled in the art of administration, the authors have made one observation that may be of value to those in charge of a regimented economy. If the program is controversial, the best way to sell it to the public is to put everybody on the committee. (This is what price has historically done.) The longevity of the AAA program is due in part to the fact that large numbers of farmers serve on state, county, and township committees, with pay. It has been frequently observed that people will support almost anything if you can get them to take a job connected with it, and that isn't often hard.

It may be that the AAA organizers observed the method followed by the country schoolmarm who wanted a good attendance at the Friday night entertainment and so put all the children on the program.

Heat in a Frozen Economy

Under a regimented economy, the government fixes prices, freezes profits, and controls wages. In effect, this rations income.

Income was formerly rationed by the price system, and men were rewarded in proportion to their contribution. This measure of equity placed responsibility for each one's economic position upon himself; if income was low, it usually was not necessary to look far to find the cause.

When the government assumed the task of rationing income, it took upon itself the burden of establishing and maintaining equity. Two difficulties arose: first, the government could not ration income as equitably as could the price system; and second, responsibility was shifted from the individual to the government, so that one who was at a disadvantage could blame the government rather than look to his own shortcomings.

Consequently the government was blamed for two sets of shortcomings, its own, of which there were enough, and those of the civilians who formerly accepted the economic fate dealt out by themselves and the price system. The result is an orgy of pressure politics and appeasement. Laborers strike or threaten to strike and are granted hidden increases in wages. Farmers are appeased with support prices. Industry and distributors are given hidden subsidies. The increases are not equitable within the groups or among the groups, and man is arrayed against man, and class against class.

According to a labor magazine,[1] Prentiss Brown was a "coddler of big business." Farmers thought that Mr. Brown was a "coddler of labor." The authors do not think that Brown was a coddler of either big business or labor; it is their

[1] Shishkin, B.: "Inflation Crisis," *American Federationist,* Volume 50, Number 4 (April 1943), page 3.

belief that he was an able, conscientious, public servant who was coddling an impossible task.

In a regimented economy the laborer believes that his wages are virtually frozen and that the sky is the limit for food prices and other incomes. The farmer believes that food prices are virtually frozen and that the sky is the limit for city wages and other incomes. The businessman is convinced that his income is frozen, but that the sky is the limit for city wages and food prices. This is an inevitable accompaniment of a sudden change from the time-honored distribution of income by a price economy to its distribution by a centralized regimented economy operating in Washington.

Labor wants food prices rolled back and wages rolled forward; farmers, on the other hand, want food prices rolled forward and wages rolled back. In time of war neither can be rolled back and both will roll forward.

Administrative Appeasement

When a food or price administrator irritates the public and/or fails to accomplish his task, there is such a public clamor that changes must be made to appease the critics. The unsuspecting and critical public thinks the wrong man was placed in charge. Therefore the first method is to change the names on the "big front door." This quiets folks for a time, but if the policies are unchanged, the names are again changed, then the name of the organization is changed, and finally a drastic reorganization is inevitable. In that event, the activities are taken over by another agency or are dispersed among two or three other agencies.

During June 1943 there were widespread suggestions that there were too many cooks working on one broth and it was contended that the work should be reorganized along commodity lines. For instance, the fixing of prices of oil, community and civilian rationing, and control of production

should be centralized in the Fuel Administrator's office. Under this type of organization, all phases of the food program — prices, production, distribution, rationing, subsidies, incentive payments, and farm labor — would be put in the hands of one administrator. Reorganization merely silences the verbal barrage for a day, and appeasement may only delay the demise of that which Walter Lippmann [2] aptly called "white elephants."

There comes a day when it is generally recognized that appeasement will not satisfy the increasing number of critics and the administration must consider the basic cause of failure and devise ways of saving face. The Office of Price Administration is a case in point. It is administratively impossible for the many agencies to freeze prices, to roll back prices, to ration part of the food, to subsidize this and that, to grant hidden increases in income, to tax equitably, and to prevent the accumulation of excess purchasing power; all done, presumably, to forestall inflation. One reorganization after another is inevitable in the early stages of a regimented economy and only the future can appraise the value of the changes.

Checks and Balances in a Regimented Economy

The public complains that the food and price administrators have too much authority, and the administrators complain that they have too little. Both may be partially correct. The conflicting policies and conflicting personalities in a regimented economy inevitably tie the hands of most administrators. To the administrator, this presents an appalling picture of chaotic administration. It seems ridiculous to him to be appointed to do a job and then have his hands tied so that he cannot do it.

[2] Lippmann, W.: "Last Days of a White Elephant," *New York Herald Tribune,* Thursday, May 27, 1943, page 21.

Chester Davis concluded that the administration's food and price programs were unworkable without centralized authority and were in danger of collapse. This point of view was held by Herbert Hoover and many others, who contended that "the food mess" would not be cleared up until a single administrator was appointed with full authority over all phases of the food problem.

Controls have been highly centralized in Washington. The difficulty is not whether the authority is centralized in one man's hands in Washington or in several hands in Washington, or whether it is decentralized with state or local control. The difficulty is the insurmountable task of trying to hold down prices in wartime and still maintain food production.

From the standpoint of the public, it may be well for inexperienced administrators to be manacled and tethered until they have matured. No farmer would hitch an unbroken colt to a mowing machine.

Every Man for Inflation and Price Control

During the controversy over price-fixing there appeared to be two irreconcilable groups: those who desired prices fixed at a low level and those who wanted freely fluctuating prices at a higher level.

There is one premise on which there was universal agreement. Everyone wanted low prices for articles he bought. This held true for farmers, laborers, school teachers, and manufacturers, whether they were liberals or conservatives, Republicans or Democrats. In time of war the government became the great consumer and government officials, like other purchasers, wanted to buy at low prices.

There was a second premise on which there could be universal agreement. Everyone wanted more income. This held true for farmers, laborers, school teachers, and everyone else. The time-honored way of raising one's standard of living was

to get more income. For more than a decade the New Deal was much interested in raising national income and boasted of every advance.

Was it possible for everyone to have low prices for the articles he bought and at the same time for everyone to have high incomes?

Income is nothing more than the product of production times price. This holds true for individuals, for industry, and for the nation as a whole. Farmers produce a given amount of crops, which they sell at a given price. The total dollars they receive are their incomes. Laborers' incomes are the product of the number of hours they work times the wages they get. School teachers' incomes are a product of the number of months they work times the salary they get. Manufacturers' incomes are the product of the volume of goods they produce times their price. National income is the product of all the goods and services produced times their prices.

Since everyone wanted more income and at the same time wanted low prices for the things they bought, there was only one way to have both, and that was to increase production. In time of peace, farmers strove to produce more food. Manufacturers, through plant expansion and increasing efficiency, produced more goods. Laborers, through increasing efficiency despite shorter hours, produced more of the good things of life. School teachers, through more training, produced more service. Over a series of years the per capita production of the nation gradually increased, and this resulted in more income and a higher standard of living for all.

However, when a nation is at war and its plant is operating at capacity, it is impossible to expand production. There are not the plants, men, or raw materials available to increase industrial output. The draft transferred men from productive occupations to the military forces. It will also be difficult in the near future to increase agricultural produc-

tion above the recent abundant harvests. It does not seem reasonable to assume that during the next year or two there will be much, if any, increase in the total physical volume of all goods and services produced in the United States. In fact, it may decrease. Therefore neither the nation nor its groups can get increased incomes by increasing production. If incomes are to be raised, it must be through advancing prices, wages, salaries, and subsidies.

This simple principle is hardly worth discussing except that it was the basis of much of the recent controversy over price ceilings, the fixing of wages, subsidies, and other activities of our regimented economy.

Urban laborers wanted more income and low prices for food. School teachers wanted more income and low prices for food, clothing, and cosmetics. Manufacturers wanted more income and low prices for their raw products. Farmers wanted more income and low prices for corn binders. The Federal government wanted more income and low prices for tanks.

Laborers knew that about the only way to get more income was by higher wages. Manufacturers knew that about the only way they could get more income was through greater volume. School teachers knew that the only way they could get more income was through more training. Farmers knew that most of the variations in their incomes were due to fluctuating prices.

The school teacher's months of employment were fixed, and any variation in income was due to variation in salary. The manufacturer's production was highly variable and the price of his product was relatively sticky. Therefore his income was primarily dependent upon production. Food production was relatively stable and prices fluctuated violently. Therefore the farmer's income was primarily dependent on price.

Like farmers, the other groups wanted higher prices for their products, more commonly known as wages, salaries, and the like. Since wages and salaries were not generally considered as prices, farmers were the only large group whose income was dependent on "price" in the strict sense of the word. For this reason farmers appeared to be the only group that was high-price-minded. Since all others eat what the farmer produces, they appeared to be low-price-minded.

The interests of the individuals and groups of individuals are all in constant conflict. The idea that imperfect administrators can reconcile the conflicting interests of the 125 million imperfect individuals when it is essential that the standard of living be reduced is fantastic.

Every man is first a seller of his product and services, and second a buyer of the products and services of others. Every man is therefore first an inflationist and second a price controller. Since everyone is for both control and inflation, it is probable that we shall have both.

Price like a Thermometer

Temperature registers the innumerable combinations of the many factors affecting the condition or health of man relative to normal. When it rises, something has happened to the stomach, the heart, the lungs, or the liver.

Price merely registered the net effect of a myriad of combinations of innumerable supplies of and demands for both commodities and money. When price rose, the normal equilibrium was disturbed; something happened to one of the many factors that made price.

When our temperature rises and we do not like it, we could smash the thermometer or fix the thermometer so it would not tell us what we should but don't want to know. Similarly, by fixing prices we are kept from finding out what we should but don't want to know.

Fixing the thermometer is a handicap to a physician when an emergency arises. Fixed prices are a handicap to a nation when a war is under way. The fluctuating thermometer tells a physician whether previous acts were correct and gives him some guide as to how he should act in the future. If the physician's thermometer were fixed so that it could not fluctuate, he would have to depend on his own judgment and the grunts and groans of his patient. In a regimented economy with fixed prices, the food and price administrators, like the physician with the fixed thermometer, must depend on their judgment and the grunts and groans of their patients to determine the effect of previous policies and to guide their future action.

"Squealometer" Needed

A frozen price structure and a fixed thermometer call for the development of a machine which, for want of a better name, might be termed a "squealometer." This machine is merely a reversion to the horse-and-buggy days when the wheel that squealed the most got the grease. There is only one method of advising the administrators of their mistakes — public protest in sufficient volume to be recorded by the "squealometer." In a regimented economy, when decisions are made by small numbers of men and are based on the decisions of other men, the number of errors inevitably is large. The administrator may soon learn that an error has been made, but be loath to correct it, as few persons are willing to admit they are wrong unless forced to do so. Even though the administrator knew he was wrong and was sufficiently courageous to admit it, the system would probably prevent him from making the change. The correction of one person's error puts others in a bad light. Unfortunately, changes in policy cannot be piecemeal. A courageous man working within an organization might make a change in the right direction over the protests of his co-administrators, but with basic policy

unchanged he would merely add to the confusion. It is only when the squealometer shrieks loudly enough that action is likely to be taken.

The nation is apparently on the squealometer standard. Consumers roar and a program is inaugurated to "roll back prices." Laborers howl and hidden increases in wages are granted. Farmers shout, and support prices and incentive payments are made. The squealometer is very selective — when the distributor cries, no one pays any attention.

Price — An Efficient Administrator

Lieutenant-General Forrest of the Confederate Cavalry is reported to have said: "The side that wins is the one that gits thar fust with the most men."

The most important advantage of a freely operating price economy is the quicker, more efficient results obtained. The price system is based upon self-interest, and human beings will act sooner in behalf of themselves than in behalf of some administrator.

For its success, price relies on the desire of human beings to obtain the most for their money. Since this urge is deeply rooted in most people, the price system operates automatically. It needs no injections, no campaigns, no promoter, and no press agent. As a producer, the individual will create the goods for which he is paid the most. As a consumer, he will regulate his purchase of high- and low-priced goods so as to maintain his standard of living at the highest level possible under the existing conditions.

The combined effect of all the factors, no matter what they are, what their size, or what their importance, is most accurately measured by freely fluctuating prices. These prices are the final judgment of millions of persons. When price is the administrator, everyone is on the committee and serves without pay. It has at least one merit: it is democratic.

The combined judgment of millions is a much more accurate appraisal than the combined judgment of the administrators of a regimented economy. Both the judgment of the millions and that of the administrators, although correct at one moment, may be wrong the next. As conditions change, the judgment of the millions changes accordingly, regardless of previous decisions. On the other hand, it takes an administrator a long time to make up his mind that he was wrong and still more time to admit it.

It is not contended that free prices do not frequently make mistakes. It is contended that administrators make many more mistakes. It is better that the public complain of a few injustices in a freely operating price economy for which no individual is responsible than to have it continually irritated by mistaken judgment and faulty administration.

The simple solution is to let the price system function. In view of the present anti-inflation policy this may seem too inadequate and too improbable a solution to the food muddle. The authors contend, however, that any other solution is predestined to fail. To those who seek a remedy for the food muddle within the framework of present policies, the authors have no program to offer. Their suggestions involve fundamental changes in policy rather than the mechanics of administration.

There are an increasing number of persons who will agree with the authors that price was like an unseen hand that sometimes beckoned and sometimes suppressed the producer, guided the distributor, and advised the consumer. It was the baton that led the national symphony.

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THIS BOOK *was set on the Linotype in a face known by the style "Modern No. 21." The "modern" part is a family name. It indicates that Number 21 is a great-great-grandchild of faces that were* modern *in 1800 — new as compared with the eighteenth-century types that preceded them, such as Caslon.*

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