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FARM *and* FOOD POLICY

REID-

Food Strategy

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FARM *and* FOOD POLICY

Pamphlet No. **1** *in the Series*

FOOD STRATEGY

by

MARGARET G. REID

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WARTIME FARM AND FOOD POLICY SERIES

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To mobilize our nation's giant strength for war necessarily means a drastic readjustment in our ways of producing, distributing, and consuming everything we make. A few laggards, and people working at cross purposes, can slow down the whole nation if government authority is not used to bring them into line. But authority is not a substitute for public understanding and acceptance. As a matter of democratic principle and of efficiency, the citizens must know what has to be done in economic mobilization—and why and how.

This series of pamphlets, prepared by members of the Department of Economics and Sociology at Iowa State College, deals with the what, why, and how of agricultural policy and food management. Besides feeding our own civilians, we Americans must feed workers and fighters of our allies, must supply our growing armed forces, and as we drive back the Axis must provide much of the food needed to make life tolerable in the liberated countries and enable them to work and fight on our side. During 1942 we have taken up slack in farm production, much as industry did in the year preceding Pearl Harbor. But to do our job as food suppliers we must redirect farm production to concentrate on essentials, and must find ways through consumer rationing and otherwise to spare from our own tables all the food we can. To arrange this efficiently and fairly is one of the nation's major tasks in 1943.

This pamphlet, *Food Strategy*, sets forth the broad problems which call for the immediate attention of the Food Administrator and the citizens. It will be followed by a number of other pamphlets, announced on the inside back cover.

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Ames, Iowa, January 11, 1943

FOOD STRATEGY

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PART I. THE FINDINGS*

ACTION NEEDED IN FOOD STRATEGY

It is clear that shortage of many foods will become greater. This is happening even though the United States has just harvested the largest crop on record. Since our food needs are going to increase faster than out food supplies and since there are many uncertainties ahead, a considerable part of the current crop should go to swell reserves.

Wise strategy calls for action of several types:

(1) Planning is needed, mapping out both the food needs to be met and successive stages in modifying consumption, building stockpiles, and adjusting production. It is better to have a short war, having made plans for a long one, than to have a long war, having made plans for a short one.

(2) Both national and international agencies must be provided for the food strategist, and powers given him which are adequate for his task. The United Nations in many decisions should act as a unit. Lists are needed of food reserves in all areas on which the United Nations might draw, and some guidance should be given to the production in these areas.

(3) Stockpiles of food should be built as rapidly as possible

* This pamphlet is based on research carried on under Project 818 of the Iowa Agricultural Experiment Station, Iowa State College, Ames, Iowa. The study also was aided by a grant from the division of the Social Sciences of the Rockefeller Foundation, New York.

to provide for three things: the greater food needs that are bound to occur, the uncertainty as to the time and size of the peak need, and the great likelihood that future crops will not be as great as that of 1942.

(4) Rationing of many foods for civilians should be instituted with as much speed as possible to bring equity in food sharing, to reduce time spent in shopping, and to avoid the loss of morale that comes from hoarding sprees and from extreme shortages of some foods.

(5) An extensive and continuing educational program should be planned so that consumers understand why they are being asked to sacrifice customary food habits, and why it is necessary for them to get a larger portion of their nutrients from foods that are less well liked. The Food Administrator should have means of discovering the full extent of civilians' willingness, in this way, to cooperate in the war effort.

(6) All speed possible should be taken in achieving maximum economy in the use of agricultural resources so that health is protected and agricultural labor not needed is released for other uses.

(7) Techniques should be developed for bringing about adjustments in the post-war world. Immediate action of this type is needed, and extensive discussion of proposals should occur in public forums. Efforts to maintain status quo in he face of the present emergency are in part due to a failure to recognize the magnitude of the task to which America is committed and in part to fear of insecurity when the war is over.

PART II. THE ANALYSIS

INTRODUCTION: A STRATEGIST EXAMINES HIS TASK

Food has an important role in winning the war and in preparing the way for an enduring peace. But both the war and the peace will be badly bungled unless certain conditions are anticipated and plans carefully laid. The Food Administrator of the United States should be a great strategist.

The year 1942 was conspicuous for the abundance of the crops that were harvested. But a strategist does not pride himself on any single achievement, no matter how outstanding. His aim is to plug all loopholes, to eliminate all possibility of failure. He is thus impelled to acknowledge that insufficient attention has been given, first to the rapid expansion that will continue to occur in the needs to be met out of the United States' food supplies, and second, to the fact that at no time during the war is there likely to be a larger volume of many foods on which to draw—or even as much as we now have. Rapid expansion in food reserves and much greater efficiency in future production are needed.

Food policy has been too limited in scope, both in space and in time. Both food needs and supplies are global in character, and plans should be conceived for a period of several years. It is not enough to plan from year to year. The needs of some people have been given insufficient recognition, at times because of ignorance, and future needs clearly looming on the horizon have been temporarily ignored. Some administrators have shrugged off the future with gestures and remarks that seemed to imply that for them "sufficient unto the day is the evil thereof." Preparedness—the timing of supplies to match needs—is the watchword of a strategist.

Food supplies, both their quantity and their distribution among people, must be related to food needs. To many persons it seems incredible that serious shortages should follow

so soon on the heels of years when restrictions were imposed to cope with surpluses, or that shortages should exist at a time when the largest crop on record had just been harvested. War in the Pacific and insufficient shipping early resulted in shortages of fats, sugar, and coffee. Rapid increase in food needs and in demands on productive resources for equipment and fighting forces with which to wage the war has month by month brought a clearer realization that food planning is a task of first magnitude, that food problems are not a series of isolated, short-run tasks. Instead they are an interrelated whole, and the task confronting the Food Administrator extends over many years.

In this pamphlet three things are to be discussed: A. The administrative machinery for food strategy. B. Various food needs, the extent to which they have been met and their future probabilities. C. The nature and extent of supplies to meet food needs.

A. THE MACHINERY OF FOOD STRATEGY

Effective machinery for food strategy has gradually been evolving. A great step forward was taken when, during December, 1942, Claude R. Wickard, Secretary of Agriculture, was appointed Food Administrator with the task of integrating the food program. His main machinery is the United States Department of Agriculture which has been organized into two major divisions:

1. The Food Distribution Administration; and
2. The Food Production Administration

Through these he will tackle two major tasks:

1. The division of foods available among the groups who are to have a share; and
2. The provision of adequate foods either from American agriculture or by imports.

Food needs relate to many groups of people, and efforts to

supply food affect the equipment and extent of the armed forces. Hence the Food Administrator must collaborate with many American Government agencies, including the State, Navy, and Army Departments, the Office of Lend-Lease, the Board of Economic Warfare, the War Production Board and the War Man power Commission, the Office of Price Administration, and others.

With the appointment of a Food Administrator, the Foods Requirements Committee established during July, 1942, was abolished. It was an advisory committee with Secretary Wickard as chairman. Representatives of most of the agencies listed above were members. It will probably not be clear for some time what change has been effected. The Foods Requirements Committee was clearly not able to cope with the problems confronting it. Food production programs proposed again and again met opposition from the War Production Board which obtained support from the Army and the Navy Departments.

The effectiveness of any administration depends on the powers conferred on it, and its working relationships with other agencies. Administrators must be outstanding persons. They must see the scope and importance of the task to be done, be ingenious in inventing ways to accomplish it, and possess the driving power of conviction that makes it possible to overcome opposition and surmount obstacles. Success in the field of food strategy will not come to weaklings nor to those who remain as calm observers of the tumult of life, failing to use the dynamic power of a purpose strongly felt.

With the United States as the central focus of food supplies for the United Nations, the Food Administrator must coordinate food policies across the seven seas. To do this he needs special agencies, and in this task he must cooperate closely with the State Department, since all agreements with other countries must be cleared with it.

A beginning in international cooperation came early in 1942 with the creation of the Combined Food Board by President Roosevelt and Prime Minister Churchill. It is an Anglo-American board which on occasions consults representatives of other nations. A major accomplishment has been a reduction of tonnage necessary to ship foods abroad—largely accomplished by exploring and promoting the drying and compressing of food. Some agreements, international in scope, have been reached concerning the pooling and division of fat and sugar supplies in various countries.

Post-war planning involving food is being carried on both by the Office of Occupied Territories, headed by Paul Appleby, and by the Office of Foreign Relief and Rehabilitation Operations, established under the direction of Herbert H. Lehman, former Governor of New York State. Both offices are attached to the State Department.

International food policy has many aspects and involves many countries. The objective might well be the cooperation of the United Nations to a point where available supplies are one stockpile to be used for a common purpose—winning the war and establishing an enduring peace. Lists are needed of actual and potential supplies in various parts of the world. Even now some redirecting of orders might save shipping. As food needs mount to the climax that will come with the end of fighting in Europe and perhaps later to another peak with the end of fighting with Japan, it is very important to know of all possible food supplies that can be shipped to hungry people.

So far little progress appears to have been made toward the establishment of a United Nations' Food Committee. The task of food management in the international field is one of great importance. Parts of it are being undertaken by various agencies. At present some lack of coordination and some omission of important functions seem highly probable. Furthermore, there is an opportunity here, of which advantage

has so far not been taken, for nations to learn to work together at a common task—to learn to submerge the special to the common interest. A committee including representatives of all United Nations might be unwieldly in size. In that case one member might be elected to represent the view point of several smaller nations. Major nations such as Russia and China should certainly have direct representation.

B. FOOD NEEDS

The forces set in motion by the war have altered the food needs of many people and even more the food supplies available to them from customary sources. In Europe customary imports have been cut off, agriculture in some areas has been disorganized, some fertile land has been devastated, and productivity reduced because of lack of fertilizer. Large quantities of food are shipped to Germany from conquered countries, leaving little even in producing areas. Over and over again, reports come of depleted food reserves, marked increases in nutritional deficiencies, and widespread starvation.

The United States has been spared the devastation that comes to combat areas. The impact of the war on food, nevertheless, makes itself felt in many ways. As men and women join the armed forces their food needs increase. Many civilians are working harder than usual, and frequently walking in the place of riding. They too need more nutrients. The greatest expansion in food needs comes, however, from people outside the United States to whom we have a responsibility.

Needs that have to be taken into account in food strategy include those of American civilians and armed forces, of Great Britain, of Russia, of parts of Latin America, and of European people to be freed from Nazi domination.

Millions of Chinese are existing (or slowly starving) on greatly reduced food rations. Lack of communication makes

it impossible to ship food. Because possibilities of aiding them with food are at present so remote, their need is not considered in this discussion. It seems highly probable that the war in Europe will terminate before Japan is finally defeated. When victory does come in the Orient, the United Nations should be in a position to ship large supplies of food to the Chinese people. China thus has an important place in long-time plans, even though little can now be done.

Meeting food needs outside the United States has been handicapped by lack of ships and by pressure to use shipping space for war equipment and other non-food items. So far the rule has been: "Fill all available ships." The development of foods reduced in weight and compressed in volume has made it possible to ship much larger amounts of food nutrients than otherwise could have been sent. Even flour and sugar are being compressed. For a long time to come anything which saves shipping space will be good strategy. As it becomes less of a bottle neck, the division of food should be based more and more on raising efficiency in war production in cooperating countries, in general, to the highest possible level.

Food for American Armed Forces

Rations of the American soldier, sailor, and marine are at a high level in both nutrients and palatable foods. The high standard is indicated by the comparison below of a U. S. Army ration and the consumption per adult male in a group of families in cities of the East North Central region during 1934–36.[1]

No American civilian is likely to begrudge these groups their high meat ration, their coffee, or other favorite foods. But garbage pail waste has not yet been minimized nor maxi-

[1] Because of drought during the period 1934–36, food production especially of milk, fruits, and vegetables, was somewhat below normal. Nevertheless, the average consumption reported here is probably high in contrast with that of the majority of males in the population during 1942.

	U. S. Army diet, May to October, 1941	Consumption Per Adult Male at Moderate Work, in Cities in the East North Central Region, Food Expenditure $2.50–$3.12 a Week per Family Member*
Nutrients Consumed Daily		
Calories	4,331	3,790
Protein, grams	131	94
Iron, milligrams	25	17
Calcium, grams	1.01	.66
Phosphorous, grams	2.03	1.56
Vitamin A, units	13,270	3,500
Thiamine, milligrams	2‡	1.8§
Riboflavin, milligrams	2.8	2.2
Ascorbic acid, milligrams	97	74
Protective Foods Consumed Weekly		
Meat, poultry, fish, lb.	5.92†	2.77†
Eggs	10.62	5.77
Butter, lb.	.85	.35
Milk equivalent, qt.	3.54	3.48
Vegetables, leafy, green, or yellow, lb.	2.94	1.37
Tomatoes, citrus fruits, lb.	2.60	1.58

* These data are taken from U. S. Department of Agriculture, Circular 507, 1939. The families included are typical of employed workers in the wage-earning and low-salaried clerical groups. The majority of the families reported spending $2.50–$3.12 or less per week per member of the family. Thus the consumption reported here probably does not understate that of the majority of the families. The East North Central region was selected because the diets were fairly good in contrast with those of other regions. In measuring the nutrients per male, allowance has been made for difference in age, sex, and activity of the family members. The consumption of foods is on a per capita basis. For some foods, such as meat, the average undoubtedly understates a man's consumption. On the other hand the average probably overstates his consumption of milk.

† Includes bacon and other fat meat.

‡ Corrected for moderate losses in cooking.

§ Not corrected for cooking losses.

mum efficiency achieved in handling foods. Any such waste becomes more serious as the size of the armed forces increases and as shortage of food supplies and manpower and other means for production becomes greater.

Army rations in the future may make even higher demands than in the past on protective foods. Knowledge of the role of vitamins and minerals in the diet is still in an elementary stage. Changes may be needed to get maximum alertness, judgment, and endurance in combat. Mechanized warfare is also new. The aviator in adapting to sudden changes of temperature and pressure, as he rises from the air field to the cold, rarefied heights above, may need a combination of nutrients not previously used. Night flying has already brought a recognition of the importance of a very high intake of Vitamin A to get rapid adaptation of the eyes to darkness.

A tightening up of military rations may occur if foods to meet other needs should become very short. Present official rations were largely formulated during a period when American agriculture was perplexed with surpluses of highly appetizing foods.

As American soldiers come to fight side by side with those of Great Britain and other Allies, moreover, some adjustments may be needed in order to maintain morale and a sense of camaraderie possible only when groups share alike. American rations may be reduced somewhat or an increase may occur in the military rations of our Allies, or a combination of these two adjustments may occur. It seems highly improbable that such changes will make for smaller demands on our total food supplies.

Food for Great Britain and Russia

Great Britain and Russia are our two great fighting Allies whom we must help with food.

The people of Great Britain, by means of their home production together with imports from India, Australia, New Zealand, Canada, and South America, plus Lend-Lease shipments of food from the United States, have managed to secure a diet fairly effective in maintaining health and efficiency.

Information available indicates that the armed forces of

Russia are in need of extra rations, and that a large part of the civilian population is near or at starvation levels. Lack of shipping space and of adequate convoy protection has been a major reason for the small quantities of food so far shipped. The Russians on many occasions have elected to use what space was available for munitions rather than food. When more shipping space is available, we should provide food for Russian soldiers in order to help to maintain the stamina in battle that has up until now amazed many peoples. There will also be the need of aiding Russia in feeding her people so as to check mass starvation, until such time as she recovers her fertile acres and reorganizes her agriculture.

There are many reasons why Americans are less conscious of the need for shipping food to Russia than to Great Britain. Over many decades we have grown accustomed to the idea that the people of Great Britain would soon starve if anything should halt, for long, the cargoes bringing in her food supply. Her contribution to our national safety by her dogged determination not to surrender in the face of a succession of overwhelming disasters during the fall and winter of 1940–41 as well as her continuing contribution to ultimate victory makes us more than willing to share with her our food supplies.

Steadily since 1941, wonder and admiration at the fighting spirit of Russia have grown in the United States. But her need for assistance in the form of large food supplies is not widely recognized. Russia is largely an agricultural country. But the Ukraine, at times described as Russia's bread basket, was lost to Germany in 1941; and disorganization of transportation has cut off much of the food that formerly flowed from southern to northern Russia.

Russia has up to date been Germany's most formidable enemy, wearing down her strength to fight. Early victory for the United Nations depends on Russia's strength being maintained through shipment of both food and munitions. Food should be sent for another reason. Providing food for

starving people is an expression of good will that will go far at the peace table in wiping out the undesirable effects of earlier misunderstandings between Russia and the United States. There are still many communities in Russia where people have a sense of eternal gratitude to America for food supplies that were distributed during 1923–24 by the American Relief Administration under the direction of Herbert Hoover.

Food for Latin America

The West Indies, Central America, and the northern part of South America have specialized in sugar, bananas, coffee, or some other tropical crops, a large part of which has been consumed in the United States, and much of their food was imported. There is widespread awareness in the United States that shipping shortage has cut off some supplies coming from tropical Latin America. Even Cuba recently has been too far distant for us to spare ships to bring customary quantities of sugar; bananas have become a special treat to American consumers. But these privations have another side. Many Latin American countries are experiencing disorganized markets with products awaiting buyers who do not come. Customary imports are not available, unemployment is widespread, and malnutrition has greatly increased. Additional consumption of sugar, coffee, and bananas, of which there is an abundance, does not compensate for food imports that have failed to come.

Responsibility in this situation is being placed on the doorstep of the United States. To the Latin Americans affected, we appear as the people who should render aid. Our country is near at hand and powerful, and it was from us that former food imports were largely secured.

In furthering the war effort another condition has been introduced. An attempt is being made by our Government to expand in tropical Latin America the production of certain strategic materials, for example, sisal, jute, and rubber. In

order to induce workers to devote their time and effort to such expansion, it is necessary to see that they get food supplies.

Agriculture can be improved so that food to a somewhat greater extent can be supplied locally in these countries. There is now a food-producing project under way in Northern Brazil. This joint undertaking of the United States Institute of Inter-American Affairs and Brazilian authorities is made in an effort to lessen the demands of one area on limited shipping facilities.

Shortage of ships and unawareness of the extent of the need have doubtless had a part in determining the limited quantities of food sent. For many months the risk of loss from U-boats in the Carribean was high; and ships used there had to be withdrawn for moving munitions and food to some sector of the many war fronts. There exists in part of Latin America an area of responsibility in meeting food needs which cannot continue to be so neglected as in the past. Wheat is the major food needed. Of this we have plenty. Ships are the bottleneck.

Food for a Freed Europe

The peoples now under Nazi domination constitute another and very important group. Apart from Germans and people in areas of Russia occupied by Germans, there are in this group close to twice as many people as in the United States. In many of these countries the percentage of children in the population is high. Here is not only a responsibility, but an opportunity. The resistance of hungry people to pressure to cooperate with the Axis depends in some measure on their expectation of relief. High officials have announced that when the power of the Axis is broken, food will be shipped. President Roosevelt has proclaimed, "No one will go hungry . . . in any territory occupied by the United Nations, if it is humanly within our powers to make the necessary supplies available to them."

Belief in this promise gives strength to the Allied cause. Feeding hungry people is a military and political necessity as well as a humane thing to do. The presence of food in storage, especially in storage in North Africa ready for shipment to Southern Europe and in England ready for shipment to Norway, Denmark, Holland, Belgium, and Western France, should prove a psychological weapon of considerable power. There must first of all be stockpiles at or near sources of supplies. Too little has been done so far to provide them.

Food for American Civilians

The food strategist must see that the health and morale of those on the home front is kept at a high level. Provision must be made for adequate total supplies and their equitable distribution.

Consumption in 1942

During 1942, American civilians did not buy all the food for which they were willing to pay, but the per capita food consumption for the country as a whole, apart from a few foods, including sugar and coffee, was higher than the average for 1935–39. For some foods average weekly consumption was as follows:

Foods (Pounds)	Weekly Per Capita Civilian Supply	
	1942	1935–39
Meat	2.64	2.43
Poultry products	1.27	1.13
Fluid milk and cream	6.96	6.58
Ice cream	.27	.18
Condensed and evaporated milk	.37	.32
Cheese (except cottage and bakers')	.12	.11
Fats and oils, including butter	.96	.93
Citrus fruits	1.12	.96
Sugar	1.44	2.00

In some communities much less than the usual quantities of meat have been available. Incomplete regulations affecting distribution have failed to alleviate some shortages. A few communities have had a shortage of fluid milk. Extreme instances have occurred in some communities having a great increase in population because of the development of a defense plant or the expansion of an army camp.

Rising Income Causes Scarcities[2]

In 1939, national income was $70 billion; for 1943 an income of $135 billion is anticipated. The shortage of meat in 1942, apart from communities that failed to get their proportionate share, has been due mostly to higher incomes. In 1943, there will probably be enough meat for civilians to have a little over 2 pounds per week—not much less than they had in 1935–39; but they will probably be willing to buy more than 3 pounds.

Higher incomes have been responsible for much of the shortages in 1942 of butter, milk, and many other foods whose prices have been held down and whose demand increases with income.

Civilians' Share Reduced

Food Administrator Wickard has announced that in 1943 our armed forces—which will constitute 6 to 7 per cent of the total population—and our allies are to get 25 per cent of our entire food supply. In 1937 and 1938, for example, food exports amounted in value to about 5 per cent the farm income from the sale of food, and our food imports exceeded food exports in value. Now food imports are down; food exports are zooming.

Hints of growing scarcities for civilians are to be found in the various orders issued by WPB. Processors, for example,

[2]A later pamphlet will discuss more fully the effects of the increase in spending power.

have been ordered to set aside at least 90 per cent of their total production of spray skimmilk powder—a dried skimmilk which can be reconstituted for drinking purposes. During November, 1942, one-half the supply of butter in cold storage was ordered to be reserved for Government use. In order to relieve, somewhat, the shortage of butter, the sale of whipping cream has been prohibited and restrictions imposed on the amount of ice cream made. Canners have been requested to set aside 35 per cent of their 1942 pack of canned fruits and vegetables for the Government. During December, 1942, WPB issued two important orders affecting the 1944 civilian supply of canned products. One curtailed the amount of various foods packed in 1943 for civilian consumption, and the other reserved one-half of the 1943 pack of popular canned fruits and vegetables for the armed forces, Lease-Lend, and stockpiles.

The use of steel and tin for the canning of some foods for civilians has been prohibited. Civilian consumption of canned foods in 1944—when the 1943 pack will come into use—is expected to be 33 pounds per annum in contrast with 46 pounds during 1935–39. Among foods canned, the reduction is greater for some foods than for others. For example, neither apples nor boned chicken are to be canned for civilian use. These are both foods that are readily available without tin. Canned soups are reduced by 50 per cent. Baby food, on the other hand, can be packed in the same quantities as in 1942.

Food Prospects for 1943

Decreases of some foods and increases of others are in prospect for 1943 and 1944. Below are given some guesses of the probable per capita civilian food supply from commercial production in 1943 compared with consumption in 1942. Civilian supplies from commercial production depend on the production goals set, the extent to which they are achieved,

Food	Probable per Capita Civilian Food Supply from Commercial Production in 1943 Compared with that of 1942 1942 = 100
Dairy products	
Fluid milk and cream	103–107
Butter	85– 89
Cheese, except cottage, pot, and bakers'	48– 51
Evaporated and condensed milk	71– 74
Ice cream	70– 75
Dried skimmilk	70– 75
Meat	90– 95
Poultry	120–126
Sea food	75– 85
Eggs	85– 90
Fats and oils	85– 90
Lard	100–105
Compounds and vegetable cooking fat	68– 75
Potatoes,	
Irish	95–105
Sweet	86– 92
Tomatoes and citrus fruits	
Citrus, fresh	105–115
Citrus, canned	60– 65
Tomatoes, fresh	93– 98
Tomatoes, canned	60– 65
Leafy, green and yellow vegetables	
Fresh	82– 88
Canned	50– 58
Dried fruits	68– 73
Sugar	68– 70
Coffee	75– 80
Tea	60– 65
Cocoa	78– 82
Cereals	As much as consumers wish to buy.
Soybean flour, flakes, and grits	A great increase is possible.

and the allocation of food among those peoples who are to have a share. Civilian consumption of many foods will be greater than indicated here if those families who are in a position to do so have gardens and keep chickens and otherwise increase the supply of food that is produced apart from the commercial supply.

The shift in the amounts indicated here does not of course measure the shift that will occur in the diets of individual families. Income distribution in society affects the way in which the national food supply is divided up. Some families,

unable to share to any great extent in the more expensive foods in 1935–39, for example, will now be able to buy larger amounts. Rationing, too, will enter to affect how various consumers will share in food supplies.

Civilians in general during 1943, in a very large measure, will continue their customary food habits with respect to meat, potatoes, milk, butter, and total fresh fruits and vegetables. The most severe cuts will be in coffee, tea, sugar, canned foods, and a few highly concentrated foods such as cheese. The question may well be raised by some persons whether civilians should not be asked to make greater changes in their food habits if such changes would further the war effort. Such a sacrifice should be valued in terms of essential stockpiles being built, more food being shipped abroad, and manpower freed for the armed forces and defense industries.

Nutritional Prospects for 1943

Food supplies to meet civilian needs should also be assessed in terms of nutrients. Below is a comparison of the daily per capita nutrients in the anticipated food supply for 1943 with the quantities recommended for optimum health by het National Research Council.[3]

Nutrient	Units	National Research Council Standard*	Anticipated Daily Per Capita Consumption of 1943
Food energy	Calories	2,800.0	2,951.0
Protein	Grams	66.0	84.1
Calcium	Grams	0.9	0.8
Iron	Milligrams	12.0	13.3
Vitamin A	International units	4,700.0	4,710.0
Riboflavin	Milligrams	2.3	1.8
Thiamine	Milligrams	1.6	1.7
Ascorbic acid	Milligrams	70.0	94.0

* Some of these estimates include a considerable margin of safety.

[3] Taken from estimates by J. M. Cassels and F. Hall, "Food Supplies for Civilian Population," *Jour. Am. Acad.*, January, 1943.

The consumption reported here is based on raw foods. A large proportion of some nutrients, notably ascorbic acid and thiamine, is commonly lost in cooking—just how much is not actually known. Even with this loss, the potential level of nutritional health for 1943 is as great as it was for 1935–39. If in 1943 foods are equitably shared, better diets should be possible than in the earlier period when a very large percentage of families were living at poverty levels.

Riboflavin in the food supply is farthest below the optimum standard. Deficiency here may be in part reduced should all white flour consumed in 1943 be enriched in accordance with the official enrichment formula. Food Administrator Wickard has ordered the enrichment of all white bread sold by bakers. Amounts of calcium and thiamine are borderline. The relative shortage of calcium makes it important to maintain the consumption of fluid milk.

In interpreting these data a word of warning is necessary. In spite of the fact that total food supplies have in the past been and will probably continue in the future to be sufficient to provide everyone with the nutrients needed for a high standard of nutritional health, many families because of low income or ignorance are consuming very poor diets. Although income of many families is up and nutritional education has been greatly increased, the war has eliminated neither of these conditions.

Evolution of Shortages

Year by year throughout the war and continuing for some time into the post-war period, progressive changes in the food supply are to be expected, both in basic foods and in the way in which they are processed. Because of supplies held over from 1941, many changes introduced by the war with Japan are only now making themselves felt. This is true for canned foods using tin. Shortage of steel will continue to limit canned

goods even if substitutes for tin coating are developed. More fruits and vegetables, meat, and fish will reach consumers uncanned, and the use of glass containers will be increased. The shortage of manpower will be a factor that will progressively shift production to those foods having low labor costs. This shift should be facilitated wherever possible. Foods of top quality will be reduced—these usually bring smaller returns in nutrients per cost unit than those of lower quality. Vegetables such as carrots, onions, and cabbage will probably expand, and asparagus, brussels sprouts, and bleached celery will probably contract. Shipping space will probably, for a long time to come, be at a premium. Consequently, civilians will be asked to do without a large portion of the concentrated foods that are suitable for immediate shipping or for holding in stockpiles. Because of heavy demands on internal transportation, there will also be smaller quantities of very bulky foods such as watermelons. Because of the need to reduce waste, highly perishable fruits and vegetables will be dehydrated in so far as processing facilities permit.

Dividing Foods Among Civilians

When supplies are shorter than usual, who is to go without? In ordinary times those who can pay the highest prices are assured that supplies will be available to them. In wartime this method is not considered satisfactory. It would lead to higher food prices than now prevail, and those with the lowest incomes would get a very inadequate share. In the interest of providing adequate diets for all, even though supplies are less than usual, and in order to have no more manpower in agriculture than is necessary, the food strategist as shortage becomes greater must resort to rationing.

Rationing of individual consumers is a substitute for voluntary rationing and rationing by retailers. In the present scheme it has two major objectives: The first is to contribute

to an equitable sharing of those foods that are to be made available to civilians and to reduce their shopping difficulties. The second is to prevent extreme shortages in some markets from creating pressures that would make it impossible to accumulate the stockpiles which are so badly needed. Only by developing and instituting a widespread system of consumer rationing and building up large reserves of concentrated foods does it seem likely that American civilians, out of their relative abundance, will be able to hold out hands of friendship overflowing with foods to the oppressed people of Europe.

Why Rationing Is Needed[4]

There are several reasons why rationing should be introduced in the near future for most of the major foods apart from cereals:

1. Present halfway measures to control civilian consumption of some foods, for example, butter, meat, canned salmon, canned fruits, and vegetables, are now far from satisfactory. Persuasion and requests to conserve have at times backfired by touching off a wave of hoarding of staple foods, causing serious confusion and loss of morale. Many Government rulings have restricted the total quantities that could be sold by wholesalers. In such circumstances often consumers who shopped early got the food. Retailers in some cases were asked to ration consumers. Some grocers have felt that the Government was "passing the buck" to them. Many of them felt that their job was to sell food and not to persuade customers not to buy. They were also accustomed to having a full stock on hand and were often disconcerted by having customers ask for products that had been cleared from their shelves earlier by hoarders. Where no close substitutes for the foods exist and considerable shortage occurs, persuasion and such rationing as retailers can achieve are not likely to prevent queues from forming, waste of time in shopping, and

[4]A later pamphlet will discuss rationing in more detail.

very heavy handicaps being imposed on women who are gainfully employed and those with small children. In dealing with shortages, persuasion and restriction of sales by wholesalers should be used only as a temporary expedient while official consumer rationing is being inaugurated with the greatest speed possible.

2. Shortages now exist, and greater shortages are in the offing. Further increase in total income is likely to occur as shifts in employment take place and some of the low level incomes are adjusted in accordance with anti-inflation legislation of October 1942. With many civilian goods, other than food, disappearing from the market and taxes and bond sales insufficient to withdraw that income which in normal times would go to those goods, there is likely to be some expansion in the proportion of their income that consumers are willing to spend for food. Furthermore, the need for food for the armed forces, Lease-Lend, and stockpiles will bring smaller per capita civilian supplies in 1943 than were available in 1942. Halfway measures of dividing food among civilians will become increasingly unsatisfactory. At some time it may be necessary to shrink civilian consumption of some foods a great deal. To do this an efficiently functioning ration system should be in operation.

Why Rationing Has Been Delayed

Delay in introducing food rationing has in part been due to unsatisfactory administrative arrangements (which it is hoped no longer exist), in part to the complexities of the task of working out the multitude of rules involved and getting machinery in operation (including the distribution of coupon books through thousands of rationing boards), and in part to public opinion. Americans dislike being told what to do unless they accept the need for rules. Too little attention has been given to explaining the food situation.

Education of Civilians[5]

In the management of civilian food supply, education has an important place. Several things should be stressed:

1. Reasons for civilian shortage, namely, sharing with Allies, the greater needs of the armed forces, and the higher spending power of civilians, need frequent repetition. The element of consumer sacrifice should not be ignored. But it should be recognized without pity being expressed. There is no point in denying that many people would rather eat more meat than more bread, more butter than more margarine. At the same time, morale may be strengthened by pointing out that the giving up a few favored foods entails a sacrifice that those at home, for the most part, are glad to make.

2. The continuing adequacy of food supplies in the market to meet basic needs of civilians for nutrients, needs to be emphasized. This is highly important in order to check hoarding and a panic demand that no manpower be withdrawn from agriculture. The fact should be stressed that no one food is necessary in the diet, and that a high level of health can be maintained, even though enormous adjustments in food habits occur.

3. The need for rationing in order to share equitably the limited food supplies and to save shopping time needs to be explained.

4. Alternate foods that will provide nutrients to replace foods not available should be announced. Selection of these in the market and their preparation in the home need to be stressed. It may be necessary to restore past skills, for example, to teach many homemakers how to prepare soup and to bake beans. Local bake shops may, of course, increase their variety of ready-to-serve foods.

5. Attention should be given to eliminating waste. The

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[5] This topic is to be discussed at greater length in a later chapter.

fat salvage campaign of 1942 should be continued. A campaign against food waste in general should be directed especially to families with moderate to high income, who have tended to discard stale bread and meat, bruised vegetables and fruits to a considerable extent. Attempts should be made to have edible vegetable tops consumed as well as other local greens now unused.

Attention should be given to those cooking methods that will reduce cooking losses of ascorbic acid, thiamine, and other precious nutrients. Because of customary food habits there have been inadequate amounts of these in many diets long before present shortages, and changes being made in the food supply have not increased the amounts of them being made available. Economy in the consumption of protective nutrients is a need of first magnitude.

Certainty and Uncertainty in Food Needs

The brief sketch of nature of the food needs of Great Britain, Russia, portions of Latin America, areas of Europe to be freed from Nazi domination, and our expanding armed forces and higher civilian needs makes it evident that many foods are going to become scarcer.

In separating certainties from uncertainties, situations should be dealt with country by country, and by time periods. It is certain that total food needed by the armed forces will increase. If it is agreed that the armed forces are to receive certain foods, the amounts of specified foods can be estimated with a great deal of certainty for the next year and longer. The number in the armed forces will probably not vary more than 10 per cent from present estimates. Insofar as destination of troops is not known, uncertainties enter concerning the processing of foods. Furthermore, war brings destruction of food supplies, and extra emergency stocks are needed.

Meeting needs outside the United States is obviously de-

pendent on shipping facilities. The whole shipping situation is bound to be subject to stresses and strains. Should it worsen, less food can be transported to the other United Nations and free countries dependent upon us for food. If ship building continues at the high rate reached in 1942, and if the submarine menace is reduced so that somewhat less convoy protection is needed, the food shipments will average more tons per month in 1943 than in 1942. Final victories in North Africa plus control of Sardinia and Sicily will open up the Mediterranean route to India, and thus save thousands of ton miles of shipping. It may be that some food dammed up in the West Indies can soon get to the United States and to Europe. With extra shipping, foods of New Zealand, Australia, and Argentina will be more on a par with those of the United States for shipment to Great Britain and nearby areas. Because of troop movements and large quantities of supplies to be shipped, the strain on shipping is likely to continue to be very great. *We must be prepared for either a relative surplus or shortage of ships. Flexibility through having foods in storage is needed.*

Russian food needs hold a large element of uncertainty, partly because of our lack of knowledge of existing needs and partly because of uncertainties in the future progress of the war. Russia may lose more of her fertile acres. Food needs of Russia may rise to unprecedented heights. Because these needs are certain to be large, United States should be prepared to ship millions of bushels of wheat and tons of butter, lard, and other fats as well as smaller amounts of other foods as soon as shipping makes it feasible.

When one turns to the food needs of other European peoples, uncertainties of both time and quantity exist. Total food needs to be met will undoubtedly be large. Unless there is a collapse of German morale, of which there is now little or no evidence, the early stages of food relief will not come simul-

taneously in all countries. Agriculture in some areas may be rehabilitated before final victory. In planning food reserves optimism about initial victories should decide policy. It should be assumed that before 1943 crops are harvested in the United States, food relief in some part of continental Europe will have been provided.

The amount of food to be shipped into any freed areas will depend on the season of the year when victory is achieved. Maximum needs would occur if victory should come just before harvest time, and if the Nazis follow the scorched earth policy in their retreat destroying crops, supplies, and equipment. Almost a full year would pass before people could be largely fed from local crops. Much less food would have to be shipped if victory occurred just long enough before planting time to get agriculture organized.

The amount as well as the kind of food needed will also depend on the extent of malnourishment, and on the quality of diets to be provided. Standards will probably seek to achieve two things: (1) to check outright hunger; and (2) to restore to adults ability to participate in work, and to children something approaching normal growth. For political reasons it is highly important to improve the food over what was available under Nazi rule.

Experience in World War I gave some indication of food supplies needed for rehabilitation. At the end of World War I, it is estimated that there were 200,000,000 persons on the verge of starvation. From February to July, 1919, 3,837,354 tons of food were delivered by the Director General of Relief to the hungry in Continental Europe. In all, during 1919, 7,551,390 tons of cereals, meat, eggs, cheese, and butter were shipped to Europe including Great Britain. Three-quarters of the tonnage was cereals.

Following this war the food needs will probably be much greater than the needs in 1918. The population subsisting on very low food standards is much larger. France and many

countries neutral in World War I are now in the Nazi orbit, and their food standard is already very low and likely to become much lower.

C. FOOD SUPPLIES

Food needs are expanding, and many of them are uncertain. These facts the food strategist should recognize. In providing supplies, there are also elements of uncertainty whose importance can be largely reduced by reserves and by a large volume of current food production. In achieving the latter, however, the food strategist is faced with serious limitations. Food production takes manpower, machines, and other scarce resources. It must be seen as part of the total war effort.

Certainty and Uncertainty of Food Supplies

Progress of the War

Victories may bring the United Nations additional food supplies. The Nazis announced that the loss of North Africa deprived them of 80 million kilograms (176 million pounds) of olive oil. In the pre-war period North Africa exported considerably more food than was imported.

Possible losses due to further Japanese and German conquests should not be entirely ruled out. The loss of India, for example, would substantially reduce our supplies of fats and oils—foods which, because of the loss of the East Indies, are now short in terms of customary consumption and stocks. The victory in the Mediterranean reduces this danger somewhat. There may be increased loss from the sinking of food cargoes, however.

Reserves

Considerable reserves of some foods in the United States—to be discussed later—provide certainty that minimum food needs will be met.

Uncertainty exists for administrators because of ignorance

of reserves and because of actual and potential production in the areas on which the United Nations might draw. Systematic investigation and the establishment of cooperative arrangements should introduce more certainty in this area.

Uncertainty in Production

Even after production goals are set, and man power and machinery are available to meet them, weather introduces uncertainties as to food that will be produced. The next few years may bring poor crops in some or several of the countries from which food supplies may be drawn. Such a contingency should not be overlooked.

The probable upper and lower limits of food production in the United States, as far as weather is a factor, can be set for 1943 with considerable assurance. Six per cent of the good crop of 1942 is credited to unusually good weather. The crops of 1934 and 1936, both drought years, provide the probable lower limit, for the crop of 1943, and that of 1942—the year of the largest crop in history—marks the probable upper limit. Studies of tree ring growth provide evidence that the Great Plains area has not since 1775 in any other two consecutive years had weather so favorable to good crops as in 1941 and 1942. It is hardly likely that the weather in 1943 will be as favorable as either 1941 or 1942. Because of the presence of subsoil moisture, however, the probability is also low that crops in 1943 will be as poor as those of 1934.

Production goals of 1944 are uncertain because of political pressures. Shifts from one type of production to another depend in large part on how quickly those influencing policy can be brought to realize the immensity of the task which, it should be assumed, lies ahead. Furthermore, the Agricultural Adjustment Administration, a powerful agency established in all agricultural communities, has potentials for contributing to efficiency still largely undeveloped. An agency established to cope with surpluses must be reoriented to reduce scarcity.

In bringing about the shift, new objectives must be developed and new rules devised to govern production activities.

Certainties as to Production

Because of the large stock of feed on hand, a high level of livestock production is now largely assured, up to and probably through 1944. Agriculture is in a favorable position. Many farms, especially in the high producing areas, are well equipped with machinery, the soil fertility is higher than in 1933, and fairly adequate facilities exist for financing farmers.[6] The Agricultural Extension Services in every state are prepared to give technical assistance in better methods.

Among the certainties that limit production of food are some drain on labor to the defense industries and to the armed forces, and some shift of labor and fertile acres to the production of raw materials for industrial uses.[7] In 1943, for example, some acres of Iowa land are going to the production of hemp, and corn will be used to produce starch for non-food purposes and industrial alcohol.

In addition, a shrinkage in equipment and other capital resources is to be expected. The War Production Board has set the production of agricultural machinery at a very low level. It may later be raised, but with the maximum increase that can be anticipated, machinery on farms is likely to begin to show marked signs of depreciation by 1944.

Processing and transportation facilities will also wear out. Congestion of transportation and depreciation of processing facilities as well as labor shortage will reduce somewhat the supply of fertilizer.

Having Supplies to Meet Needs

In relating food needs and supplies, the Food Administrator is faced with many uncertainties. With systematic examination of them, some, which at first glance seem un-

[6]A later pamphlet will discuss facilities for financing farmers.
[7]A later pamphlet will discuss labor policies.

certain, can be reduced to certainty. Even so, the extent of uncertainties remaining is very large. At some points they seem to assume gigantic dimensions. Furthermore, there is no reason why they should cancel each other; several of them might strike in the same direction. Poor crops in areas accessible to the United Nations might coincide with victories opening up large areas into which food should be sent to alleviate starvation.

Large food reserves provide a measure of protection against the uncertainties involved in the size of food needs ahead and the uncertainties of production.

Present Food Reserves

In time of peace in the United States, current production is the major assurance of ample food supplies. The uncertainties of war make it especially important to note existing reserves that could be drawn upon in event of an abnormally large need or an abnormally small supply. Reserves in part are in cold storage and in warehouses and elevators. Stocks of some foods in storage as of December 1, 1942, in contrast with those of December 1, 1941, are shown in the table below.

For poultry and fruits and vegetables, largely for civilian consumption, important gains occurred in cold storage holdings. Among things important for overseas shipment stocks of meat and cheese were down somewhat. Those of lard and butter were very low. Other fats are, however, close to last year's level. Stocks of eggs, including dried eggs, and of dried milk are at relatively high levels.

Data on current stocks of canned fruits and vegetables are not available. So far, however, little of the 1942 pack of canned fruits and vegetables has been released for sale, so that presumably reserves are relatively high. It seems likely that stocks of dry beans and peas are slightly higher than a year ago and are above normal and that stocks of potatoes are somewhat below normal.

Commodity	Stocks Available (000,000's omitted)		Percentage Change Dec. 1, 1941 to Dec. 1, 1942
	Dec. 1, 1941	Dec. 1, 1942	
Meat, pounds	471	441	− 6.4
Poultry, pounds	173	193	+ 11.6
Eggs, (dried, frozen, and shell), cases equivalent	6.5	11.9	+ 83.1
Cheese, pounds	189	153	− 19.0
Milk (evaporated and condensed), pounds	691	915	+ 32.4
Milk (dried, whole, and skim), pounds	30	115	+283.3
Lard, pounds	153	60	− 60.8
Butter, pounds	152	46	− 69.7
Other fats and oils, pounds	2,000*	1,960†	− 2.0
Fresh apples and pears, pounds‡	34	35	+ 1.9
Frozen fruits and vegetables, pounds‡	299	334	+ 11.2

* 1937–41 average for January 1.
† January 1, 1943.
‡ Stocks as of November 1.

Sugar stocks are reported to be one-third larger than at this time a year ago. Rationing of civilians has made this possible.

Wheat is our major reserve. In the United States and Canada alone—assuming the rate of exports as in 1942 and relatively large amounts of wheat fed to livestock—there would be on hand July 1, 1943, approximately 1,370 million bushels of wheat. A July reserve of 300 million bushels is looked upon as a large combined carry-over for the United States and Canada. This reserve could be provided, and yet during 1943 approximately seven times the quantity of wheat could be exported that was shipped to European countries in 1919. Furthermore, there are considerable stocks of wheat in Australia and Argentina. With this wheat we are well fortified against hunger, and we have some food on hand for millions of people whenever it can be sent. Wheat, even though unaccompanied by other foods, would be welcomed eagerly by the hungry populations of Latin America, Europe,

and Asia. In most instances some vegetables, fruits, and animal products would probably be available locally to supplement it.

In addition to the wheat, it is of course possible at anytime to draw for human use, on animal feeds, including oats, corn, and other cereals, and the soybean and peanut meals, certain root crops, and skimmilk. Furthermore, herds and flocks of livestock constitute important reserves to be drawn upon in case of need.

Among the animal feeds are some like skimmilk and soybean and peanut meal, that are high in protein and certain minerals likely to occur in insufficient quantities in many diets. In 1937, 83 per cent of the skimmilk went to animals or was discarded. Plans are now underway to expand the processing of dried skimmilk. Because it is a protective, highly condensed food, much of this will be reserved for shipment abroad. Since soybean and peanut meal, and flour are relatively new foods, methods must be found for introducing them into the diet.

In the interests of efficiency, all reserves in the United States should be taken into account in plans. During 1942 various agencies, including the commissaries of the armed forces and representatives of European governments, were building up separate reserves. Some confusion and duplication in purpose appear to exist. It seems highly desirable that reserves of various types of food be coordinated and a plan developed for distribution so cross-hauling is avoided.

Building Stockpiles to Meet Uncertainties

Stockpiles are foods ready to be shipped or after limited processing to be moved into consumption. If cereals alone were adequate to provide for high future needs and for insurance against uncertainties, there would be no problem of building stockpiles. Supplies of fats, protein foods, and those high in vitamins and minerals are needed. These are highly

important for children and to supplement cereals where dietary deficiencies have been very great and local supplies are very low. Stocks of these should be increased now in order to reserve some of the abundant crop of 1942, which was 25 per cent above the average for the 1935–39 period.

WPB recently issued an order restricting the use of fats and oils by manufacturers, in order to build up a stockpile of 3 billion pounds as a safeguard against crop failures and war emergency. Fat is very scarce in Europe. Similar action should be taken for other foods, as dried milk, eggs, meat, beans and peas and soybean meal.

Why the Delay?

For months the need for stockpiles of food to supplement cereals has been officially recognized. Foods in warehouses near shipping points have at times been so limited that it has been necessary to postpone sailing dates of badly needed ships in order to allow time for assembling the foods to fill them. The greater need ahead for many foods, as well as the uncertainties affecting food supplies, has been accepted. Why then has so little been done? Several factors helped to delay the building of stockpiles:

1. Current needs of Lend-Lease and the armed forces have seemed large. The effort devoted to the management of food supplies has gone entirely to them and to civilian consumption. Furthermore, no one has been assigned the responsibility for seeing that stockpiles are built up.

2. Machinery for an orderly shrinkage in civilian consumption of many foods was not in existence during 1942. Optimism that, somehow or other, it would be possible to avoid the complicated and thankless task of rationing individual consumers appears to have been a conspicuous characteristic of the behavior of those charged with responsibility for rationing.

3. There are uncertainties in regard to the size of the future

food needs, and the time at which they will be needed. But the situation has not been squarely faced. Failing to look far enough ahead, Administrators may have been reluctant to take the risk of building up stockpiles, and industry spokesmen, failing to recognize the existence or the magnitude of the need ahead feared that reserves would greatly depress future prices.

4. Insufficient attention has been given to the importance of civilian education, including consumers, producers, journalists, and broadcasters. It is necessary to impress on civilians the need for stockpiles so that they understand why the presence of large stocks in storage does not obviate the need for rationing.

5. Stockpiles require storage space. Information is now being gathered on available space.

6. An increase in stockpiles of foods to be shipped abroad must be of highly concentrated foods that are nonperishable outside of cold storage. Capacity for such processing has been limited, and scarcity of materials and labor has been an obstacle to its expansion.

A Program for Larger Stockpiles

The first step in developing a suitable program necessitates a staff assigned the responsibility and given the powers necessary to build stockpiles. Consumer rationing and a widespread civilian education are essential. Storage will in all probability become less of an obstacle as supplies of non-food commodities diminish and considerable dry storage is thus made available. Priority rating for additional processing machinery depends on a demonstration of the need for it as part of the total war program. To get recognition, stockpiles must have a spokesman armed with facts to demonstrate their contribution to the total program for war and peace.

Frequent revision of plans will be needed. At the outset, it is safe to guess that the stockpiles should be large and that

successively larger stockpile goals should be set for definite dates, say by March 31, and by November 30, 1943, for those foods that flow into the market throughout the year.

The accumulation of stockpiles should not be dependent on the existence of a surplus, over and above what the civilian market can absorb. It should proceed even though the shortage for civilians is so great that rationing is necessary. Nor should stockpiles be used merely as a price stabilization device. At the same time the maximum quantities of food should probably be added to the stockpiles at the peak of seasonal supply or when other demands are relatively low. Warehouse space should be mobilized. It may be that all the major warehouses in the nation should be included in the stockpile project.

What and How Much to Produce

In war the need for economizing the resources of society becomes a painful reality as one shortage after another confronts those who plan. The great shortage for the American economy during the war will be manpower (here taken to include womanpower). Next come materials for machinery, chemicals—some of which are used for fertilizers—and then internal transportation. In using these resources, provision must first be made for armed forces and munitions. Maintaining and then expanding the level of food production come next in importance. The function of the Food Administrator is to balance the advantage of various products against the cost of producing them in terms of manpower, metals, and machinery withdrawn from the war effort at some other front. Requests for expanding farm machinery must be weighed against limiting the production of ships, guns, and tanks or processing machinery and yet feed our armed forces, allies, and civilians.

To realize the extent of the labor shortage, it should be

recognized that America has been forced into a task which even with the cooperation of other nations is the greatest in all her history to date. Manpower shortages in some places are already great, even acute; yet, a large part of the defense industry is not yet manned and the armed forces estimated to be needed are far from being fully recruited.

During 1942, thousands of persons left agriculture. In spite of this a record crop was harvested. Food needs continue to mount. What should be the policy? Is production of all customary crops to be increased? Should some be increased a great deal while others are contracted somewhat? Since labor is the resource which is most scarce, these questions must first be resolved by examining manpower.

Can we maintain present manpower in agriculture without impeding the war effort? The answer is "Yes" if manpower suitable for the armed forces, for munition industries, and for necessary civilian non-food industries and services including the marketing of food, is available elsewhere. The War Manpower Commission in an effort to check a reduction of manpower in agriculture must look to unemployed women and to workers in nonessential civilian industries. It must examine inefficiencies in marketing, cross-hauling, overlapping deliveries, unnecessary advertising, numerous retail outlets—many with a small volume of sales and many with bare shelves as stocks of nonessential civilian goods are sold out. Simplification of consumer goods, the production of which is to be continued, will save labor both in factories and in stores. Agriculture should not be squeezed to get manpower for the armed forces and munition industries without attempting to get labor fully and efficiently used in other areas of the economy.

In spite of such reservoirs of manpower on which to draw, it seems highly probable that 1943 will see further shrinkage of labor in agriculture. Young men from the farms make good soldiers, and they rapidly develop necessary skills in industries.

Other factors will result in many leaving farms. For one thing serving in the armed forces represents a unique sacrifice. Along with other groups in society, farm people are likely to be reluctant not to assume a fair share of this burden. Social pressure is likely to result in further absorption of farm boys into military units.

Can adequate food supplies be provided in the face of further shrinkage in agricultural manpower? Time alone will provide conclusive evidence. With reasonable cooperation from the weatherman and action along the following lines, there is no doubt that the total supply of nutrients actually consumed can be increased considerably even in the face of shrinkage of manpower:[8]

1. Reduce to a minimum all spoilage and discarding of food suitable for human consumption. Skimmilk and whey should not go down the drain. Waste in kitchens—those of home, restaurants, and army camps—should be cut. Marketing practices which waste food should be eliminated. Large quantities of fresh fruits and vegetables have in recent years been allowed to rot in the fields either because the price was too low to cover the cost of marketing or in an effort to secure a higher price for products sold. Especially the lower grades, including those irregular in shape and having minor bruises, have been discarded to sustain price. Carelessness in handling enroute to consumers has also brought considerable spoilage. Shortage of labor may make it impossible to avoid entirely such waste in fresh fruits and vegetables, but it should be cut to a minimum and consumers taught to accept the irregular products with minor bruises. Spoilage and shipping costs can be reduced also by shifting from fresh to dehydrated fruits and vegetables. Availability of processing facilities will probably limit greatly the shift in this direction. The campaign against waste should extend to all areas on which the United Nations might draw for food.

[8]A later pamphlet will discuss manpower in agriculture in greater detail.

2. Expand the processing facilities that will make it possible to bring into the food supply more skimmilk and whey solids, and soybean and peanut meal. These are very high quality foods. The withdrawal of a portion of these from animal feeds will make it necessary to adjust animal rations, but saving can nevertheless be effected.

3. Expand the production of foods with a low total labor cost in relation to nutrients needed and contract the production of those with a high labor cost. Planning to accomplish this end calls for the joint effort of nutritionists and farm management specialists. Most foods are a complex of nutrients all of which are not equally scarce; and foods which are nutritionally close substitutes call for different types of processing and fit into food habits in very different ways. In addition, almost every food has a complex set of relationships within the farm business. Among foods, some differences in relative costs are very striking. Where there is a choice between resources being used for fluid milk or for butter, a much greater return for the labor used is likely to result if fluid milk is produced—unless, of course, the skimmilk and buttermilk by-products of butter-making are used.[9] Pork ranks above beef in returns per unit of labor if corn is a major feed used. Cabbage, beets, sweet corn, and carrots rank high among the vegetables and lettuce, asparagus, and bleached celery, low; legumes, including soybeans, navy beans, and peanuts, rank high.

4. Bring into use that farm labor which has not been fully utilized. The expansion planned for poultry and family gardens and home processing of perishable foods, should draw to a large extent on woman power. Time given to such work may in large part come from nonessential household tasks. In some areas labor would be more fully used if seasonal workers were shifted from one area to another.

5. Introduce more efficient methods with attention specially

[9]A later pamphlet will discuss this subject in greater detail.

given to getting maximum returns for the labor used. During war years less attention should perhaps be given to checking weeds and to soil conservation practices that make considerable demands on time.

6. Shift labor from low- to high-producing farms. Shifts within communities as well as shifts between communities would be advantageous.

7. Mobilize labor in urban communities and high school youths in farm communities to help to meet seasonal peaks for those crops that can be handled by such labor.

8. Shrink food and non-food crops of which there are abundant reserves or which are nonessential, and shift acres and labor thus freed to foods which are needed. A very great possibility for increasing the food production in the United States within two or three years lies in shifting some farm resources used in growing wheat, cotton, and tobacco to the production of those foods of which larger quantities are needed.[10]

Efforts are being made to get higher returns from manpower on farms. Production goals for 1943 announced by Secretary Wickard recognize the importance of the expanding production of those foods that will yield high nutrients per unit of labor; many policies are directed toward greater economies, and various techniques, including price floors, subsidies, educational programs, labor, and machinery plans, are designed to get farmers to cooperate in providing the foods which are most economical.[11]

Goals that call for contraction of certain types of production, in the interest of economy, have met strong opposition from some processors and farmers having a large vested interest in the production to be curtailed. Some of these may not find it easy to adapt their skill and equipment to other uses. Wishful thinking is in part responsible for this attitude. There are

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[10]A later pamphlet will discuss this subject in greater detail.
[11]Later pamphlets will discuss in detail methods useful in achieving goals.

those who, figuratively speaking, think that America, probably even without any help from allies, can lick the Germans and the Japanese with her hands tied behind her back. There are also groups indifferent to the war. They announce by their actions that for them the war is not sufficiently important to call for sacrifice. As the demands of the war on our manpower become more apparent, as they undoubtedly will before the end of 1943, the need for pruning that production unessential to the war effort will become apparent to more people. When this occurs, policy that directs the use of resources will come to focus more consistently and wholeheartedly on the common objective of winning the war. Public opinion has an important part to play in checking special privileges that prevent full use of resources.

✡ ✡ ✡ SUBSEQUENT PAMPHLETS will follow this one at intervals of a few weeks. There will be fifteen or more in the series, each dealing with a crucial problem of our WARTIME FARM AND FOOD POLICY, including:

FARM PRICES FOR FOOD PRODUCTION
FISCAL POLICY AND FOOD MANAGEMENT
MANPOWER PROGRAM FOR AGRICULTURE
COMMODITY LOANS AND PRICE FLOORS
A DAIRY PROGRAM STREAMLINED FOR WAR
REMODELLING THE AAA
CONTROLLING LAND PRICES AND SALES
DIVIDING FOOD AMONG CIVILIANS
IMPROVING NUTRITION IN WARTIME
METHODS OF EDUCATING CONSUMERS

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