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# Production, Purchase, Sale, and Use of Specified Foods on Alabama Farms

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# Production, Purchase, Sale, and Use of Specified Foods on Alabama Farms

By

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**C**HANGING economic conditions in recent years have caused considerable emphasis to be placed upon production for home markets. With some, the thought in regard to producing agricultural products for these markets is to cater to markets within the State, or even to adopt a live-at-home program, thus limiting production primarily to commodities for consumption on the farm, while with others emphasis is placed upon production for national markets. The emphasis upon production for home markets generally has varied inversely with the access of an area to other satisfactory markets, and directly with curtailment of the demand for cash crops in recent depression periods.

In Alabama emphasis is now being placed upon producing for local markets and upon a live-at-home program, chiefly as a result of the decline in demand for cotton which is the principal cash crop. By raising more food products for local and home consumption it is not only possible to decrease purchases of these foods, but also to practice greater diversification in farm production which in turn tends to aid in maintaining soil fertility and promotes fuller utilization of farm labor. Many farm people in the State are not obtaining an adequate diet because of their limited production of foods and their low cash incomes. Cotton farming is not conducive to the improvement of these conditions.

With greater emphasis now being placed upon planned farm production, information relating to the production and consumption of farm products on Alabama farms is valuable in formulating any future farm program. This study, which is a phase of a general investigation of the balance in Alabama's production, purchases, and consumption of farm products, was made to determine the amounts of food products produced, purchased, and consumed on farms, and methods of improving the farm diet.

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<sup>1</sup>Acknowledgment is made to J. H. Blackstone for assistance in collecting and tabulating the data for this study.

## METHOD

This study considers primarily those food products that can be grown with a fair degree of success in Alabama<sup>1</sup>. Total farm consumption, combined with urban and other non-farm consumption, which is to be considered in another phase of this investigation, include Alabama's total consumption of food products. The situation in 1935, when Census data were available, seems typical of recent conditions in the State.

The data for this study were obtained chiefly from two sources: first, production and disposition reports of the Bureau of Agricultural Economics; and second, records of 816 farms in various farming areas of the State. The production and disposition reports were used in computing the production and sales of the principal products and to some extent in computing home consumption. The 816 farm business records were used in further itemizing the production and disposition data of the Bureau, as the basis of calculating family food purchases, and the use of foods by tenure groups. Farm records were obtained in Baldwin, Butler, Clarke, Hale, Jefferson, Limestone, Pickens, Pike, and St. Clair Counties for 1935. In obtaining these records an attempt was made to sample the various farming areas of the State, and also to obtain representative information from both colored and white farmers of each tenure group.

Farm business records taken in the Sandy and Buck Creek Soil Conservation Area near Dadeville, Alabama, were also analyzed to determine the kinds of fruits and vegetables available during each month of the year. This area is centrally located in the State from north to south, and is typical of a large part of the State.

## PRODUCTION AND DISPOSITION

The proportions of farm-grown food products consumed and sold varied considerably according to the kind of product. This variation was the result of such factors as the availability of market outlets, need for the product as food on the farm, and the adaptability of the product for household use or for marketing. Frequently the temporary availability of satisfactory cash markets leads to the sale of products which would otherwise be consumed as food on the farm. Foods that are not easily processed on the farm are usually sold and then repurchased in processed form. These factors become extremely important when an attempt is made to increase the consumption of home-grown foods and consequently they should be given careful consideration.

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<sup>1</sup>The quantity of fruits and vegetables produced for consumption is given for these foods in the condition as harvested.

## Field Crops

The value of field crops used for food on the farm was \$5,404,000 in 1935 while the value of sales of these same crops was \$8,440,000 (Table 1). Corn comprising 5,050,000 bushels,

**TABLE 1.—Amount and Value of Field Crop Products Sold and Used by Farmers, Alabama, 1935<sup>1</sup>.**

Kind	Sold		Used		Total	
	Amount <sup>2</sup>	Value	Amount <sup>2</sup>	Value	Amount <sup>2</sup>	Value
	Thousands	Thousands	Thousands	Thousands	Thousands	Thousands
Cane sirup -----	563	\$ 242	2,062	\$ 887	2,625	\$1,129
Corn -----	2,260	1,582	5,050	3,535	7,310	5,117
Cowpeas -----	390	581	59	88	449	669
Peanuts -----	104	5,828	4	226	108	6,054
Sorghum sirup ----	392	176	1,437	647	1,829	823
Wheat -----	32	31	22	21	54	52
<b>Total -----</b>		<b>\$8,440</b>		<b>\$5,404</b>		<b>\$13,844</b>

<sup>1</sup>Farm Value, Gross Income, and Cash Income from Farm Production, 1934-35, U.S.D.A.

<sup>2</sup>Peanuts in tons, sirup in gallons, all others in bushels.

most of which was ground into meal, was the most important field crop consumed by farmers. Sirup, including both cane and sorghum, was the second most important field crop with 3,499,000 gallons used and 955,000 gallons sold. In North Alabama peanuts were grown in small quantities primarily for home consumption while in South Alabama they were grown on a commercial basis and were used primarily as feed for hogs and as a cash crop. Cowpeas were used for food rather extensively in some areas. In North Alabama small quantities of wheat were grown, a part of which was used for home consumption. Farmers have experienced considerable difficulty in getting wheat milled and consequently are discouraged in growing it for home consumption.

## Livestock and Livestock Products

There is a marked difference among various kinds of livestock and poultry in the numbers kept for slaughter on the farm and the numbers sold. In 1935, hogs slaughtered on farms amounted to 116,000,000 pounds live weight while those sold from farms amounted to only 23,720,000 pounds (Table 2). It was quite different with cattle and calves. Cattle slaughtered on farms amounted to only 12,600,000 pounds, and calves to only 1,050,000 pounds live weight, while those sold from farms comprised 155,160,000 and 10,350,000 pounds, respectively. Few sheep were produced, consequently both farm slaughter and sales were low. In the disposition of poultry 20,708,000 pounds of chickens were killed on farms and 8,974,000 pounds sold, while 585,000 pounds of turkeys were killed and 2,160,000 pounds sold.

**TABLE 2.—Disposition from Farms of Livestock and Poultry by Farm Slaughter and Sales, Alabama, 1935<sup>1</sup>.**

Kind	Disposition		Percentage disposition	
	Farm slaughter <sup>2</sup>	Sales	Farm slaughter <sup>2</sup>	Sales
	1,000 pounds	1,000 pounds	Per cent	Per cent
Hogs -----	116,000	23,720	83	17
Cattle -----	12,600	155,160	8	92
Calves -----	1,050	10,350	9	91
Sheep -----	240	240	50	50
Lambs -----	100	150	40	60
Chickens -----	20,708	8,974	70	30
Turkeys -----	585	2,160	21	79

<sup>1</sup>Farm Production from Meat Animals, 1924-35, Farm Production and Disposition of Chickens and Eggs, 1925-27, and Turkeys, Farm Production and Disposition, 1929-1939, U.S.D.A.

<sup>2</sup>All weights computed on live weight basis.

When these data are compared on a percentage basis, it is noted that 83 per cent of the hogs and only 8 per cent of the cattle and 9 per cent of the calves disposed of were slaughtered on farms. The percentage of hogs slaughtered was higher than average since production in that year was low and home needs have preference over sales (Appendix Table 1). Fifty per cent of the sheep, 40 per cent of the lambs, and 70 per cent of the chickens were slaughtered on farms.

Farmers tend to slaughter a much smaller percentage of cattle and calves than of other classes of livestock. Even if production of cattle were increased, it appears doubtful that many more would be slaughtered on farms until farmers are better able to care for fresh beef. However, farmers would probably increase their consumption of hogs, sheep, and poultry if production were increased because these animals can be utilized more easily as food without deterioration. The utilization of mechanical refrigeration for farm use should increase the number of livestock slaughtered where farmers are able financially to take advantage of this service.

Of the livestock products produced on the farm, including livestock and poultry slaughtered, 73 per cent was consumed on the farm while 27 per cent was sold. There was considerable variation in the amounts and proportions of the various products sold.

Milk products sold were valued at \$7,256,000 and those used at \$18,926,000 (Table 3). The most important item of consumption by the farm family was buttermilk of which 524,996,000 pounds valued at \$7,326,000 were used, while whole milk amounting to 178,003,000 pounds and valued at \$5,357,000 was the most important livestock product sold. Relatively small amounts of cream were sold and little skim milk was produced since farmers usually churn the whole milk. Alabama

**TABLE 3.—Amount and Value of Farm-Produced Livestock Products Sold and Used by Farmers, Alabama, 1935.**

Kind	Sold		Used <sup>1</sup>		Total	
	Amount	Value	Amount	Value	Amount	Value
	1,000 pounds	1,000 dollars	1,000 pounds	1,000 dollars	1,000 pounds	1,000 dollars
Milk: <sup>1</sup>						
Whole milk -----	178,003	5,357	249,615	5,527	427,618	10,884
Buttermilk -----	21,190	394	524,996	7,326	546,186	7,720
Butter -----	3,798	798	33,402	6,012	37,200	6,810
Butterfat -----	2,122	488	—	—	2,122	488
Skim milk -----	12,556	219	6,527	61	19,083	280
Total -----	217,669	7,256	814,540	18,926	1,032,209	26,182
Pork <sup>2</sup> -----	8,802	1,452	52,214	6,883	61,016	8,335
Beef <sup>2</sup> -----	4,364	371	1,969	162	6,333	533
Mutton <sup>2</sup> -----	98	10	59	6	157	16
Chickens <sup>3</sup> -----	—	—	14,495	3,530	14,495	3,530
Turkeys -----	—	—	410	89	410	89
Eggs -----	20,250	2,754	27,250	3,706	47,500	6,460
Honey -----	230	21	676	64	906	85
Grand total ---	251,413	11,864	911,613	33,366	1,163,026	45,230

<sup>1</sup>Milk Production and Utilization in the United States 1934, 1935, and 1936, U.S.D.A.

<sup>2</sup>Farm Production from Meat Animals 1924-1935, and Farm Production and Disposition Chickens and Eggs, 1938, U.S.D.A. Turkeys, Farm Production and Disposition, 1929-1939, U.S.D.A. Pork, beef, and mutton were calculated on a cured or retail cut weight basis as follows: pork 52.6 per cent live weight; beef 46.4 per cent of live weight; mutton 46.3 per cent of live weight. See Appendix Table 2 for conversion factors.

<sup>3</sup>All poultry sold is calculated on a live basis and is included in the table on livestock and poultry sold. Poultry used was calculated on 70 per cent of live weight.

<sup>4</sup>Buttermilk, 13,132,000 gallons; whole milk, 7,705,000 gallons in addition to 1,172,000 gallons fed to calves; skim milk, 1,816,000 gallons not included. Excludes milk suckled by calves.

farm people usually prefer buttermilk to milk in its other forms. This preference probably results from the fact that buttermilk remains palatable longer than other kinds of milk under farm conditions. A general increase in the production of dairy products should result in an increase in consumption since few farmers now have satisfactory outlets for the sale of these products. Commercial milk production comes from a relatively small number of dairy farms.

Pork, including lard, amounting to 61,016,000 pounds, was the most important meat product produced, and also comprised a very large proportion, 52,214,000 pounds, of the meat consumed on the farm. The sale of cured pork is apparently influenced by the necessity for cash at certain times of the year. Dressed beef, including veal, was next in importance with 6,333,000 pounds<sup>1</sup>; however, only 1,969,000 pounds of this were consumed on the farm. A relatively large percentage of dressed beef was necessarily sold because of the inability of the farmer to utilize an entire carcass at one time. The dressed weight of chickens slaughtered on the farm amounted to 14,495,000

<sup>1</sup>Pork, beef, and mutton were calculated at 52.6, 46.4, and 46.3 per cent, respectively, of live weight which was cut weight or cured weight per cent and slightly less than dressing per cent.

pounds. Though a small amount of poultry was no doubt sold from farms in dressed form, it was considered of such minor importance that it was included in live poultry sold.

Of the 47,500,000 pounds of eggs produced 57 per cent were used on the farm and 43 per cent sold. Though more eggs could have been consumed as food on the farm, they provided a source of cash income at times of the year when cash was very scarce and were often sold to purchase commodities for which the family had greater desires. The production of honey was 906,000 pounds, 676,000 pounds of which were used on the farm and 230,000 pounds sold. Farmers, particularly those above the cropper status, usually provide their family requirements for livestock products from the farm or do without.

### Vegetables

Although Alabama produced over \$18,000,000 worth of truck and garden products in 1935, only 15 per cent was sold (Table 4). These sales were concentrated largely in truck crop

**TABLE 4.—Amount and Value of Garden and Truck Crops Sold and Used by Farmers That Were Produced on Farms, Alabama, 1935<sup>1</sup>.**

Kind	Sold		Used		Total	
	Amount 1,000 pounds	Value Dollars	Amount 1,000 pounds	Value Dollars	Amount 1,000 pounds	Value Dollars
Beets -----	312	3,433	12,536	175,503	12,848	178,936
Cabbage -----	11,000	82,500	109,004	1,635,056	120,004	1,717,556
Cantaloupes ---	2,380	47,589	7,138	154,666	9,518	202,255
Carrots -----	222	2,884	1,664	24,965	1,886	27,849
Collards -----	316	22,530	61,502	1,230,041	61,818	1,252,571
Cucumbers ---	9,747	62,021	6,894	50,269	16,641	112,290
Eggplant ----	124	2,535	195	4,132	319	6,667
Garden peas ---	541	15,690	41,746	1,252,378	42,287	1,268,068
Green corn ---	15,672	170,624	49,086	631,114	64,758	801,738
Green field peas -----	429	10,602	1,584	42,247	2,013	52,849
Irish potatoes	92,820	1,036,490	67,200	750,000	160,020	1,786,490
Lettuce -----	13	504	859	3,435	872	3,939
Lima beans ---	495	20,112	14,116	617,567	14,611	637,679
Okra -----	61	1,712	3,282	82,037	3,343	83,749
Onions -----	1,068	9,446	37,378	426,238	38,446	435,684
Rape -----	35	715	62	1,435	97	2,150
Snap beans ---	2,115	43,425	42,990	1,003,092	45,105	1,046,517
Spinach -----	387	8,385	429	10,020	816	18,405
Squash -----	190	3,043	738	12,548	928	15,591
Sweet potatoes	54,450	712,800	342,320	4,481,000	396,770	5,193,800
Tomatoes ----	15,511	193,890	77,677	1,040,320	93,188	1,234,210
Turnips and greens -----	6,959	53,662	46,773	415,758	53,732	469,420
Watermelons ---	75,460	275,198	385,118	1,540,473	460,578	1,815,671
Other vege- tables -----	—	9,500	—	85,706	—	95,206
<b>Total</b> -----		<b>2,789,290</b>		<b>15,670,000</b>		<b>18,459,290</b>

<sup>1</sup>Agricultural Statistics, 1937, U.S.D.A., and Farm Value, Gross Income, and Cash Income from Farm Production 1934-35, U.S.D.A. (Many of these vegetables were originally included in "Other" but were itemized here on the basis of 816 farm records).



producing areas of South Alabama and in smaller areas scattered over the State which have access to local town and city markets and have favorable production conditions. The more important commercially produced vegetables are Irish potatoes, sweet potatoes, watermelons, tomatoes, green corn, cabbage, and cucumbers. The production of truck crops has not been very extensive in areas where cotton is the major crop. The distances from large consuming centers of the United States have tended to limit commercial truck crop production to those parts of the State having especial production advantages such as earliness of season.

Large amounts of sweet potatoes, watermelons, Irish potatoes, cabbage, garden peas, collards, tomatoes, beans, green corn, and turnip greens are grown for home consumption. These products are grown throughout the State and constitute a large part of the vegetative diet of the farm population. Several other vegetables are grown in smaller quantities to supplement these. The limited production of certain vegetables is usually due to one or more of the following factors: poor adaptation of the vegetable to the area, its lack of palatability, and lack of information on the part of the farmers as to methods of its production, preservation, and use. An increase in vegetable production on Alabama farms generally would mean almost an equal increase for home consumption because of the lack of available markets.

### Fruits and Nuts

Fruits and nuts produced in Alabama were valued at \$2,365,000 in 1935 (Table 5). This production was divided almost equally between sales and family use. The amount sold

**TABLE 5.—Amount and Value of Fruits and Nuts Sold and Used by Farmers, Alabama, 1935<sup>1</sup>.**

Kind	Sold		Used		Total	
	Amount <sup>2</sup>	Value	Amount <sup>2</sup>	Value	Amount <sup>2</sup>	Value
	Thousands	Thousands	Thousands	Thousands	Thousands	Thousands
Apples -----	105	\$ 120	420	\$ 478	525	\$ 598
Cherries -----	5	9	10	16	15	25
Grapes -----	6	8	16	23	22	31
Peaches -----	265	225	560	476	825	701
Pears -----	55	41	90	68	145	109
Pecans -----	2,250	268	950	114	3,200	382
Plums -----	13	13	32	32	45	45
Satsumas -----	—	—	2	4	2	4
Strawberries -----	4,900	441	130	12	5,030	453
Other -----	—	13	—	4	—	17
Total -----		\$1,138		\$1,227		\$2,365

<sup>1</sup>Agricultural Statistics 1937, U.S.D.A., and Farm Value, Gross Income, and Cash Income from Farm Production, 1934-35, U.S.D.A. Data on plums and cherries were segregated from "Other" on the basis of the 816 farm records.

<sup>2</sup>Pecans in pounds, strawberries in quarts, and satsumas in boxes; all others in bushels.

was valued at \$1,138,000 while the amount used by the family was valued at \$1,227,000. Eighty per cent of the apples and large proportions of several of the other fruits were used by the farm family. Strawberries and pecans were frequently grown on a commercial basis, hence a relatively larger percentage of these crops was sold than used. Apples and peaches accounted for 78 per cent of the value of the products used on the farm, while pecans, strawberries, and peaches comprised 82 per cent of the total sales. Considerable amounts of wild fruits and nuts were used to improve the farm diet though a complete record on these was not available. The production of fruits for both farm consumption and sale was very low on the average farm. This very limited production may be partially accounted for by the lack of necessary equipment to satisfactorily control diseases and insect pests. This control is usually essential to the production of a quality product or any product at all in some instances.

#### **PURCHASES**

The purchases by Alabama farm families of food products that are adapted to production in the State were valued at approximately \$50 per family in 1935. A comparison of the records of 816 farms with the results obtained by the Alabama Home Economics Extension Service<sup>1</sup> indicated that approximately 50 per cent of all food purchases were items which were adapted to production on Alabama farms. The purchases of foods that were consumed by farm people while away from the farm were not included, but were probably very small. Because of their low cash incomes, many farm families were frequently unable to buy foods that were needed.

#### **Processed Field Crops**

The largest expenditures for foods by Alabama farmers were for processed field crop products. They were valued at approximately eleven million dollars in 1935, of which sum flour represented 74 per cent (Table 6). Though the expenditure for flour amounted to \$30 per family annually, apparently the farmers considered this a necessary food the consumption of which could not be decreased. Vegetable shortening was the second largest item of this group, while corn meal and sirup were of less importance. Although corn meal and sirup were usually produced on the farm, purchases of these products were required by some families each year because of poor crops, weevils in farm stored corn, and other limitations. If an adequate supply of some of these products, such as wheat, were grown in Alabama, there would still be considerable expense to the farmer in having it processed into edible form.

<sup>1</sup>Agricultural Statistics, 1937—Page 412.

**TABLE 6.—Amount and Value of Processed Field Crops Purchased as Food by Farmers, Alabama, 1935.**

Kind	Amount	Value
	Pounds	Dollars
Bread -----	39,800	3,980
Corn meal -----	31,252,464	651,093
Catchup -----	1,890	324
Flour -----	177,383,283	8,159,631
Peanut butter -----	379,186	63,324
Shortening -----	15,420,373	1,881,285
Sirup -----	4,459,097	202,722
Total -----	228,936,093	10,962,359

### Livestock Products and Fish

Purchases of livestock products and fish amounted to \$1,973,829 in 1935 or \$7.22 per census farm (Table 7). Of these beef alone accounted for \$832,385 or 42 per cent. Approxi-

**TABLE 7.—Amount and Value of Livestock Products and Fish Purchased by Farmers, Alabama, 1935.**

Kind	Amount	Value
	Pounds	Dollars
Beef -----	5,662,483	832,385
Butter -----	76,246	20,129
Cheese -----	26,454	6,640
Condensed and evaporated milk -----	82,740	10,682
Cured pork -----	2,293,795	458,759
Eggs -----	151,598	26,277
Fish (excluding salmon) -----	2,969,202	338,489
Fresh pork -----	724,640	108,696
Honey -----	102,746	11,713
Lard -----	1,072,004	130,785
Milk -----	623,930	14,510
Mutton -----	28,740	4,311
Poultry -----	47,005	9,072
Salmon -----	9,935	1,381
Total -----	13,871,518	1,973,829

mately 55 per cent of the value of beef purchased represented packing house products. The second largest purchase of livestock products was pork products which amounted to \$698,240 of which 66 per cent was cured pork. A large part of the pork and lard purchase was made by croppers who apparently failed to produce enough meat and consequently were furnished pork through advances by the landlord. Fish, including salmon, were third in importance, with a value of \$339,870. Fish were a cheap source of protein and also served as a change from the pork diet. Other purchases, including poultry and eggs, dairy products, mutton, and honey were valued at \$103,334.

## Vegetables

Purchases of vegetables by Alabama farmers were also very low, amounting to only \$288,550 in 1935, 57 per cent of which were canned vegetables and 43 per cent fresh and dried (Table 8).

**TABLE 8.—Amount and Value of Vegetables Purchased by Farmers, Alabama, 1935.**

Kind	Canned		Fresh and dried		Total value
	Amount	Value	Amount	Value	
	Pounds	Dollars	Pounds	Dollars	Dollars
Beans -----	303,468	29,644	108,032	4,389	34,033
Beets -----	—	—	47,200	519	519
Cabbage -----	4,406	371	1,811,700	48,312	48,683
Collards -----	—	—	2,175	155	155
Corn -----	5,333	521	—	—	521
Dried beans ---	—	—	27,448	1,839	1,839
Irish potatoes ---	—	—	3,925,800	45,801	45,801
Lettuce -----	—	—	5,194	371	371
Onions -----	—	—	175,332	1,538	1,538
Peas -----	203,570	28,114	44,760	1,298	29,412
Pickles -----	150,683	18,943	48,480	303	19,246
Spinach -----	5,985	756	—	—	756
Sweet potatoes ---	1,841	155	492,415	6,446	6,601
Tomatoes -----	1,257,503	84,716	412,496	5,156	89,872
Turnips -----	—	—	1,161,700	8,132	8,132
Vegetable soup ---	1,823	155	250,960	—	155
Watermelons ---	—	—	—	916	916
<b>Total -----</b>	<b>1,934,612</b>	<b>163,375</b>	<b>8,513,692</b>	<b>125,175</b>	<b>288,550</b>

Canned vegetables purchased, of which slightly over half was tomatoes, were valued at \$163,375. Beans, peas, and pickles were the other canned vegetables purchased in quantities of importance. Farm families usually bought the same kinds of vegetables that they commonly grew on their farms which indicates that the primary problem is one of getting farmers to grow more of the same vegetables than they are now growing.

Purchases of fresh and dried vegetables amounted to \$125,175. These included principally such staples as cabbage, Irish potatoes, turnips, and sweet potatoes, and were apparently made chiefly between garden seasons. The farmers generally either produced their own fresh vegetables or did without them.

## Fruits and Nuts

Purchases of fruits and nuts by Alabama farmers were valued at only \$318,484 in 1935 (Table 9). Apples valued at \$141,031 and peaches valued at \$125,632 included 84 per cent of fruit purchases. A large part of these expenditures was for dried apples and peaches, while the purchases of canned fruits, with the exception of peaches, were very small. Fresh fruits were generally bought from neighboring farmers. The total purchases of fruits and nuts were valued at only \$1.16 per farm.

**TABLE 9.—Amount and Value of Fruits and Nuts Purchased by Farmers, Alabama, 1935.**

Kind	Canned		Dried		Fresh		Total value
	Amount	Value	Amount	Value	Amount	Value	
	100 pounds	Dollars	100 pounds	Dollars	100 pounds	Dollars	Dollars
Apples ----	—	—	7,832	96,332	21,490	44,699	141,031
Peaches ---	2,244	22,659	4,857	66,058	22,238	36,915	125,632
Pears -----	55	627	—	—	5,101	7,652	8,279
Prunes -----	104	1,287	315	3,870	—	—	5,157
Figs -----	—	—	59	1,485	966	2,318	3,803
Apricots ---	—	—	280	6,168	—	—	6,168
Bramble fruit ----	—	—	—	—	4,203	13,311	13,311
Strawberries	—	—	—	—	422	2,811	2,811
Grapes -----	—	—	—	—	658	1,507	1,507
Plums -----	—	—	—	—	872	1,226	1,226
Pecans -----	—	—	—	—	1,125	9,559	9,559
Total ---	2,403	24,573	13,343	173,913	57,075	119,998	318,484

The total expenditure for the food products included in this study was \$13,543,222. Processed field crops accounted for 80.9 per cent, livestock products 14.6 per cent, fruits 2.4 per cent, and vegetables 2.1 per cent. In developing plans with farmers to grow more of the food products which they now purchase, it appears that field crops and livestock products should be given first consideration. This is not to imply, however, that farmers are now producing quantities of fruits and vegetables to provide an adequate diet.

#### CONSUMPTION PER PERSON

The foods consumed per farm person, produced or adapted to some extent to production in the State, were valued at \$49.94 in 1935 (Table 10). Livestock products and fish included approximately 50 per cent of the value of these foods while fruits and nuts included only approximately 2 per cent. Purchases of foods with the exception of flour and vegetable shortening were very small.

The total amount of field crop products consumed per person amounted to 378 pounds and was valued at \$11.82. Corn meal was the largest single item in weight amounting to 197 pounds. There were 129 pounds of wheat, bread, and flour consumed, most of which was purchased, while all the vegetable shortening was purchased. Most of the sirup used was produced on the farm. Field crop products included 81 per cent of the value of food purchases.

Livestock products and fish, amounting to 668 pounds and valued at \$25.48 per person, represented the most valuable group of products consumed. A large part of this was dairy products. Other foods of considerable importance were 41

**TABLE 10.—Amount and Value of Food Produced on the Farm or Purchased and Consumed, per Farm Person, Alabama, 1935.**

Kind	Produced		Purchased		Total	
	Amount Pounds	Value Dollars	Amount Pounds	Value Dollars	Amount Pounds	Value Dollars
Field crops, total -----	<b>212.74</b>	<b>3.90</b>	<b>165.16</b>	<b>7.92</b>	<b>377.90</b>	<b>11.82</b>
Bread and flour -----	.95	.02	128.00	5.89	128.95	5.91
Corn meal -----	174.88	2.55	22.55	.47	197.43	3.02
Cowpeas -----	2.54	.06	—	—	2.54	.06
Peanuts -----	5.81	.16	—	—	5.81	.16
Peanut butter -----	—	—	.27	.05	.27	.05
Sirup -----	28.56	1.11	3.22	.15	31.78	1.26
Vegetable shortening -----	—	—	11.12	1.36	11.12	1.36
Livestock products and fish, total -----	<b>657.66</b>	<b>24.07</b>	<b>9.90</b>	<b>1.41</b>	<b>667.56</b>	<b>25.48</b>
Beef -----	1.42	.12	4.08	.60	5.50	.72
Butter -----	24.10	4.34	.06	.02	24.16	4.36
Buttermilk and skim milk -----	383.49	5.33	—	—	383.49	5.33
Eggs -----	19.66	2.67	.11	.02	19.77	2.69
Fish and salmon -----	—	—	2.15	.24	2.15	.24
Honey -----	.49	.05	.07	.01	.56	.06
Pork and lard -----	37.67	4.97	2.95	.50	40.62	5.47
Poultry -----	10.73	2.60	.03	.01	10.76	2.61
Whole milk -----	180.10	3.99	.45	.01	180.55	4.00
Vegetables, total -----	<b>950.30</b>	<b>11.31</b>	<b>7.55</b>	<b>.20</b>	<b>957.85</b>	<b>11.51</b>
Beets -----	9.04	.13	.03	—	9.07	.13
Cabbage -----	78.64	1.18	1.31	.04	79.95	1.22
Carrots -----	1.20	.02	—	—	1.20	.02
Collards -----	44.37	.89	—	—	44.37	.89
Cucumbers -----	4.97	.04	.04	—	5.01	.04
Garden peas -----	30.12	.90	.03	—	30.15	.90
Green corn -----	35.41	.46	—	—	35.41	.46
Green field peas -----	1.14	.03	—	—	1.14	.03
Irish potatoes -----	48.48	.54	2.83	.01	51.31	.55
Lima beans -----	10.18	.45	—	—	10.18	.45
Melons -----	283.00	1.22	.18	—	283.18	1.22
Okra -----	2.37	.06	—	—	2.37	.06
Onions -----	26.97	.31	.13	—	27.10	.31
Snap beans -----	36.02	.72	.10	.01	36.12	.73
Sweet potatoes -----	246.97	3.23	.36	—	247.33	3.23
Tomatoes -----	56.04	.75	.30	.01	56.34	.76
Turnips and greens -----	33.74	.30	.84	.01	34.58	.31
Other fresh vegetables -----	1.64	.08	—	—	1.64	.08
Canned vegetables -----	— <sup>1</sup>	—	1.40	.12	1.40	.12
Fruits and nuts, total -----	<b>41.91</b>	<b>.88</b>	<b>5.24</b>	<b>.23</b>	<b>47.15</b>	<b>1.11</b>
Apples -----	15.15	.34	1.55	.03	16.70	.37
Canned fruits -----	— <sup>1</sup>	—	.17	.02	.17	.02
Dried fruits -----	—	—	.96	.12	.96	.12
Grapes -----	.57	.02	.05	.00	.62	.02
Peaches -----	20.20	.34	1.60	.03	21.80	.37
Pears -----	3.25	.05	.37	.01	3.62	.06
Pecans -----	.68	.08	.08	.01	.76	.09
Other fresh fruit -----	2.06	.05	.46	.01	2.52	.06
Other food stuffs -----	<b>.04</b>	—	<b>.10</b>	<b>.02</b>	<b>.14</b>	<b>.02</b>
Grand total -----	<b>1,862.65</b>	<b>40.16</b>	<b>187.95</b>	<b>9.78</b>	<b>2,050.60</b>	<b>49.94</b>

<sup>1</sup>Fruits and vegetables were all estimated in fresh state.

pounds of pork products and 20 pounds of eggs. Beef, pork and lard, and fish were the only livestock products purchased in appreciable amounts.

Vegetables produced on the farm gave considerable variety to the farm diet and included 46 per cent of the total pounds of foods consumed per person. Though several different vegetables were purchased the total amount was very small.

Fruits and nuts represented a very small part of the farm diet. The total consumption was 47 pounds valued at \$1.11 per person and consisted principally of peaches and apples. The total purchases of fruits and nuts were very small.

The consumption per person of most proteinaceous foods was very low while the consumption of corn meal, flour, and sweet potatoes, which are high in carbohydrates, was high. Thus, only 13 dozen eggs and 38 pounds of pork produced on the farm were consumed. Other meats, such as beef and poultry, and such proteinaceous vegetables as beans and peas were also available in small quantities.

Of the foods consumed, 80 per cent were grown on the farm where used, and 20 per cent were purchased (Table 11).

**TABLE 11.—Distribution Between Production and Purchase of Foods Consumed by Farm People, Alabama, 1935.**

	Per cent produced	Per cent purchased	Total
Field crops -----	33.0	67.0	100.0
Livestock products -----	94.2	5.8	100.0
Vegetables -----	98.3	1.7	100.0
Fruits -----	79.3	20.7	100.0
Average -----	80.0	20.0	100.0

The percentages of the consumed portions of these various foods produced on the farm varied from 98.3 per cent for vegetables to 33.0 per cent for field crops. The percentages for livestock products and fruits were 94.2 and 79.3 respectively.

#### VARIATIONS IN PRODUCTION AND CONSUMPTION BY AREAS, TENURE, AND SEASONS

In considering a program for increasing the production of foods for home consumption, attention should be given to the differences between various areas and tenure groups in the quantities now produced. Some groups are now apparently producing adequate amounts of certain adapted foods for their needs, while others are far short on a part or on all their requirements. A brief analysis has been made of some of these variations.

### Variations by Areas

A comparison of Baldwin, Jefferson, and Pickens Counties was made to determine the variations in production of foods for home consumption. Records from white farmers, other than croppers, were used in order to have comparable groups. The value of foods produced per person was \$64.64 for Baldwin, \$82.48 for Jefferson, and \$89.00 for Pickens County (Table 12). Baldwin was lowest in consumption of home grown vegetables, fruits, livestock products, and field crops, while Jefferson County was lowest in poultry and meat. Pickens County was highest in the consumption of vegetables, meat, and field crops,

**TABLE 12.—Value of Foods Consumed per Person Including Those Produced on the Farm and Purchased, Baldwin, Jefferson, and Pickens Counties, Alabama, 1935<sup>1</sup>.**

Kind	County		
	Baldwin	Jefferson	Pickens
<b>Produced:</b>			
Field crops -----	\$ 3.49	\$ 6.24	\$ 7.05
Livestock products:			
Poultry -----	3.25	2.87	3.02
Meat -----	14.45	10.06	22.57
Milk products -----	22.50	34.95	28.59
Eggs -----	5.14	5.61	4.44
Other -----	0.17	0.15	0.08
Vegetables -----	13.19	17.99	19.38
Fruits -----	2.45	4.61	3.87
<b>Total</b> -----	<b>\$64.64</b>	<b>\$82.48</b>	<b>\$89.00</b>
<b>Purchased:</b>			
Field crops -----	9.99	10.93	8.48
Livestock products:			
Poultry -----	<sup>2</sup>	<sup>2</sup>	<sup>2</sup>
Meat -----	2.80	2.36	0.89
Milk products -----	0.06	0.24	—
Eggs -----	0.06	0.12	0.01
Other -----	0.09	—	—
Vegetables -----	0.61	0.17	0.25
Fruits -----	1.08	0.19	0.06
<b>Total</b> -----	<b>\$14.69</b>	<b>\$14.01</b>	<b>\$ 9.69</b>
<b>Total consumption:</b>			
Field crops -----	13.48	17.17	15.53
Livestock products:			
Poultry -----	3.25	2.87	3.02
Meat -----	17.25	12.42	23.46
Milk products -----	22.56	35.19	28.59
Eggs -----	5.20	5.73	4.45
Other -----	0.26	0.15	0.08
Vegetables -----	13.80	18.16	19.63
Fruits -----	3.53	4.80	3.93
<b>Total</b> -----	<b>\$79.33</b>	<b>\$96.49</b>	<b>\$98.69</b>

<sup>1</sup>Average of all white farmers other than croppers.

<sup>2</sup>Poultry purchased is included in meat purchased.



while Jefferson was highest in fruits and milk products, and Baldwin was highest in poultry. A part of Baldwin County's low consumption value of home produced foods is explained by the fact that some vegetables had a lower price in that county. This lower price did not explain a very large part of the difference, however, even with vegetables.

The purchases per person of foods that could be produced on the farm were valued at \$14.69 for Baldwin, \$14.01 for Jefferson, and \$9.69 for Pickens County. Baldwin purchased the largest amount of vegetables, fruits, and meat, while Jefferson County purchased the largest amount of milk products and field crops. Pickens County purchased very little of any of these foods except field crops.

Though Baldwin and Jefferson Counties produced several food products on a commercial basis, apparently a smaller amount of home-grown foods was consumed than in Pickens County. The principal reason for this limited consumption was that commercial production counties had available markets, while Pickens County was not so well situated.

### Variations by Tenure

An analysis of the value of home-grown foods that were consumed on the farm in Pickens County varied in relation to the position of the farmer on the agricultural ladder or his progress toward full ownership. Thus, families that were full owners produced and consumed per person foods valued at \$96.19, part owners \$79.24, renters \$72.74, and croppers \$67.84 (Table 13). The production and consumption by tenure of the

**TABLE 13.—Value of Foods Consumed per Person Including Those Produced on the Farm and Purchased, by Tenure, Pickens County, Alabama, 1935<sup>1</sup>.**

Kind	Full owners	Part owners	Renters	Croppers	Average
Produced:					
Field crops -----	\$ 7.47	\$ 7.45	\$ 5.83	\$ 8.96	\$ 7.19
Livestock products:					
Poultry -----	3.40	3.06	2.05	1.34	2.90
Meat -----	24.11	20.33	19.06	17.42	22.19
Milk products -----	30.63	23.72	24.61	21.14	28.03
Eggs -----	4.93	4.92	3.07	1.82	4.24
Other -----	0.08	0.10	0.06	—	0.07
Vegetables -----	20.90	16.91	15.97	16.04	19.13
Fruits -----	4.67	2.75	2.09	1.12	3.67
Total produced -----	\$ 96.19	\$79.24	\$72.74	\$67.84	\$87.42
Total purchased <sup>2</sup> -----	9.95	11.28	8.57	8.26	9.58
Grand total -----	\$106.14	\$90.52	\$81.31	\$76.10	\$97.00

<sup>1</sup>Includes white farmers only.

<sup>2</sup>Purchases include only those foods adapted to some extent to production in Alabama.

various groups of foods tended to follow this same relationship except that croppers consumed a larger amount of field crop products than those in other tenure groups. Croppers not only grew less food products but they also had less variety in foods grown. Their purchases of foods, however, more nearly equalled those of the other tenure groups than did their production. These facts indicate that less food was consumed by members of the cropper family than by members of any of the other tenure groups.

There was also considerable difference, according to tenure groups, in the percentage of farmers producing the various foods (Table 14). A very large percentage of the full owners and a somewhat smaller percentage of other groups, with croppers in last place generally produced these foods. Part owners more commonly produced such staples as sweet potatoes, toma-

**TABLE 14.—Per Cent of Farms Reporting Production of Specified Foods for Home Use by Tenure Groups<sup>1</sup>, Alabama, 1935.**

Kind	Full owners	Part owners	Renters	Crop-pers	Weighted State average <sup>2</sup>
Number of farms	82,140	15,068	108,273	67,974	273,455
Livestock products:					
Beef -----	11	17	9	—	8
Dairy products -----	95	99	94	87	93
Eggs -----	98	97	95	87	94
Honey -----	9	10	5	7	7
Pork -----	88	85	85	97	89
Poultry -----	96	96	91	83	91
Vegetables:					
Beets -----	50	41	42	37	43
Cabbage -----	78	83	80	80	80
Carrots -----	12	15	2	—	5
Collards -----	47	50	44	50	47
Green corn -----	73	81	76	63	72
Irish potatoes -----	84	84	79	83	82
Lima beans -----	61	62	58	53	58
Onions -----	70	75	72	63	69
Peas -----	72	69	67	63	68
Sweet potatoes -----	89	91	90	80	87
Snap beans -----	86	83	82	70	80
Tomatoes -----	88	89	85	80	85
Turnips -----	69	61	66	57	64
Watermelons -----	66	66	72	67	69
Fruits and nuts:					
Apples -----	49	45	32	23	36
Bramble fruit -----	46	48	58	50	52
Figs -----	36	34	21	23	27
Grapes -----	23	17	10	7	14
Peaches -----	76	73	60	50	63
Pecans -----	36	36	17	13	23
Pears -----	32	19	21	13	22
Strawberries -----	19	13	9	10	12

<sup>1</sup>The distribution by tenure was made on the basis of 816 farm records.

<sup>2</sup>Weighted on basis of the number of farms by tenure in 1935 Census.

toes, cabbage, green corn, and onions than did full owners; however, a larger percentage of the latter produced fruits. Apparently many of the part owners had not had sufficient time to establish orchards. The percentage of renters and croppers producing the more commonly grown foods was only slightly lower than of owners, while it was much lower than owners for the less common foods such as fruits, beets, carrots, beef, and honey. Croppers were high in the percentage producing collards, bramble fruit, and pork. Though croppers usually raised hogs the amount of meat produced per family was small. Apparently farmers in South Alabama where the percentage of croppers is low were not able to care for pork as well as those farther north. White farmers, especially owners, frequently expressed a distaste for collards.

There are several reasons for the direct relationship between the kinds and amounts of food consumed and the farm operator's equity in the farm business. Some of the more important are: first, the renter or cropper frequently shows little interest in producing foods, but prefers to devote his time to cotton growing; second, croppers and renters are less stable, often moving annually, thus not having the opportunity to develop an adequate garden and truck patch; third, the landlord often does not provide adequate pasture, garden, and feed areas; fourth, the land owner, by having more capital, is not forced to sell his consumable farm products and buy foods later<sup>1</sup>; and fifth, cash income per person, which limits principally the purchases of foods, is related directly to the operator's equity.

### Variations by Seasons

A vital problem of the Alabama farmer is that of providing an adequate diet for his family during the entire year. Nutritionists have demonstrated that both quantity and quality of foods are important in providing an adequate diet and that this diet should not only contain sufficient quantities of proteins, carbohydrates, and fats, but also minerals and vitamins. The seasonal demand of cash crops for labor and apparent lack of appreciation of the need for foods often keeps the farmer from providing needed ones.

Since fruits and vegetables are considered essential in an adequate diet an analysis was made of 346 farm records, taken in the Sandy and Buck Creek Soil Conservation Area near Dadeville, Alabama, in 1934, to determine the number of months in which certain important fruits and vegetables were available

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<sup>1</sup>Croppers, particularly, frequently feel compelled to sell consumable farm products in the fall or winter when they are not financed and may buy the same products at higher prices in spring and summer when they are financed.

for consumption. Though it was not possible to show how much of each food was available for consumption, the analysis does indicate the percentage of the families making some attempt to provide these more important fruits and vegetables.

The principal harvest period for the twelve fruits and vegetables was from May through October (Figures 1 and 2). During these months varying amounts of apples, peaches, cabbage, beets, snap beans, tomatoes, peas, lima beans, Irish potatoes, and sweet potatoes were available to a large percentage of the farm people, but no one vegetable was available to more than 80 per cent of the farmers in any one month. During the late fall, winter, and early spring months, practically the only vegetables available for harvest were collards and turnips. These two vegetables rank with the best in food nutrients and are very valuable during the off season for other vegetables<sup>1</sup>. However, only slightly over 50 per cent of the farmers had these vegetables in any one month.

Stored sweet potatoes composed the bulk of the vegetable farm diet during the winter months, while Irish potatoes were an important food in the summer and fall (Figure 3). Dry lima beans and peas were also available to approximately 25 per cent of the farm families from October to May. These data indicate that farmers are spending little effort in storing fruits and vegetables for use during the winter season.

Though canned and dried fruits and vegetables are important as foods when they are not available in the fresh state, a large per cent of the farmers failed to can or dry these foods (Figure 4). Approximately 30 per cent of these farmers canned apples, 70 per cent canned peaches, 12 per cent canned beets, 45 per cent canned snap beans, and 60 per cent canned tomatoes. A relatively small percentage of the farmers dried either fruits or vegetables. Those who canned foods generally had at least a limited quantity available throughout the year.

Though a relatively large number of farmers grew some of the fruits and vegetables listed, only 50 to 75 per cent grew any one. Very few people grew fruits and vegetables other than the ones listed. The canning, drying, and storing of vegetables were neglected, and green vegetables were generally lacking in the winter months. Considerable improvement could be made in the home-grown food supply by growing more of the vegetables now commonly grown and preserving them for winter consumption.

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<sup>1</sup>See Consumers' Guide, U.S.D.A., February 27, 1939 for a comparison of the food value of fruits and vegetables.

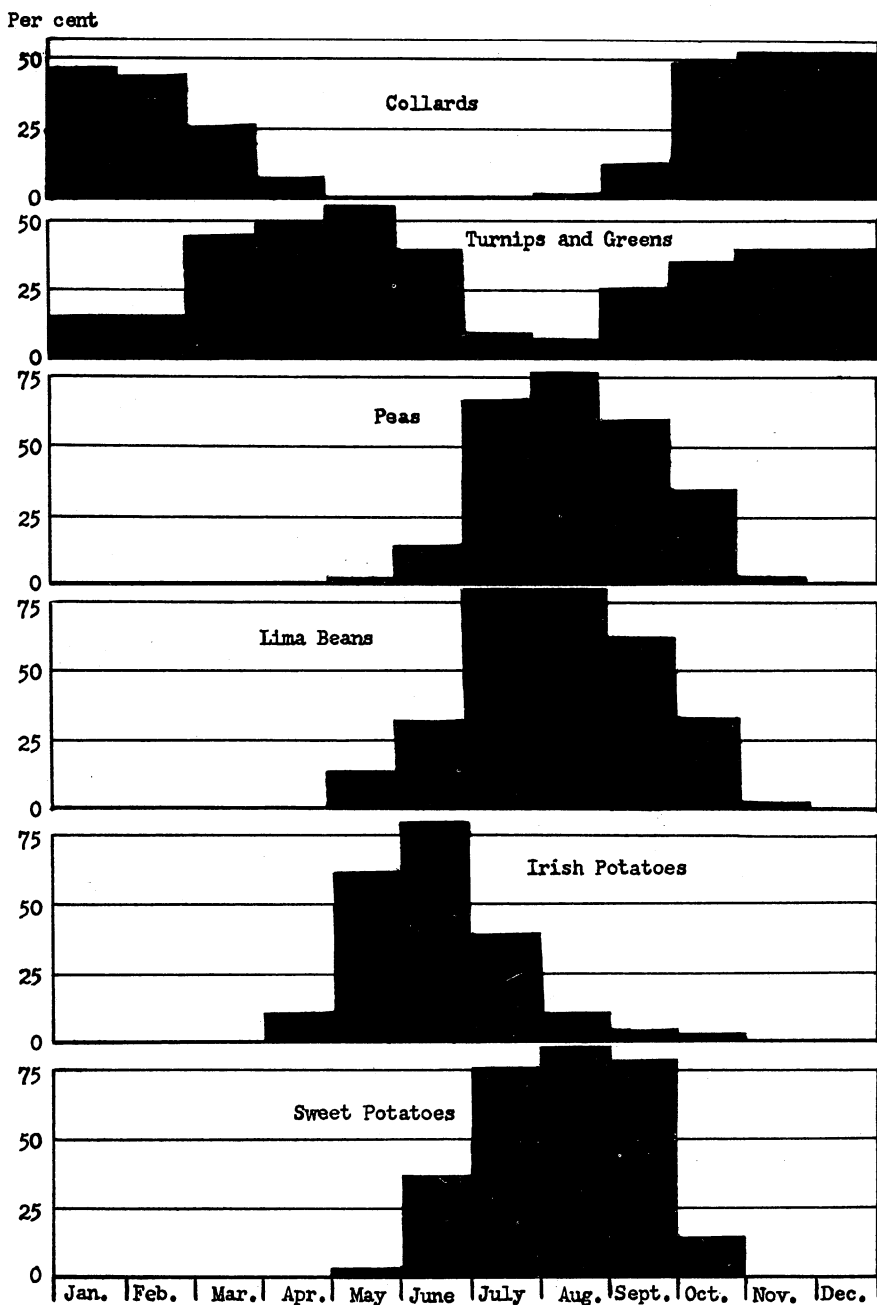


FIGURE 1.—Per Cent of 346 Farmers Near Dadeville Harvesting Selected Vegetables for Home Use, by Months.

Per cent

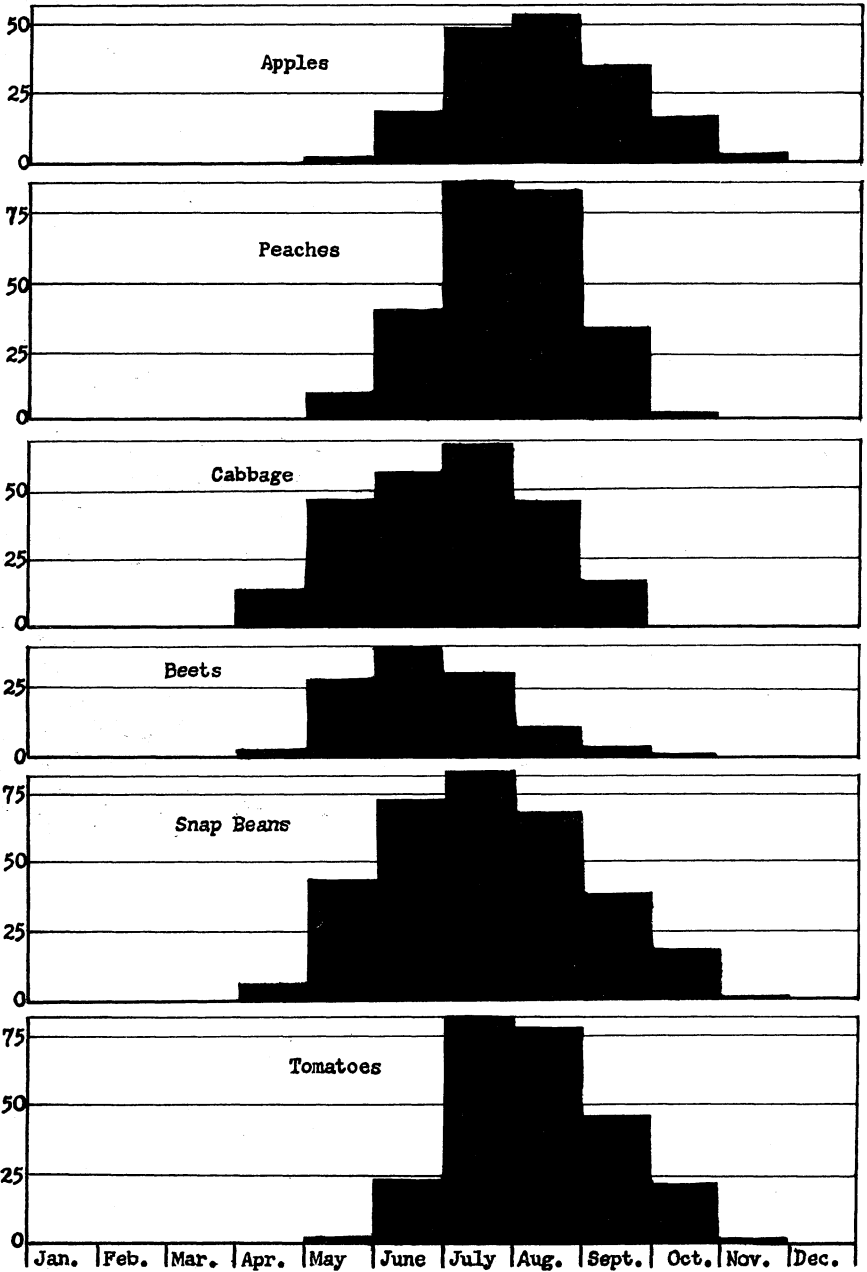


FIGURE 2.—Per Cent of 346 Farmers Near Dadeville Harvesting Selected Fruits and Vegetables for Home Use, by Months.

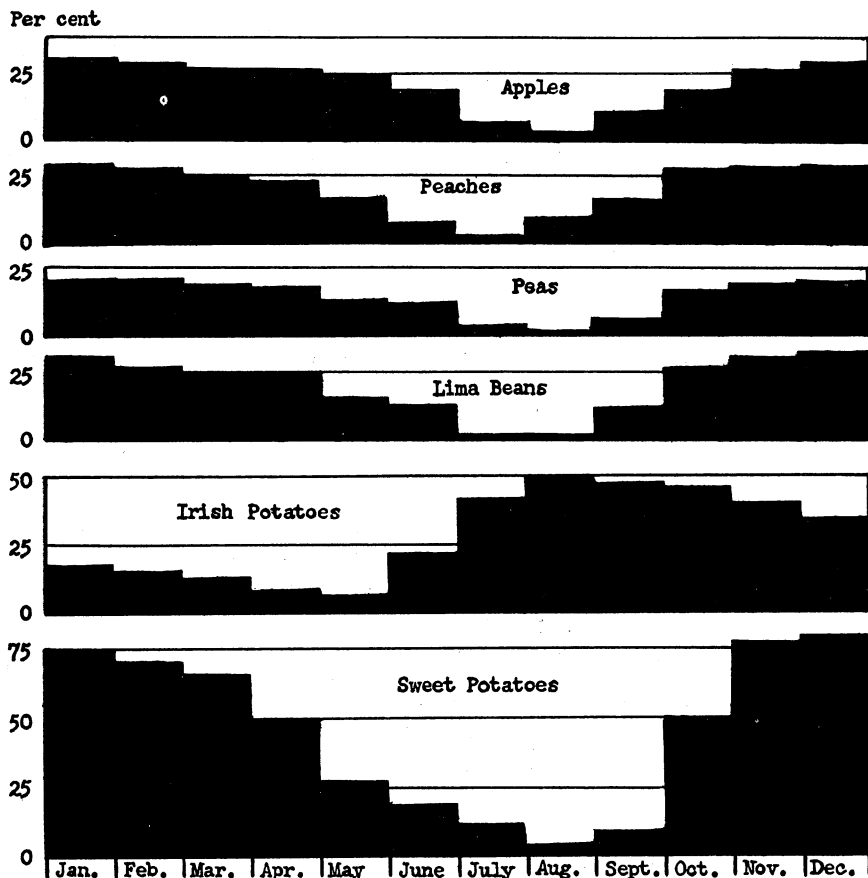


FIGURE 3.—Per Cent of 346 Farmers Near Dadeville Who Had on Hand Dried Apples or Peaches, and Stored Peas, Lima Beans, Irish Potatoes, or Sweet Potatoes, by Months.

#### PRACTICES NECESSARY IN PROVIDING FOR FOOD NEEDS

A principal problem of Alabama farmers is the providing of the foods that are needed by the family. Recent recommendations to farm people have stressed the importance of producing for home needs though it is not always known just what amounts of the various foods are needed. In order to approximate the shortages in present food production a comparison is made between the quantities of foods produced and consumed, and the quantities of food items that are considered necessary to provide a minimum-adequate diet.

Data prepared by the Bureau of Agricultural Economics, U.S.D.A. show the amounts and kinds of foods considered neces-

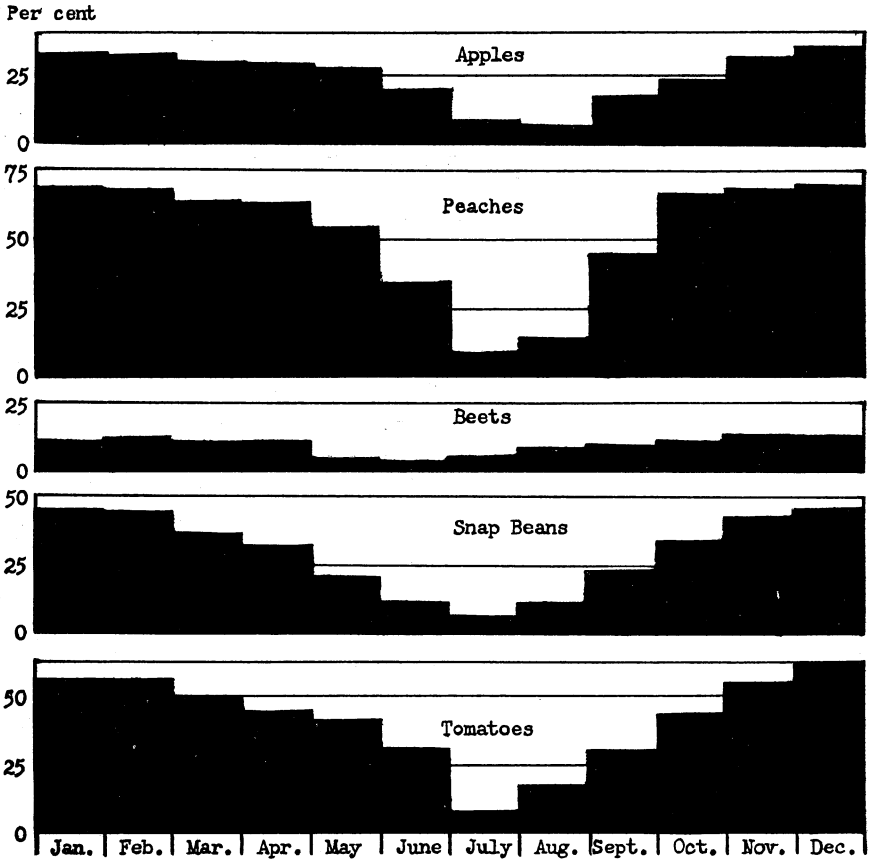


FIGURE 4.—Per Cent of 346 Farmers Near Dadeville Who Had on Hand Canned Apples, Peaches, Beets, Snap Beans, and Tomatoes, by Months.

sary for a minimum-adequate diet for farm people in Alabama (Table 15). A comparison of these data with production indicates that the production is more than is needed of certain foods while it is extremely lacking in others. Thus, the farm population is apparently consuming more cereals, sweet potatoes, and leafy, green, and yellow vegetables than are needed, while the diet is lacking in other foods, especially those high in protein as dried beans and peas, nuts, meats, and milk. The consumption of fruits is extremely low also.

The consumption of carbohydrate foods in quantities considerably above needs arises through the use of large amounts of corn meal, flour, and sweet potatoes. Even with the large utilization of such foods that are home-grown, still others as



**TABLE 15.—Amount of Food Produced, Purchased, and Consumed per Farm Person in 1935, and Amount Needed for a Minimum Adequate Diet, Alabama.**

Kind	A- mount farm pro- duced and used	A- mount need- ed <sup>1</sup>	Excess of pro- duc- tion over needs	A- mount pur- chased and used	Total used	Excess of total used over needs
	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds
Cereals, total -----	<b>176</b>	<b>200</b>	<b>-24</b>	<b>151</b>	<b>327</b>	<b>127</b>
Corn meal -----	175	100	75	23	198	98
Flour, wheat -----	1	—	—	128	129	—
Purchased items -----	—	100	-100	—	—	29
Potatoes, total -----	<b>295</b>	<b>220</b>	<b>75</b>	<b>3</b>	<b>298</b>	<b>78</b>
Irish potatoes -----	48	95	-47	3	51	-44
Sweet potatoes -----	247	125	122	—	247	122
Dried beans, peas, and nuts, total -----	<b>10</b>	<b>25</b>	<b>-15</b>	<b>—</b>	<b>10</b>	<b>-15</b>
Dried beans and peas -----	3	18	-15	—	3	-15
Peanuts -----	6	3	3	—	6	3
Nuts -----	1	4	-3	—	1	-3
Tomatoes, citrus fruits, total Tomatoes, fresh and canned	<b>56</b> 56	<b>95</b> 95	<b>-39</b> -39	<b>—</b> —	<b>56</b> 56	<b>-39</b> —
Leafy, green, and yellow veg.	228	100	128	2	230	130
Other vegetables, fruits -----	128	360	-232	6	134	-226
Sugars, total -----	<b>29</b>	<b>70</b>	<b>-41</b>	<b>48</b>	<b>77</b>	<b>7</b>
Sirups -----	29	40	-11	3	32	-8
Sugar purchased -----	—	30	-30	45	45	15
Cattle products:						
Milk <sup>2</sup> -----	282	380	-98	—	282	-98
Beef -----	1	10	-9	4	5	-5
Poultry products:						
Eggs -----	13	20	-7	—	13	-7
Poultry -----	11	14	-3	—	11	-3
Hog products, total -----	<b>38</b>	<b>76</b>	<b>-38</b>	<b>14</b>	<b>52</b>	<b>-24</b>
Lean meat -----	3	37	—	2	—	—
Bacon and salt pork -----	3	19	—	—	—	—
Lard -----	3	20	—	12 <sup>4</sup>	—	—
Fish and game, total -----	—	<b>5</b>	<b>-5</b>	<b>2</b>	<b>2</b>	<b>-3</b>
Fish -----	—	—	—	2	2	—
Melons -----	283	—	—	—	283	—

<sup>1</sup>From: Food and Feed Needs in Alabama, Regional Cir. 2, Region V, Division of Farm Management & Costs, U.S.D.A.

<sup>2</sup>Milk in quarts, eggs in dozen.

<sup>3</sup>Not computed separately.

<sup>4</sup>Vegetable shortening.

flour, sugar, and corn meal represent the principal foods purchased. The consumption of large amounts of corn meal and sweet potatoes is apparently necessary because of the shortage of other kinds of foods. The problem of reducing the consumption of some purchased foods, such as flour, for example, would apparently necessitate a considerable reformation in food habits.

The quantity of dried beans, peas, and nuts produced for home use is less than one-half the amount needed. These data fail to include wild nuts, such as hickory nuts and walnuts which, no doubt, are of some importance in many areas, but would in no way be sufficient to meet the requirements for foods of this kind. An increased production of the proteinaceous foods should be comparatively easy to achieve principally by growing more of those foods now produced. The production of pecans more than fulfills the needs for nuts; however, a large part of this is commercial production in the southern half of the State. Since only approximately 75 per cent of the farmers produce peas and beans and 25 per cent store them, the shortage could be alleviated by increased production and use of these foods. The problem of keeping these foods until needed is one of the easiest to solve.

The shortage in production of tomatoes could be alleviated by increasing the number of farmers who produce and can them. Since the harvesting season is relatively short the continuous supply problem centers in getting the tomatoes canned. Tomatoes are considered a satisfactory substitute for citrus fruits.

The study shows that farm families grow more than an adequate amount of leafy, green, and yellow vegetables. Farmers usually grow sufficient quantities of such vegetables as greens, cabbage, and collards, which are also among the best foods for supplying minerals and vitamins. Though there is a sufficient quantity produced, there are many periods of the year when they are not available. The mild season permits the harvesting of greens and collards throughout the winter in southern Alabama and during a large part of the winter in northern Alabama. With the growing of these vegetables, farmers in a majority of the counties are able to harvest leafy and green vegetables during the entire year. In the Dadeville Area, however, only about 50 per cent grew turnips and collards which are the important winter vegetables. The problem here becomes one of getting more people to grow these winter vegetables in order to provide an adequate supply during the entire year.

The production of "other vegetables and fruits" is far short of needs. This shortage is caused more by the limited production of fruits than of vegetables since only 42 pounds of fruits per person were produced. Fruits, which are grouped with other vegetables as to nutritive value, are very hard to produce. Though peaches and apples are grown on a large number of

farms in the Dadeville Area they are not so easy to grow farther south. Peaches were very important as a canned fruit. Pears are of considerable importance in the southern part of the State. Diseases and pests make fruit production very hazardous, while the short period of tenure of many farmers is not conducive to establishing orchards.

Of the 70 pounds of sugars considered as needed per person it is estimated that 40 pounds can be supplied through sirups and 30 pounds should be purchased. At the present time the production of sirups is approximately equal to the needs; however, approximately 26 per cent of this is sold. The increased production of sirups to meet needs and still provide a surplus for sale should not be a serious problem.

The low consumption of meats is a prime reason for the shortage of proteins in the farm diet. Animal proteins can be furnished through cattle, pork, mutton, poultry, or fish products. Since the production of sheep is hazardous primarily because of dogs and other pests it is improbable that mutton could be counted on to increase the protein supply. It is possible that with the controlled production of fish in farm ponds considerable increase in the meat supply can be developed. The shortage in poultry products could be taken care of, no doubt, through the increase in production of poultry especially by tenant farmers. However, there is always the incentive to sell poultry products in order to purchase other goods that are needed. An adequate consumption of poultry products will thus depend somewhat upon a higher cash income.

The greatest shortage in meat production for home use appears in pork products. The problem here is primarily one of increasing the number of farmers who raise hogs and the amount produced per farm especially for croppers. This problem is related not only to increasing the number of hogs on farms and increasing feed, but also to making the cropper a more stable individual. Through a different tenure system and more responsibility he should become more interested in providing his own foods. Mechanical refrigeration may increase pork consumption in the higher income groups, particularly in South Alabama where curing is a problem; however, it will probably not aid the low income cropper to any appreciable extent.

The shortage of beef production for home use is a problem to correct since many farms are not adapted to its production while on many other farms where beef can be produced an entire carcass cannot be properly kept. The use of cold storage lockers or mechanical refrigeration would go a long way in solving this problem with the higher income families. Alabama is now producing sufficient beef for farm family needs, however, the live animals are generally sold. An increase in beef production would undoubtedly merely increase sales. An increased production of milk on the general Alabama farm

would be consumed on the farm because of the lack of satisfactory market outlets. It is probable that other proteinaceous foods as poultry and milk could be substituted for pork and beef with reasonable safety to health.

Many limitations are thus found in providing an adequate amount of food products for home needs. Some of the more general of these are, the lack of stability of the cropper, need of greater cash income, lack of initiative, inability to preserve products, and seasonal demands of cash crops on labor supply. It is usually feasible to provide adequate foods for needs with the carrying out of a proper production program. A program directed toward producing to meet the food needs must consider not only the problem of production but also the serious problem of preservation and storage of foods until they are consumed.

### SUMMARY AND CONCLUSIONS

In Alabama emphasis is now being placed upon a live-at-home program for farmers, chiefly as a result of the decline in the market demand for cotton. With the exception of sugar and flour most farmers of the State can produce sufficient foods for their families.

The proportion of a food product raised on the farm that was used for food as compared with that sold varied considerably because of such factors as the availability of market outlets, need for the product as food on the farm, and the adaptability of the product for household use or for marketing. Eighty-three per cent of the hogs and only 8 per cent of the cattle and calves produced were slaughtered on the farm. Seventy per cent of the poultry was farm slaughtered. The low production of fruits was divided almost equally between sales and family use. Sales of garden and truck products, principally from concentrated garden and truck crop areas amounted to only 15 per cent of production.

The purchases of food products that are adapted to production in Alabama by farm families were valued at approximately \$50 per family in 1935 and represented approximately 50 per cent of all food purchases. The largest expenditures for foods were processed field crop products which comprised 80.9 per cent of the total. Flour represented an expenditure of \$30 per family.

The foods consumed per farm person that were produced or were adapted to some extent to production in the State, 80 per cent of which was grown on the farm where used, were valued at \$49.94. The value of foods per person produced and consumed by white farmers other than croppers for selected counties was \$64.64 for Baldwin, \$82.48 for Jefferson, and

\$89.00 for Pickens. The areas having more satisfactory markets tended to produce less for home consumption. An analysis of the farm records for Pickens County indicated that white farmers who were full owners consumed home-grown foods valued at \$96.19 per person, part owners \$79.24, renters \$72.74, and croppers \$67.84.

There was considerable variation in the kinds of fruits and vegetables grown by the different tenure groups. Owners produced the largest variety of fruits and vegetables together, especially the less common ones. Part owners, renters, and croppers grew progressively fewer varieties, especially of fruits.

An analysis of the farm records indicated that the production of vegetables is very seasonal and lacking in variety. Slightly over 50 per cent of the farmers grew collards or turnips. The percentage of farmers who canned or stored fruits or vegetables was very low.

A comparison of the farm diet of Alabama farm people with a recommended minimum-adequate diet indicates that they are receiving more than adequate quantities of foods high in carbohydrates and less than an adequate amount of those high in proteins. Vegetables for supplying vitamins and minerals were usually produced in sufficient quantities; however, the seasonal distribution was not satisfactory.

### RECOMMENDATIONS

1. The problem of low consumption of proteins by Alabama farm families can be attacked successfully by the production of greater amounts of pork and poultry products, beans, and peas, particularly by cropper families.
2. The more general production of such vegetables as turnips, collards, and carrots would improve the availability of leafy, green, and yellow vegetables throughout the year.
3. Methods of caring for foods until needed should be given careful consideration.
4. Better financial arrangements for croppers should prevent the forced sale of products in the fall and winter that must be repurchased at higher prices later.
5. Much encouragement should be given to the production of greater quantities of field crops for food.
6. A longer period of tenure would promote the production of foods for home use.
7. Larger cash incomes would permit the using of some products that are now sold.

## APPENDIX

**TABLE 1.—Disposition from Farms of Livestock and Poultry by Farm Slaughter and Sales, Alabama, 1934 and 1936<sup>1</sup>.**

Kind	Disposition			
	Farm slaughter <sup>2</sup>		Sales <sup>2</sup>	
	1934	1936	1934	1936
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds
Hogs -----	120,000	124,000	36,330	42,180
Cattle -----	10,350	6,300	98,300	131,280
Calves -----	1,750	857	7,350	11,700
Sheep -----	160	240	240	240
Lambs -----	50	100	150	250
Chickens -----	20,439	22,147	8,360	10,549
Turkeys -----	630	675	2,355	2,085

<sup>1</sup>Farm Production from Meat Animals, 1924-35, and 1936-37, U.S.D.A., and Farm Production and Disposition Chickens and Eggs, Dec. 1, 1939, U.S.D.A., and Turkeys, Farm Production and Disposition, Sept. 1939, U.S.D.A.

<sup>2</sup>All weights computed on live weight basis.

TABLE 2.—Weights per Unit Used in Computing Amounts of Food Products.

Kind	Unit	Weight per unit	Kind	Unit	Weight per unit
		Pounds			Pounds
Field crops:			Vegetables: (continued)		
Meal, corn -----	Bu.	48	Turnips and greens -----	Bu.	45
Peas, dry, shelled -----	Bu.	60	Watermelons -----	Each	20
Sirup, cane -----	Gal.	11.25	Fruits:		
Sirup, sorghum -----	Gal.	11.40	Apples -----	Bu.	50
Vegetables:			Cherries -----	Bu.	56
Beans, green -----	Bu.	30	Figs -----	Bu.	50
Beans, green lima -----	Bu.	32	Grapes -----	Bu.	48
Beets -----	Bu.	50	Peaches -----	Bu.	50
Cantaloupes -----	Each	1.20	Pears -----	Bu.	50
Carrots -----	Bu.	50	Plums -----	Bu.	64
Corn, green in shuck -----	Bu.	35	Satsumas -----	Bu.	50
Cucumbers -----	Bu.	48	Satsumas -----	Boxes	40.18
Eggplant -----	Bu.	33	Strawberries -----	Bu.	48
Lettuce -----	Head	0.70	Miscellaneous:		
Okra -----	Bu.	40	Bread -----	Loaves	1
Onions -----	Bu.	57	Catchup -----	Bottles	0.88
Peas, green -----	Bu.	30	Eggs -----	Dozens	1.50
Potatoes, Irish (at harvest) -----	Bu.	60	Milk -----	Gal.	8.60
Potatoes, sweet (at harvest) -----	Bu.	55	Milk, evaporated and condensed -----	Lr. cans	0.91
Rape -----	Bu.	30	Pickles -----	Jars	1.31
Spinach -----	Bu.	30	Salmon -----	Cans	1
Squash -----	Bu.	50	Number 2½ cans -----	Cans	1.81
Tomatoes -----	Bu.	56	Number 2 cans -----	Cans	1.19

Chickens for farm slaughter, plucked and drawn, were calculated on 70% of live weight (live weight 2.64 pounds). Turkeys, plucked and drawn, 70% of live weight (live weight 15 pounds). Beef, pork, and mutton were calculated on a cured or retail cut weight basis: beef 46.4% of live weight; pork 52.6% of live weight; mutton 46.3% of live weight. Live weights for farm slaughter were: pork, 200 pounds; beef, 450 pounds; sheep, 80 pounds, lamb, 50 pounds. Per farm and per person calculations were made on the basis of 273,455 farms, and 1,386,074 rural farm population.

