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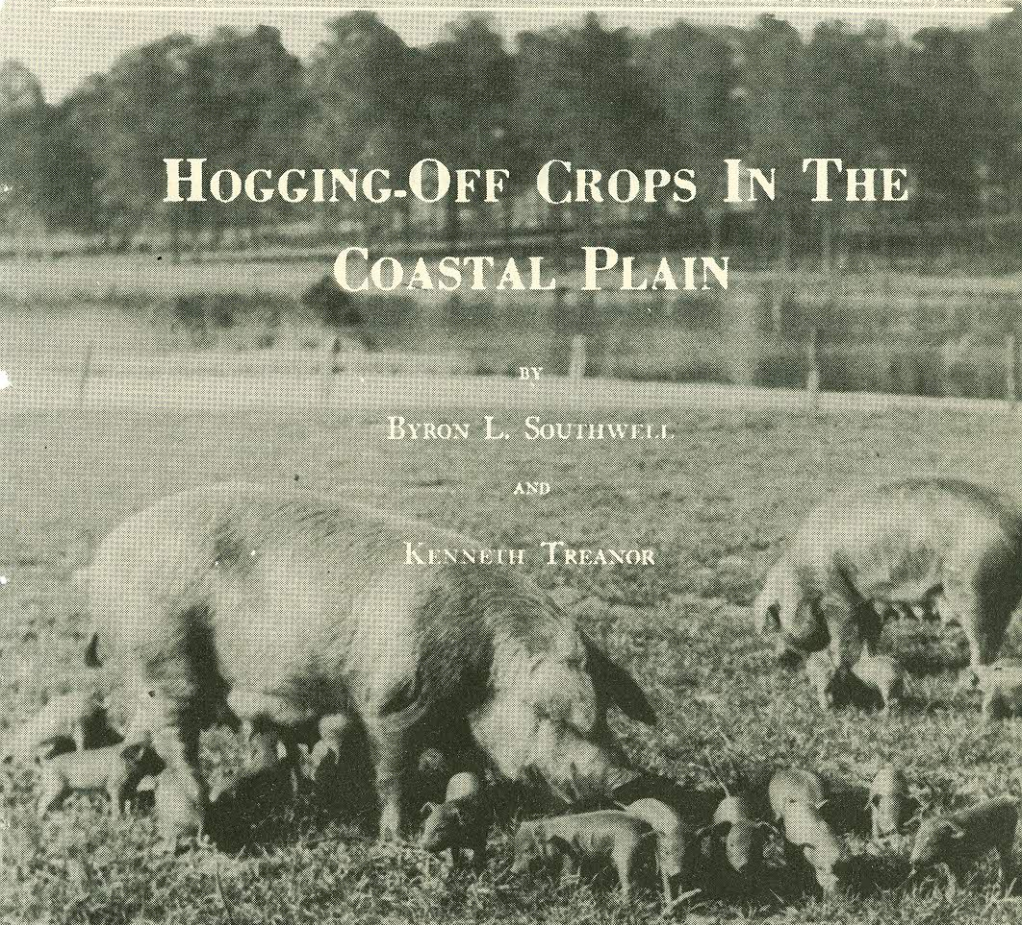
HOGGING-OFF CROPS IN THE COASTAL PLAIN



BY

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The production of hogs has for many years been one of the principal enterprises on many farms in the Coastal Plain area of Georgia. The importance of hog production has increased during recent years to the extent that it is now one of the most important sources of cash farm income in a large part of south Georgia.

Corn is only one of several grain crops grown in the area. Swine production is based on several crops, with corn and peanuts predominating. The soil and climatic conditions in the Coastal Plain are such as to make possible the production of a wide variety of hogging-off crops which can be so managed as to furnish, during normal seasons, almost continuous feed throughout the year. The advantages of a system of hog production in which hogs harvest the crops are quite obvious and, for the most part, well recognized and understood.

The more important advantages accruing to this system of producing hogs are:

1. A relatively large part of the total cost of producing and saving any crop is the cost involved in harvesting. Under the hogging-off system the costs of man labor, mule work, machinery and other items which otherwise would be necessary to save the crops are eliminated. Hogs harvest the crops and convert them into a readily marketable product.

2. The system tends to increase soil fertility since the crop residue remains on the land and since the system provides continuous or almost continuous land cover.

3. A year-round system of hogging-off crops helps to distribute both labor and income more uniformly throughout the year.

4. The system provides an ideal arrangement for swine sanitation practices for the effective control of parasites and diseases.

[1] These tests conducted in cooperation with the Bureau of Animal Industry, U. S. Department of Agriculture.

5. Because of the relatively low average yields of corn which are being obtained on most south Georgia farms, profitable hog production must be based largely on crops other than corn. The hogging-off system permits use of crops that can not be economically harvested and fed to livestock. Generally, these crops when hogged-off, have greater soil building value than corn.

In order to determine the amount of pork that could be produced per acre from the various hogging-off crops adapted to the Coastal Plain area of Georgia, and the possible net return from such practice, a series of experiments was begun in 1936. The results of these tests are discussed in this bulletin under two general heads. The forepart of the bulletin gives the results of hogging-off the crops as measured in pounds of pork produced per acre, while the latter part deals with the cost of producing the crops and the financial returns from the practice.

RESULTS OF HOGGING-OFF CROPS

The amount of pork produced from each crop was determined by subtracting the total weight of hogs at the time they were placed on each crop from the total weight at the time they were removed from each crop. A discussion of hogging-off the crops is given under titles, such as: the sequence of hogging-off crops, kind of pigs used, protein and mineral supplements fed, and general management practices. The results of each crop hogged-off, together with the value of each crop in the year-round system, are discussed in detail.

In developing a year-round system of hogging-off crops, as much emphasis was placed on the sequence of crops as on the value of individual crops. In determining the acreage of each crop, the number of pigs to be used to hog-off the crops and the probable length of time the crop would be needed for feed were taken into consideration.

SEQUENCE OF HOGGING-OFF CROPS

The sequence of the periods during which the crops in these experiments were hogged-off is shown in Figure 1. The earliest date on which hogs were placed on each crop and the latest date on which hogs were removed from each crop, in the order in which the crops were hogged-off, are:

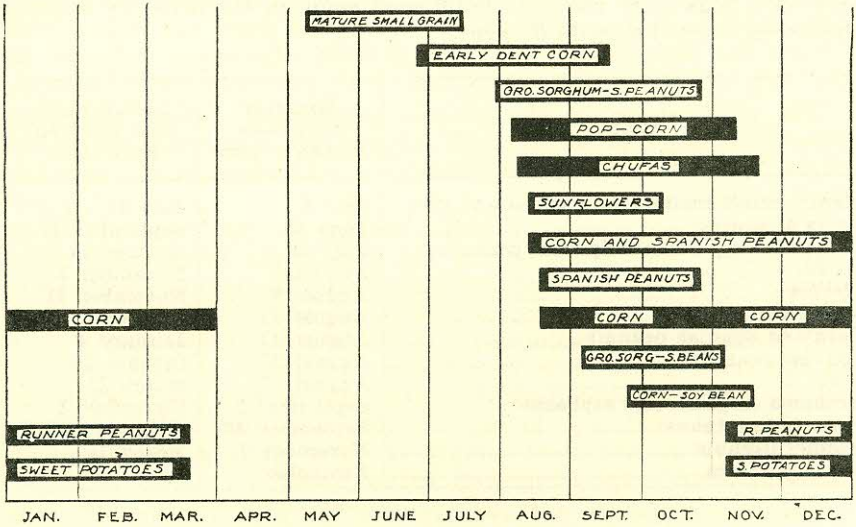
Crop	Earliest date hogs placed on crop	Latest date hogs removed from crop
Mature small grains (Oats, wheat and rye)	May 6	July 15
Early dent corn	June 28	September 27
Grohoma sorghum and Spanish peanuts	July 29	October 25
Popcorn	August 6	November 8
Chufas	August 8	November 21
Sunflowers	August 12	October 5
Corn and Spanish peanuts	August 12	January 4
Spanish peanuts	August 17	October 26
Corn	August 17	March 31
Grohoma sorghum and soybeans	September 2	November 2
Corn and soybeans	September 23	November 18
Runner peanuts	November 7	March 17
Sweet potatoes	November 7	March 17

The length of the hogging-off period depends, of course, upon seasonal conditions, crop yields, and the number of hogs placed on the crops. In these experiments an effort was made to arrange crop plantings in such a way that the various crops would be ready for hogging-off in regular sequence. An effort was made also to use the number of hogs on each crop which would consume the crop to best advantage. It is quite obvious that some of the above crops could have been hogged-off over a longer period of time than is shown. Certainly, some of the crops could have been hogged-off later than the above dates. Hogging-off runner peanuts and sweet potatoes could have begun at least thirty days before November 7.

Fig. 1

SEQUENCE OF HOGGING-OFF CROPS

EARLIEST DATE ON AND LATEST DATE OFF EACH CROP



PIGS USED IN HOGGING-OFF CROPS

Most of the pigs used to hog-off the various crops were raised at the Station. When necessary, pigs averaging from 80 to 130 pounds were purchased to use in the tests. Due to certain breeding studies that were in progress, only a few of the fall-farrowed pigs at the Station were available for hogging-off crops; this necessitated the purchase of feeder pigs to place on the crops hogged-off during the late fall and through the winter. An attempt was made to purchase pigs comparable to those grown at the Station.

The Station-raised pigs used in these tests were purebred and were farrowed in March or September. Usually, the pigs were weaned at ten weeks of age (May and November) and placed on the crops immediately afterward. The pigs were treated for cholera, and the male pigs were castrated during the suckling period. Prospective breeding males remained in the groups hogging-off crops until they were about four months old. Prospective breeding gilts were not selected until they reached a slaughter weight of about 225 pounds.

PROTEIN AND MINERAL SUPPLEMENTS AND GREEN GRAZING

A protein supplement was kept before the pigs while hogging-off each crop. A mineral mixture composed of equal parts salt, bone meal, and ground limestone or marble dust was either kept before the pigs or added to the protein supplement mixture at the rate of 10 percent. At times, both practices were followed.

The composition of the protein supplement varied somewhat from year to year. In general, the mixture was composed of six parts tankage, three parts peanut or cottonseed meal, and one part mineral mixture.

An abundant supply of green grazing in the form of weeds and grasses was available for the pigs while hogging-off crops during the spring, summer and early fall. The plants were mostly Florida pursley, crab grass, beggar weed, and other native grasses and weeds growing voluntarily in the crops. These plants grew in the small grain plots in sufficient quantities to give the pigs all the green grazing desired, except one or two years when the weather was very dry during late May and during June. There was always an abundant supply of these grasses and weeds in the cultivated crops hogged-off before frost.

Green grazing was not available for the pigs hogging-off crops during the winter months. Tests have not been carried on to determine the economy of having green grazing in the form of small grains available for the hogs at the same time they were hogging-off the other crops. Observations indicate that it would be desirable to have these supplemental grazing areas. These could be planted in a certain area of the field where the crops to be hogged-off were grown or could be supplied in a field adjacent to the crops being hogged-off.

GENERAL MANAGEMENT PRACTICES

The system of management practiced in hogging-off the various crops not only resulted in a continuous feed supply but at the same time permitted good sanitation practices. Various tests have shown that internal parasites are held in check by keeping the pigs on cultivated fields, especially if rigid swine sanitation measures are practiced during the pigs' suckling period.

Sufficient shade (consisting of straw arbor) was provided for the pigs when they were hogging-off the crops during warm weather. No houses were provided at any time of the year. In the winter a supply of straw in which the pigs could bed down was placed in the field.

The size and the age of a pig influence, to a certain extent, the feed requirements per 100 pounds of gain. Some crops are better adapted for young growing pigs than others. These factors could not be taken into consideration in the hogging-off tests discussed in this bulletin. It is thought that older pigs would have made better use of a bulky feed, such as mature oats, than did the young pigs. In the management system practiced, however, only weanling pigs were available for hogging-off small grains. The average weight of the pigs placed on the small grains was approximately 35 to 40 pounds. Since the same pigs were placed on the succeeding crop to be hogged-off (early dent corn), they naturally had a considerably higher initial weight on the corn crop than the initial weight when placed on small grains. The pigs were removed from these tests as they reached an average slaughter weight of 225 pounds. The spring pigs were marketed at that weight off the crops in September, October, and early November; likewise, the fall pigs were marketed in March and April.

Comparable groups of pigs were dry-lot fed to make direct comparisons with pigs hogging-off small grains, early dent corn, Grohoma sorghum and Spanish peanuts interplanted, and corn and mature soybeans interplanted in the spring, summer and early fall. The dry-lot groups were composed of representative barrow pigs selected one from each litter at weaning time. These pigs remained in the dry-lot groups until they reached slaughter weight of approximately 225 pounds. The dry-lot pigs were full-fed corn and a protein supplement. The supplement was composed of 20 per cent alfalfa-leaf meal, plus the same high protein feeds in the supplements fed the pigs on crops. The feed and weight periods for the pigs in dry-lot were the same as those for the pigs hogging-off crops. No dry-lot groups were fed to compare with pigs hogging-off crops in the late fall and winter.

PRINCIPAL CROPS HOGGED-OFF

In general, the crops produced for these hogging-off tests were grown according to recommendations of this Station. The varieties used were those available to farmers. Commercial fertilizers were applied to the crops in average rather than maximum quantities. The crops were grown on Tifton sandy loam soil that occasionally blended into Norfolk sandy loam.

Two crops per year were grown on all the areas except those crops that were hogged-off during the winter months. Usually, the areas hogged-off in the summer and early fall were planted to small grains to be grazed during the winter by brood sows or by cattle.

An attempt was made to grow a sufficient acreage of the various crops so that each crop would carry a given number of pigs until the succeeding crop was ready for hogging-off.

Only grain crops are considered in this bulletin. Hogging-off grain crops is thought of as a fattening process. Even though green grazing crops, because of their value as supplements to grains, are of great economic importance in profitable livestock production, they are not considered in this publication.

Spring pigs hogging-off mature oats during May and June.

HOGGING-OFF MATURE SMALL GRAINS

(Oats, Wheat and Rye)

The small grain crops hogged-off each year included oats, wheat, and Abruzzi rye. These crops were sown in the fall as near October 15 as practicable. If the oats were to be used as a green grazing crop during the winter months, and later let head out for a grain crop, to be hogged-off, the seeding rate of 4 bushels per acre was used; otherwise, the seeding rate was 2 bushels per acre. The rye and wheat were each seeded at the rate of 1½ to 2 bushels per acre. Ordinarily, an application of approximately 300 pounds per acre of an 0-14-10 commercial fertilizer was made at planting. The crops usually were top dressed with approximately 100 pounds per acre of a commercial nitrate.

Pigs were placed on the small grain plots when the grain had reached, or just passed, the dough stage, which was usually during the first two weeks of May. The small grains were hogged-off in May and June. The small grains usually lodged when they were full ripe. In the case of oats this was really beneficial because the grain was softer and apparently more palatable to the pigs after it had lain on or near the ground. For the six years mature oats were hogged-off, very few were lost because of decay. After wheat or rye had fallen to the ground, considerable sprouting was noted one or two years during a wet period. Apparently, oats can be hogged-off over a longer period of time than can wheat or rye.

Figure 1 shows the average length of the hogging-off period for small grains. Table 1 shows that small grains produced an

eight-year average of 306.30 pounds of pork per acre from a yield of 1281.28 pounds of grain. Oats alone were tested for the five years, 1936 through 1940. For three years, 1941 through 1943, oats, rye, and wheat were tested; a comparable area of each of the three crops was planted each year. The table gives the combined results of hogging-off the three crops for each of the three years. There was some variation in the results obtained these three years from hogging-off each crop. Oats alone produced a three-year average of 342.77 pounds of pork per acre as compared to 318.38 pounds for rye and 215.72 pounds for wheat. The average acre yield of grain for the three years was 1226.0 pounds for oats, 1378.83 pounds for rye, and 1493.77 pounds for wheat. The beards on the rye and wheat heads did not seem to be objectionable as far as the pigs were concerned.

For the eight years the small grains were hogged-off the pigs were fed corn in addition to protein supplement and minerals. Table 1 shows the total pounds of pork produced from the corn and other supplements fed and small grain hogged-off combined in addition to the total pounds gain per acre credited to the small grain hogged-off. The average pork per acre produced on small grain alone was 306.30 pounds as compared to 910.81 pounds when 1723.54 pounds of corn was fed to the pigs in addition to the small grain hogged-off. In other words, when pigs hogged-off mature small grain, they were able to put on an additional pound of gain for each 2.85 pounds of corn consumed. These figures indicate that feeding corn to pigs hogging-off small grain is profitable.

The number of pounds of pork attributed to the small grain hogged-off and to the corn fed was based on the feed consumption per 100 pounds gain made by comparable pigs in dry-lot. It will be noted in Table 1 that pigs in dry-lot consumed 279.31 pounds of corn per 100 pounds of gain. Assuming that, when fed to pigs hogging-off mature small grains, an equal amount of corn would result in 100 pounds of gain, the corn fed produced 604.51 pounds of pork and the small grain hogged-off produced the remainder, or 306.30 pounds. This, of course, is only a fairly close estimate of the influence attributed to each grain (corn fed and small grains hogged-off).

It will be noted that the pigs in dry-lot consumed a total of 373.11 pounds of feed per 100 pounds of gain as compared to 395.91 pounds of total feed for the pigs on the crops. That might very well be expected because the pigs in dry-lot were fed no grain other than corn; whereas the pigs on the crops ate the small grain in addition. Oats is a bulky feed and is not as efficient pig feed as corn.

While the pork produced per acre by hogging-off small grains is rather low as compared to most of the other crops in the year-round system, small grains do have a very definite place. There are no other grain crops available for hogging-off during May, June, and early July.

TABLE 1.

HOGGING-OFF MATURE SMALL GRAINS (Oats, Wheat and Rye)

Yearly and 8-year average results of hogging-off small grains. Pigs were given supplemental feeding of corn. Results include total gains per acre from hogging-off small grains plus corn fed and total gain per acre from small grains hogged-off, after influence of corn was deducted.

Eight-year averages of dry-lot feeding comparable groups of pigs are listed for comparisons.

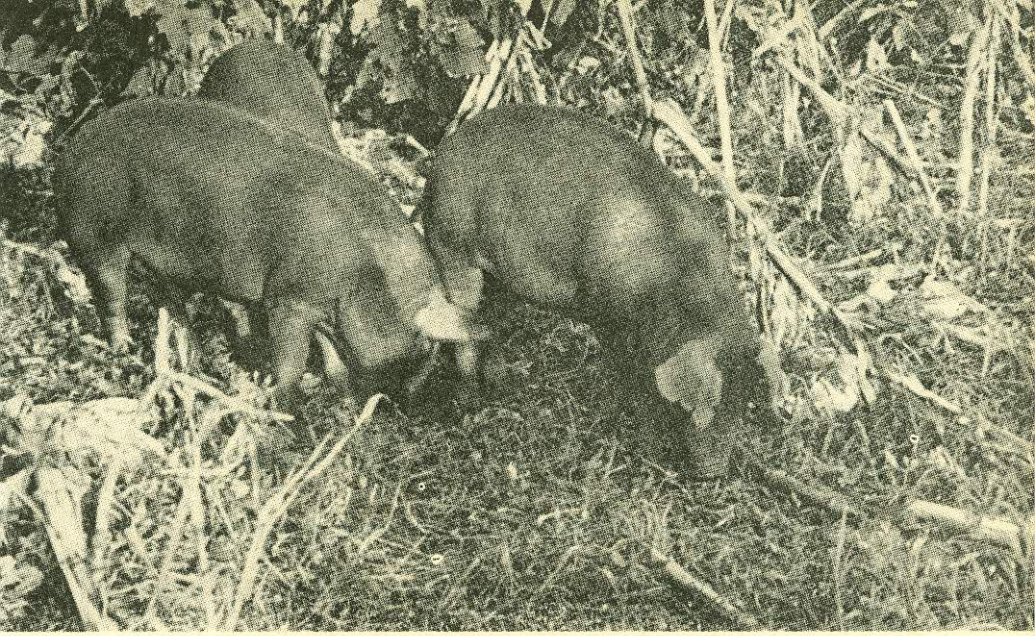
	1936**	1937**	1938**	1939**	1940**	1941***	1942***	1943***	8-Year Average	Dry-Lot 8-Year Average
Number pigs on test*	56	87	95	108	121	91	108	66	91.5	14.25
Date on test	May 5	May 6	May 10	May 9	May 6	May 12	May 11	May 10	May 9	May 9
Date off test	July 14	July 1	July 9	July 4	July 15	July 7	June 29	June 28	July 6	July 6
Days on test	71	56	60	56	70	56	49	49	58	58
Average initial weight (lbs.)	41.68	31.94	35.49	40.79	33.03	39.86	37.59	32.82	36.53	34.51
Average final weight (lbs.)	97.98	75.80	96.48	93.97	90.48	74.40	67.43	66.73	82.93	83.22
Average daily gain (lbs.)	.793	.822	1.01	.958	.827	.617	.609	.699	.803	.839
Yield of crop per acre (lbs.)	1567.95	780.53	1526.78	871.85	1324.50	1775.08	1093.22	1305.82	1281.28	----
Total acres hogged-off (acres)	3.90	3.20	5.93	5.69	5.53	4.15	5.40	3.49	4.66	----
Total hogging-off days per acre (days)	1019.49	1451.25	955.82	1053.90	1519.35	1227.95	980.00	920.63	1134.03	----
Total feed consumed per 100 lbs. gain (lbs.)	459.00	350.80	411.51	350.74	383.76	426.52	425.25	410.74	395.91	373.11
Grain hogged-off (lbs.)	194.00	65.00	158.92	86.36	105.37	234.38	183.23	203.63	140.68	----
Shelled corn (lbs.)	213.00	212.00	188.05	210.39	218.96	123.07	152.39	120.69	189.40	279.31
Protein supplement (lbs.)	49.00	73.00	62.96	52.98	58.48	62.36	81.50	78.11	62.90	89.04
Mineral (lbs.)	3.00	.80	1.58	1.01	.95	6.71	8.13	8.31	2.93	4.76
Total gain per acre (lbs. pork)	808.46	1192.50	960.71	1009.49	1256.96	757.34	596.67	641.26	910.81	----
Total gain per acre from small grains hogged-off (lbs. pork)****	274.00	278.78	233.89	361.69	381.92	283.84	275.33	355.00	306.30	----

* One or more pigs often removed during test period because of sickness or for slaughter.

** Oats only.

*** Area each of oats, wheat and rye.

**** Gain due to oats hogged-off. Gain due to corn fed to pigs has been deducted.



Spring pigs hogging-off early dent corn. Early dent corn can be hogged-off from July 1 until early fall.

HOGGING-OFF EARLY DENT CORN

Early dent corn was planted as early as practicable, usually the last week in March or the first week in April. June 28 was the earliest date hogs were turned on early dent corn. Ordinarily, they were not put on the crop until about July 8. Pigs were placed on the corn when the grains were well dented and beginning to harden. It was necessary to hold the pigs off the crops until the corn was mature enough that it would not rot when the pigs ate part of an ear and left the remainder lying on the ground. Unless the corn was beginning to harden, it would rot under those conditions. As shown in Table 2, the smallest amount of pork produced per acre was 150 pounds as compared to the largest amount of 868 pounds. The average for the eight years was 501.63 pounds per acre. The average yield of corn per acre was 38.06 bushels. Early dent corn proved to be one of the most profitable and satisfactory crops hogged-off. It can be hogged-off over a rather long period of time. When left standing in the field until late September and October, weevil damage was slightly noticeable. Most of the early dent varieties do not have a good shuck covering—consequently very little protection from weevil infestation.

Table 2 also shows that for an eight-year average the pigs hogging-off early white dent corn consumed per 100 pounds of gain 424.92 pounds of corn, 44.30 pounds of protein supplement, and 2.27 pounds of minerals, as compared to the dry-lot average of 335.74 pounds corn, 81.46 pounds protein supplement, and 4.55 pounds minerals. These figures indicate that pigs in dry-lot made

more efficient gains. In determining profitable gains, however, one must remember that in the case of the dry-lot, the pigs ate corn that had been harvested and stored for several months. Considerable labor was involved in feeding. Whereas, the pigs hogging-off corn harvested the crop, the corn was not stored, there was no labor in feeding the grain, and the pigs left the manurial value of the grain on the land that grew it. All the crop produced on an area was charged to the hogs. Some feed was wasted in the hogging-off process, which partly caused the feed consumption per 100 pounds to appear slightly high. That, of course, is a part of the hogging-off system and must be so considered.

HOGGING-OFF CORN AND SPANISH PEANUTS

Three years' results were obtained from hogging-off corn and Spanish peanuts interplanted. Corn alone was planted in every third row and Spanish peanuts alone in the two rows between each corn row. Generally, the corn was ready to hog-off before the Spanish peanuts, but the hogs were not placed on the crops until the Spanish peanuts had reached their maximum production, which was usually about the middle of August. Peanuts are very palatable to hogs. As a result, the hogs have a tendency to consume the peanuts before they eat the corn. Some corn was eaten during the time they hogged-off the peanuts, but as a rule the heaviest corn consumption was during the latter part of the hogging-off period. After Spanish peanuts reach maturity, the nuts sprout, especially if there is an abundance of moisture in

Hogging-off corn and Spanish peanuts in late August and in September.

TABLE 2.

HOGGING-OFF EARLY DENT CORN

Yearly and eight-year average results of hogging-off early dent corn. Hogging-off periods began soon after roasting-ear stage when corn grains were well dented. Eight-year average results of d ry-lot feeding similar groups of pigs are listed for corparison.

	1936	1937	1938	1939	1940	1941	1942	1943	8-Year Average	Dry-Lot 8-Year Average
Number pigs on test*	53	70	82	181	114	78	93	65	92.00	15.38
Date on test	July 15	July 1	July 9	July 4	July 15	July 7	July 6	June 28	July 7	July 7
Date off test	Aug. 14	July 19	Sept. 27	Sept. 12	Sept. 9	Sept. 1	Aug. 17	Sept. 6	Aug. 29	Aug. 29
Days on test	31	18	80	70	56	56	42	70	52.88	52.88
Average initial weight (lbs.)	96.94	78.90	94.83	135.87	90.85	72.42	77.73	67.06	95.96	98.19
Average final weight (lbs.)	157.57	100.38	206.19	189.46	159.65	146.77	125.04	163.06	160.94	163.71
Average daily gain (lbs.)	1.98	1.19	1.42	1.49	1.26	1.33	1.13	1.47	1.38	1.35
Yield of crop per acre (bu.)	25.55	18.59	47.30	61.20	37.80	28.52	46.68	29.03	38.06	.....
Total acres hogged-off (acres)	6.00	10.00	16.47	11.17	15.06	9.68	11.20	15.77	11.92	.....
Total hogging-off days per acre (days)	270.67	125.90	391.62	584.06	412.88	451.24	348.75	369.88	362.93	.....
Total feed consumed per 100 pounds gain:										
(lbs.)	314.28	752.06	509.37	444.86	457.44	296.20	699.07	490.85	471.49	421.75
Crop hogged-off (lbs.)	267.16	692.22	477.63	394.62	407.65	266.61	665.45	410.88	424.92	.....
Shelled corn (lbs.)	.....	.....	.....	.....	.....	.....	.....	.....	.....	335.74
Protein supplement (lbs.)	45.75	59.18	30.48	49.81	48.74	26.90	30.45	71.98	44.30	81.46
Mineral (lbs.)	1.37	.66	1.26	.43	1.05	2.69	3.17	7.99	2.27	4.55
Gain per acre (lbs. pork)	535.50	150.40	554.46	868.31	520.78	599.07	392.86	395.69	501.63	.....

* One or more pigs often removed during test period because of sickness or for slaughter.

the soil. Because of this fact, Spanish peanuts must be hogged-off within a comparatively short period of time. During one test year, corn and Spanish peanuts were hogged-off over a period of approximately 90 days. In this case, of course, the peanuts were hogged-off in the early part of the period and corn in the latter part. Table 3 shows that corn and Spanish peanuts produced an average of 541.72 pounds of pork per acre for the three years the crop was tested.

HOGGING-OFF SPANISH PEANUTS

Spanish peanuts alone were planted in 28 or 30-inch rows. For the three years they were hogged-off, the yield of the crop averaged 1396.18 pounds of nuts (in the shell) per acre. The three-year average shows that Spanish peanuts produced 342.96 pounds of pork per acre, while corn and Spanish peanuts interplanted gave an average gain of 541.72 pounds of pork per acre. (Table 4).

TABLE 3.

HOGGING-OFF CORN AND SPANISH PEANUTS

Yearly and three-year average results of hogging-off corn and Spanish peanuts (interplanted). Crops planted one row of corn and two rows of peanuts.

	1938	1939	1941	3-Year Average
Number pigs on test*	35	24	45	34.67
Date on test	Aug. 12	Aug. 12	Aug. 27	Aug. 17
Date off test	Oct. 17	Oct. 18	Jan. 4	Nov. 13
Days on test	66	67	130	87.67
Average initial weight (lbs.)	125.43	114.33	112.44	117.25
Average final weight (lbs.)	199.29	204.29	236.11	216.38
Average daily gain (lbs.)	1.70	1.41	1.42	1.48
Yield of crop per acre:				
Corn (bu.)	19.50	30.40	42.80	34.00
Spanish peanuts (lbs.)	982.87	774.10	580.79	782.23
Total acres hogged-off (acres)	4.78	4.57	9.68	6.34
Total hogging-off days per acre (days)	317.99	336.11	405.58	366.89
Total feed consumed per 100 pounds gain (lbs):	389.07	551.69	542.93	506.18
Corn (lbs.)	202.02	360.54	417.57	351.57
Spanish peanuts (lbs.)	181.75	163.87	101.02	134.43
Protein supplement (lbs.)	3.06	26.82	23.40	19.01
Mineral (lbs.)	2.24	.46	.94	1.17
Gain per acre (lbs. pork)	540.79	472.43	574.89	541.72

* One or more pigs often removed during test period because of sickness or for slaughter.

The hogging-off period for grain sorghum and Spanish peanuts parallels the hogging-off period for corn and Spanish peanuts.

HOGGING-OFF GROHOMA SORGHUM AND SPANISH PEANUTS INTERPLANTED

Grohoma sorghum and Spanish peanuts were planted in the same manner as were corn and Spanish peanuts. The Grohoma sorghum was mature enough to be hogged-off by the time Spanish peanuts had reached their maximum production of nuts. The pigs hogged-off the available peanuts before they ate very much sorghum grain. The sorghum was not very palatable. The pigs continued to gain weight during the latter part of the hogging-off period when they were eating largely Grohoma sorghum grain, but they were not in as good condition at the end of the hogging-off period as they were earlier in the period when a good supply of peanuts was still available. As shown in Table 5, Grohoma sorghum and Spanish peanuts interplanted produced a four-year average of 314.13 pounds of pork per acre as compared to a three-year average of 541.72 pounds from corn and Spanish peanuts interplanted.

TABLE 4.

HOGGING-OFF SPANISH PEANUTS

Yearly and three-year average results of hogging-off Spanish peanuts.

	1941	1942	1943	3-Year Average
Number pigs on test*	18	46	24	29.33
Date on test	Sept. 4	Aug. 17	Aug. 24	Aug. 25
Date off test	Oct. 21	Sept. 22	Oct. 26	Oct. 13
Days on test	47	36	63	48.67
Average initial weight (lbs.)	131.11	118.87	116.46	120.72
Average final weight (lbs.)	197.78	163.76	191.63	178.32
Average daily gain (lbs.)	1.42	1.25	1.22	1.27
Yield of crop per acre (lbs.)	1363.00	1742.40	1065.32	1396.18
Total acres hogged-off (acres)	4.60	5.20	4.98	4.93
Total hogging-off days per acre (days)	183.91	318.46	296.79	269.28
Total feed consumed per 100 pounds gain (lbs.)	544.48	453.73	296.14	419.13
Crop hogged-off (lbs.)	522.48	438.76	294.09	407.09
Protein supplement (lbs.)	20.00	13.61	**	10.28
Mineral (lbs.)	2.00	1.36	2.05	1.76
Gain per acre (lbs. pork)	260.87	397.10	362.25	342.96

* One or more pigs often removed during test period because of sickness or for slaughter.
** No protein supplement fed.

TABLE 5.

HOGGING-OFF GROHOMA SORGHUM AND SPANISH PEANUTS

Yearly and four-year average results of hogging-off Grohoma sorghum and Spanish peanuts (interplanted). Crops planted one row Grohoma sorghum and two rows Spanish peanuts. Two years' results of dry-lot feeding a comparable group of pigs are listed for comparison.

	1936	1937	1938	1939	4-Year Average	Dry-Lot 2-Year Average (1936-37)
Number pigs on test*	52	137	35	25	62.25	18
Date on test	Aug. 15	July 29	Aug. 12	Aug. 12	Aug. 9	Aug. 7
Date off test	Sept. 29	Sept. 2	Oct. 25	Oct. 5	Sept. 30	Sept. 16
Days on test	46	35	74	54	52	40
Average initial weight (lbs.)	157.60	128.23	124.86	121.56	133.22	135.53
Average final weight (lbs.)	200.54	140.27	196.43	177.28	164.47	161.86
Average daily gain (lbs.)	.982	.927	1.27	1.03	1.05	1.36
Yield of crop per acre:						
Grohoma sorghum (lbs.)	871.00	1123.63	834.86	1550.22	1083.35	----------
Spanish peanuts (lbs.)	836.00	349.89	1088.99	697.60	683.75	----------
Total acres hogged-off (acres)	5.45	9.29	5.45	4.58	6.19	----------
Total hogging-off days per acre (days)	417.43	191.60	363.30	294.76	298.14	----------
Total feed consumed per 100 pounds gain (lbs.):	499.60	912.36	427.35	774.01	612.99	513.29
Grohoma sorghum (lbs.)	212.54	632.64	181.64	509.69	344.87	----------
Spanish peanuts (lbs.)	204.03	197.00	236.93	229.36	217.66	----------
Shelled corn (lbs.)	----------	----------	----------	----------	----------	400.84
Protein supplement (lbs.)	78.82	81.21	6.39	34.24	48.03	110.34
Mineral (lbs.)	4.21	1.51	2.39	.72	2.43	2.11
Gain per acre (lbs. pork)	409.72	177.61	459.63	304.15	314.13	----------

* One or more pigs often removed during test period because of sickness or for slaughter.

Table 5 also shows that for four years the pigs on Grohoma sorghum and Spanish peanuts consumed a total of 612.99 pounds of feed per 100 pounds of gain as compared to pigs in dry-lot that averaged, for two years, 513.29 pounds of feed per 100 pounds of gain. The pigs in dry-lot, of course, were not eating the same feed being hogged-off. Here, as with early dent corn, the pigs were in one case being fed harvested feeds, while the other group was doing their own harvesting of grains, one of which (peanuts) cannot be economically harvested for animal feed. The soil-building factor of the crops hogged-off is important.

HOGGING-OFF CORN AND MATURE SOYBEANS

Seven years' results obtained from hogging-off corn and mature soybeans are summarized in Table 6. The crops were planted in 36-inch rows. Every other row was planted to corn alone and the row in between to soybeans alone. The varieties of soybeans used in this test were Mathew, Hayseed, and Pluto. The latter two varieties were selections made at this Station. The corn was ready for hogging-off before the soybean seed had reached maturity. The pigs were placed on the soybeans when

Spring pigs hogging-off corn and mature soybeans during the late summer and early fall. (The best seed-producing varieties of soybeans mature their seed about September 1 to 15.)

the majority of the seed had just passed the dough stage. Some of the pods of beans were beginning to turn brown. The soybeans were ready for hogging-off approximately September 15. The mature soybeans proved to be more or less unpalatable and the pigs ate very few until most of the corn had been hogged-off. They ate enough beans during the time they were hogging-off the corn to partially balance their ration. In the latter part of the hogging-off period when the pigs were largely on a soybean diet, they continued to make fair gains but were not in as good market condition at the end of the period as they were earlier, when an abundance of corn was available. A diet composed largely of soybean seed proved to be very laxative. A seven-year average shows 305.20 pounds of pork produced per acre. The two crops interplanted did not prove to be as profitable as many of the others in the system.

It will be noted in Table 6 that pigs on corn and mature soybeans, for seven years, consumed an average of 715.16 pounds of feed per 100 pounds of gain as compared to 400.17 pounds for comparable pigs in dry-lot for a similar period. The pigs on crops actually had charged against them, in addition to the soybeans, more corn per 100 pounds of gain than the dry-lot pigs consumed. As was the case with similar comparisons on early dent corn and Grohoma sorghum and Spanish peanuts, the pigs had charged against them all the crops produced. There was naturally some waste which was especially noticeable with the mature soybeans. Here, again, one group was fed harvested and stored feed while the other group did its own harvesting of the crop.

HOGGING-OFF RUNNER PEANUTS

Runner peanuts is the principal fattening crop used by the farmers in the Coastal Plain area. The runner peanuts in these tests were planted in 36-inch rows. Table 7 gives a seven-year average yield per acre of 1933.92 pounds for this crop.

During the seven years runner peanuts were hogged-off the practice was to hog the peanuts off during mid-winter. The tests were usually begun in late November or early December. It was found that the runner peanuts left in the ground after February 1 to 15 began to decay rather badly. The percentage rotting depended on soil moisture and, to some extent, temperature. All the crop produced was charged to the hogs, but for several years it was estimated that from 10 to 20 per cent of the total nuts produced were lost by decay.

The runner peanuts produced a seven-year average of 361.35 pounds of pork per acre. This gain was made from a yield of 1933.92 pounds of nuts. As indicated above, considerably more pork might have been produced per acre had the nuts been hogged-off immediately after they reached maturity in October. Tests

TABLE 6.

HOGGING-OFF CORN AND MATURE SOYBEANS

Yearly and seven-year average results of hogging-off corn and mature soybeans (interplanted). Crops planted in alternate rows, three feet apart. Seven-year average results of dry-lot feeding similar groups of pigs are listed for comparison.

	1936	1937	1938	1939	1940	1941	1942	7-Year Average	Dry-Lot 7-Year Average
Number pigs on test*	39	68	78	71	104	36	47	63.29	14
Date on test	Sept. 30	Sept. 23	Sept. 27	Sept. 12	Sept. 9	Sept. 1	Sept. 22	Sept. 18	Sept. 18
Date off test	Oct. 26	Oct. 16	Nov. 8	Oct. 24	Nov. 18	Oct. 21	Sept. 28	Oct. 25	Oct. 22
Days on test	27	23	42	42	70	50	6	37	34
Average initial weight (lbs.)	193.59	172.99	198.79	183.53	158.08	145.08	179.74	175.98	176.46
Average final weight (lbs.)	220.64	205.12	224.10	223.70	220.74	207.75	192.31	215.33	221.32
Average daily gain (lbs.)	1.00	1.53	1.53	1.51	1.38	1.43	2.10	1.42	1.91
Yield of crop per acre:									
Corn (bu.)	9.30	39.80	13.30	33.70	45.40	31.98	15.48	27.15	.....
Soybeans (lbs.)	396.50	674.60	220.50	484.40	872.10	726.00	221.81	516.22	.....
Total acres hogged-off (acres)	8.50	5.96	13.80	9.38	11.48	5.40	2.59	8.16	.....
Total hogging-off days per acre (days)	123.88	242.11	93.77	201.49	411.85	291.85	108.88	214.78	.....
Total feed consumed per 100 pounds gain (lbs.):	817.17	845.12	704.57	830.12	650.73	648.74	497.29	715.16	400.17
Corn (lbs.)	421.30	608.69	519.43	621.39	447.91	428.65	379.99	498.14	.....
Soybeans (lbs.)	319.48	184.02	154.14	159.33	153.57	173.78	97.20	169.14	.....
Shelled corn (lbs.)	.....	.....	.....	.....	.....	.....	.....	.....	343.43
Protein supplement (lbs.)	73.93	51.95	30.04	48.91	48.03	42.10	18.27	46.42	54.25
Mineral (lbs.)	2.46	.46	.96	.49	1.22	4.21	1.83	1.46	2.49
Gain per acre (lbs. pork)	124.12	366.61	143.04	304.05	567.68	417.78	228.19	305.20	.....

* One or more pigs often removed during test period because of sickness or for saughter.l

are now in progress to determine the optimum time to hog-off runner peanuts.

Peanuts produce soft and oily pork. Despite that fact, however, it is one of the most important hog crops in south Georgia. Finishing hogs on peanuts throws them on the market during the winter months when hog prices in the southeast are usually the lowest and movement to market is heaviest. It is generally considered, however, that hogging-off peanuts is one of the best practices to be followed in a soil-building program. All the plant itself is left on the ground and most of the manurial value of the nut is returned to the soil.

HOGGING-OFF SWEET POTATOES

The sweet potatoes grown for these tests were planted according to recommendations put out by this Station. As far as possible, early plants were grown to set the entire acreage. For some of the years, however, a sufficient number of plants was not available, in which case vines were set as soon as they could be produced on the area. Table 8 shows that a seven-year average yield of sweet potatoes was 192.36 bushels, which produced an average of 457.42 pounds of pork per acre.

Sweet potatoes proved to be one of the best crops in the system as far as pounds of pork produced per acre were concerned. Sweet potatoes, like peanuts, start decaying rather badly if left in the ground after February 1 to 15. In the seven years of this test the crop was hogged-off during mid-winter. In some years, from 10 to 20 percent of the potatoes rotted and were lost as far

Hogging-off corn and runner peanuts. These crops can be hogged-off from October until February.

TABLE 7.

HOGGING-OFF RUNNER PEANUTS

Yearly and seven-year average results of hogging-off runner peanuts. Runner peanuts usually hogged-off in winter for direct comparison with other winter crops hogged-off.

	1936-37	1937-38	1938-39	1939-40	1940-41	1941-42	1942-43	7-Year Average
Number pigs on test*	13	16	24	30	30	32	23	24
Date on test	Nov. 7	Dec. 8	Nov. 19	Nov. 11	Dec. 9	Dec. 12	Dec. 10	Nov. 28
Date off test	Mar. 5	Mar. 3	Mar. 17	Jan. 1	Feb. 11	Feb. 12	Mar. 4	Feb. 19
Days on test	118	85	118	51	64	62	84	83.14
Average initial weight (lbs.)	78.77	88.44	73.96	107.67	91.33	121.09	104.35	97.97
Average final weight (lbs.)	168.69	193.44	191.04	159.50	173.66	192.81	214.78	184.39
Average daily gain (lbs.)	1.10	1.24	1.51	1.07	1.30	1.18	1.31	1.26
Yield of crop per acre (lbs.)	1527.30	2101.40	1775.70	1405.20	2359.10	1935.00	2581.38	1933.92
Total acres hogged-off (acres)	5.27	6.80	7.00	6.16	4.83	5.00	5.12	5.74
Total hogging-off days per acre (days)	201.52	200.00	265.86	236.04	392.96	390.20	377.34	286.66
Total feed consumed per 100 pounds gain: (lbs.)	725.58	889.70	461.57	611.70	489.29	444.91	547.58	565.57
Crop hogged-off (lbs.)	688.54	850.54	442.35	556.66	461.32	421.57	520.14	535.19
Protein supplement (lbs.)	34.73	38.09	18.22	54.08	26.32	21.22	25.00	28.73
Mineral (lbs.)	2.31	1.07	1.00	.96	1.65	2.12	2.44	1.65
Gain per acre (lbs. pork)	221.82	247.06	401.43	252.44	511.39	459.00	496.09	361.35

* One or more pigs often removed during test period because of sickness or for saughter.

as hog feed was concerned. The total yield of sweet potatoes was charged to the hogs. As with peanuts, had the crop been hogged-off during late fall and early winter, very little loss would have occurred from spoilage and the pounds of pork produced per acre would likely have been considerably higher.

As will be noted, under the general discussion of the cost of producing the various crops hogged-off, sweet potato costs were comparatively high, which resulted in a rather small profit per acre, or no profit at all. The seed-piece method of planting sweet potatoes, recently developed at this Station, will likely enable the farmer to reduce the cost of production, which would make sweet potatoes one of the most valuable crops in the southeast for hogging-off. Sweet potatoes are very palatable to hogs and the daily rate of gain and the pork produced per acre on potatoes are high.

Sweet potatoes, unlike peanuts, produce hard pork. Observations made during the seven years these tests were in progress indicated that hogs fattened on sweet potatoes had firmer carcasses than hogs fattened on any other crops grown in the system.

HOGGING-OFF CORN

Results of hogging-off regular field corn during the eight years covered by these tests were compared with results obtained from hogging-off Spanish peanuts, runner peanuts, and sweet potatoes. As shown in Table 9, the yield of corn for the eight years varied from 27.2 to 58.9 bushels per acre, with an average yield of 39.50 bushels. An average of 358.28 pounds of pork per acre was produced from the corn. During most of the years covered by these tests the corn was hogged-off in the late winter months. It was found that corn planted alone deteriorated very little during the winter months. In fact, the weevil damage was less for the corn in the field than for that harvested and placed in the barn. Considerable loss was experienced, however, in hogging-off corn during the late winter months. Most of the feed crops in the vicinity had been hogged-off before that time. As a result the doves flocked into the fields in rather large numbers. It was thought they consumed a large quantity of the corn that would otherwise have been eaten by the hogs. All the corn produced on the area was charged to the hogs. It was noted that the grain requirements per 100 pounds of gain were much higher for the pigs hogging-off the corn during the winter than for the pigs hogging-off corn during the summer, when very little losses were incurred.

Generally, the pigs used to hog-off regular field corn weighed above 140 pounds when placed on test and were kept on corn until they reached an average weight of well above 200 pounds, which partially accounts for the rather high feed consumption per 100 pounds of gain.

TABLE 8.

HOGGING-OFF SWEET POTATOES

Yearly and seven-year average results of hogging-off sweet potatoes. Sweet potatoes generally hogged-off in winter for direct comparison with other winter hogging-off crops.

	1936-37	1937-38	1938-39	1939-40	1940-41	1941-42	1942-43	7-Year Average
Number pigs on test*	13	11	19	58	30	27	20	25.43
Date on test	Nov. 7	Dec. 8	Nov. 19	Nov. 11	Dec. 9	Dec. 12	Dec. 10	Nov. 28
Date off test	Mar. 15	Feb. 9	Mar. 17	Feb. 1	Feb. 20	Feb. 15	Feb. 17	Feb. 21
Days on test	128	63	118	82	73	65	69	85.43
Yield of crop per acre (bu.)	70.77	107.27	90.79	136.90	92.83	133.33	103.25	113.57
Average final weight (lbs.)	171.92	165.27	168.68	191.83	175.70	199.85	178.00	183.21
Average daily gain (lbs.)	.79	1.00	.956	.968	1.14	1.15	1.08	1.01
Yield of crop per acre (lbs.)	168.50	155.00	151.00	333.20	202.30	159.70	159.16	192.36
Total acres hogged-off (acres)	3.59	4.08	4.94	4.41	3.41	2.81	3.86	3.87
Total hogging-off days per acre (days)	463.51	155.64	313.36	746.71	642.23	553.38	357.51	452.58
Total feed consumed per 100 pounds gain: (lbs.)	2899.01	6086.05	3138.91	2853.19	1780.59	1599.21	2517.44	2621.27
Crop hogged-off (lbs.)	2761.14	5975.24	3030.40	2767.82	1673.07	1499.50	2460.92	2523.21
Protein supplement (lbs.)	134.14	108.93	106.82	83.96	100.76	90.65	51.44	93.72
Mineral (lbs.)	3.73	1.88	1.69	1.41	6.76	9.06	5.08	4.34
Gain per acre (lbs. pork)	366.30	156.37	299.59	722.45	729.03	639.15	387.31	457.42

* One or more pigs often removed during test period because of sickness or for saughter.l

TABLE 9.
HOGGING-OF CORN

Yearly and average results of hogging-off regular field corn. The average is for ten tests conducted in a seven-year period. Corn hogged-off in winter for direct comparison with other winter crops hogged-off.

	1936-37	1937-38	1938-39	1939-40	1940-41	1941	1941-42	1942	1942-43	1943	Average 10 Tests (8 Yrs.)
Number pigs on test*	6	16	25	49	37	34	31	94	41	81	41.40
Date on test	Nov. 7	Dec. 8	Nov. 19	Feb. 5	Feb. 11	Sept. 1	Feb. 12	Aug. 17	Feb. 17	Sept. 6	Nov. 29
Date off test	Mar. 11	Mar. 23	Mar. 17	Mar. 30	Mar. 27	Oct. 21	Mar. 31	Sept. 22	Mar. 26	Nov. 12	Feb. 5
Days on test	124	105	118	54	44	50	47	36	37	67	68
Average initial weight (lbs.)	51.67	80.00	73.60	143.06	158.73	146.35	185.48	145.00	197.07	175.49	152.08
Average final weight (lbs.)	215.00	231.88	185.56	208.20	204.59	224.41	245.35	169.33	229.75	230.80	210.04
Average daily gain (lbs.)	1.32	1.45	1.25	1.67	1.16	1.70	1.57	1.35	1.11	1.85	1.32
Yield of crop per acre (bu.)	27.20	37.00	39.40	46.70	58.90	42.40	46.60	31.50	57.60	32.19	39.50
Total hogging-off days per acre (days)	133.33	248.15	305.87	284.48	416.48	325.83	238.29	162.07	259.05	372.88	270.81
Total acres hogged-off (acres)	5.58	6.77	7.33	6.70	3.52	4.80	5.72	10.44	4.64	11.47	6.69
Total feed consumed per 100											
Pounds gain (lbs.)	936.32	612.30	618.84	592.86	741.82	478.72	761.58	829.71	1130.34	511.39	662.32
Corn hogged-off (lbs.)	867.24	578.19	578.18	549.20	685.32	430.08	699.15	804.48	1116.23	460.14	617.67
Protein supplement (lbs.)	66.94	32.96	39.66	43.55	51.73	44.25	56.58	22.93	12.84	46.12	41.59
Mineral (lbs.)	2.14	1.15	1.00	1.10	4.77	4.39	5.85	2.30	1.27	5.13	3.06
Gain per acre (lbs. pork)	175.63	358.94	381.86	476.42	482.10	552.92	373.25	219.06	288.79	390.58	358.28

* One or more pigs often removed during test period because of sickness or for slaughter.

MISCELLANEOUS CROPS HOGGED-OFF

Results on the hogging-off of several miscellaneous crops are shown in Table 10.

Popcorn: Three years' results were obtained from hogging-off popcorn. The average yield of popcorn per acre was 31.98 bushels which produced 369.10 pounds of pork. While popcorn proved to be a satisfactory crop for hogging-off, it did not prove to be any earlier or better than early white dent corn or regular field corn.

Chufas: The three-year average yield of chufas obtained in tests was 4207.20 pounds of nuts which produced only 338.07 pounds of pork per acre. While chufas proved to be a very satisfactory crop for hogging-off, it did not have any special advantage over other crops available during August, September, and October. Where the crop can be grown to better advantage than corn or peanuts, it should prove to be a very satisfactory crop for hogging-off during the summer and early fall months.

Grohoma Sorghum and Mature Soybeans: Grohoma sorghum and mature soybeans were hogged-off during the late summers of 1936 and 1937. The two-year average yield was 633.40 pounds of Grohoma sorghum seed and 845.13 pounds of mature soybean seed per acre. This amount of feed produced an average of 359.94 pounds of pork per acre. Grohoma sorghum seed and mature soybean seed were not very palatable to the hogs as was indicated by an average daily gain of only .832 pound. Where grain sorghum can be grown to better advantage than corn, this combination of crops is worthy of consideration.

Fall pigs being finished on a field of corn in March.

TABLE 10.

MISCELLANEOUS CROPS HOGGED-OFF

Three-year average results of hogging-off popcorn and hogging-off chufas, two-year average results of hogging-off Grohoma sorghum and mature soybeans and one year's results of hogging-off sunflowers. Hogs were placed on the crops as soon as they were mature enough to be hogged-off.

	Popcorn 3-year average 1940-41-42	Chufas 3-year average 1940-41-42	Grohoma sorghum and mature soybeans 2-year average 1936-37	Sunflowers 1-year average 1940
Number pigs on test*	20.33	15.33	49.00	4.00
Date on test	Aug. 12	Aug. 22	Sept. 6	Aug. 12
Date off test	Oct. 2	Oct. 28	Oct. 13	Oct. 5
Days on test	50.67	67.00	37.50	54.00
Average initial weight (lbs.)	104.75	130.43	125.26	80.00
Average final weight (lbs.)	152.92	190.85	150.74	133.75
Average daily gain (lbs.)	1.33	1.23	.832	.995
Yield of crop per acre:				
Popcorn (bu.)	31.98	----	----	----
Chufas (lbs.)	----	4207.20	----	----
Grohoma sorghum (lbs.)	----	----	633.40	----
Mature soybeans (lbs.)	----	----	845.13	----
Sunflowers (lbs.)	----	----	----	1083.10
Total acres hogged-off (acres)	7.96	8.22	3.47	1.74
Total hogging-off days per acre (days)	277.89	275.43	432.42	216.00
Total feed consumed per 100 lbs. gain (lbs.):	525.41	1284.63	489.71	1098.98
Crop hogged-off (lbs.)	486.89 (popcorn)	1244.45 (chufas)	175.97 (sorghum) 234.80 (soybeans)	881.21 (sunflowers)
Protein supplement (lbs.)	36.83	39.04	76.82	127.91
Mineral (lbs.)	1.69	1.14	2.12	1.86
Gain per acre (lbs. pork)	369.10	338.07	359.94	123.56

* One or more pigs often removed during test period because of sickness or for saughter.

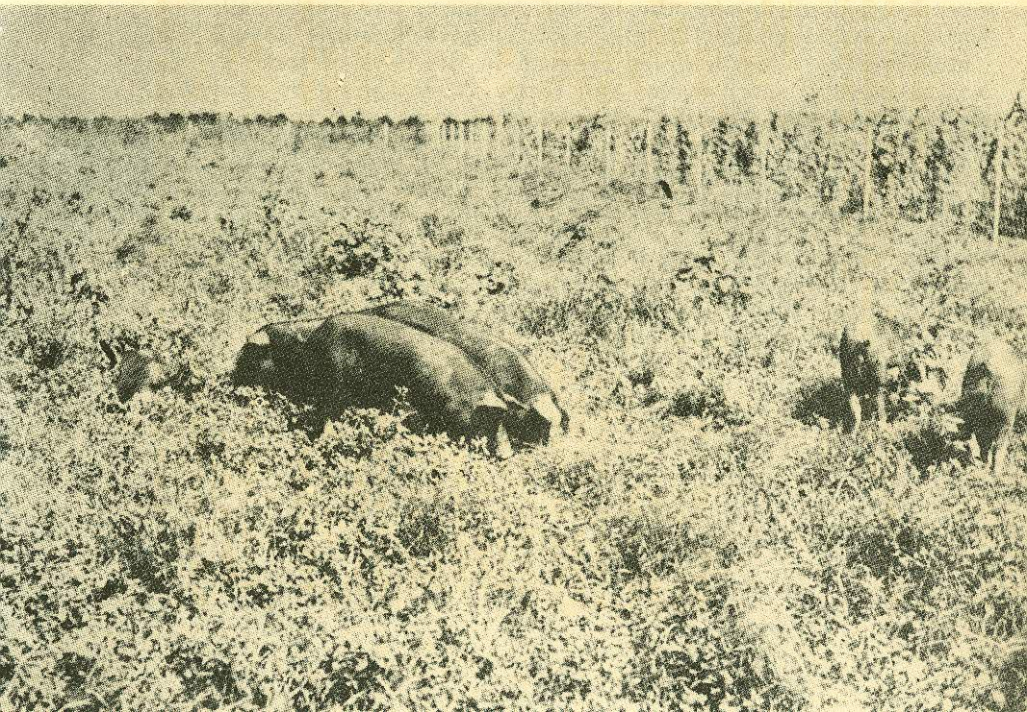
Sunflowers: One year's results with hogging-off sunflowers gave a yield of 1083.10 pounds of seed per acre, which produced only 123.56 pounds of pork. Hogs were turned on the sunflowers after 50 percent of the seed heads had ripened. The sunflower seed were not palatable to the hogs.

YEAR-ROUND SYSTEM

As was stated in the forepart of this bulletin, an attempt has been made to develop a year-round system of hogging-off crops so that one crop would be available for hogging-off as soon as the previous crop was consumed. As much interest was shown in the sequence as in individual crops. During the latter years covered by this report, tests were carried on to compare the value of different crops that could be made available for hogging-off at the same time. Those comparisons are still being made.

To make the system most useful to the farmer, it should be simplified in that as few crops as possible, rather than as many as possible, should be planted. Based on the results given in this bulletin, the farmer has a rather wide choice of crops that could be planted in the Coastal Plain area of the state. A practical

Hogging-off chufas. Chufas may replace peanuts on the more sandy soils. (Picture made September 29.)



sequence of crops, for instance, would be (1) mature oats for hogging-off during May and June, (2) early dent corn for hogging-off during July, August, September, and October, followed by (3) either runner peanuts or sweet potatoes to be hogged-off in November, December, and January, with (4) field corn available during February and March. The late winter and early spring pigs could be grown to market weight on the mature small grain and early dent corn. The late summer and early fall pigs could be fattened on runner peanuts and sweet potatoes, followed by corn.

The number of acres of different crops to be planted will, of course, depend upon the probable yield and the number of pigs to be used and the weight of the pigs when they are placed on the crop. It has been found that one acre of mature oats will carry from 10 to 20 weanling pigs for a 60-day period. The results of the various tests discussed in this bulletin show that approximately .4 of an acre of fattening crops was required for growing out and developing a pig from weaning to a market weight of 225 pounds.

If the farmer wishes to produce only hard pork, it will be necessary for him to leave peanuts out of the year-round program he develops for his individual farm. Mature soybeans also have a tendency to produce soft pork. The other crops tested produced firm carcasses.

As was stated in the forepart of this bulletin, green grazing crops were not placed in the system of hogging-off crops, even though they are of great economic importance in profitable swine production in the Coastal Plain area. Green grazing, in the form of native grasses and weeds, was available in the field where crops were hogged-off during the spring, summer, and early fall, but was not available for the pigs that hogged-off crops during the winter months. Ample green grazing, in the form of small grains or a mixture of small grains and Hairy vetch, should be available during the winter for the sows, suckling pigs, and young stock. For the summer months the native grasses and weeds are good. Results at this Station indicate that Cattail millet, soybeans, and cowpeas are excellent green grazing crops. Having a good supply of grazing crops as near year-round as possible makes for healthier pigs, larger litters, heavier pigs at weaning, and better developed young stock. It is estimated that ample supplies of green grazing save from 10 to 20 percent in feed requirements for growing and fattening pigs.

TABLE 11.
YIELDS PER ACRE OF HOGGING-OFF CROPS

Crop	Years grown	Average yield per acre	Largest yield per acre	Smallest yield per acre
Corn and	3	34.00 bu.	42.80 bu.	19.50 bu.
Spanish peanuts		728.23 lbs.	983.87 lbs.	580.79 lbs.
Early dent corn	8	38.06 bu.	61.20 bu.	18.59 bu.
Sweet potatoes	7	192.36 bu.	333.20 bu.	151.00 bu.
Popcorn	3	1797.08 lbs.	2126.00 lbs.	1209.99 lbs.
Runner peanuts	7	1933.92 lbs.	2581.38 lbs.	1405.20 lbs.
Grohoma sorghum and	2	633.40 lbs.	740.00 lbs.	539.00 lbs.
Soybeans		845.13 lbs.	1241.00 lbs.	498.00 lbs.
Corn	8	39.50 bu.	58.90 bu.	27.20 bu.
Spanish peanuts	3	1396.18 lbs.	1742.40 lbs.	1065.32 lbs.
Chufas	3	4207.20 lbs.	5499.80 lbs.	3049.20 lbs.
Grohoma sorghum and	4	1083.35 lbs.	1123.63 lbs.	738.06 lbs.
Spanish peanuts		683.75 lbs.	1088.99 lbs.	349.89 lbs.
Corn and	7	27.15 bu.	45.40 bu.	9.30 bu.
Soybeans		516.22 lbs.	872.10 lbs.	220.50 lbs.
Small grain (Oats, wheat, rye)	6	35.50 bu.	55.47 bu.	24.40 bu.
Sunflowers	1	1083.10 lbs.	1083.10 lbs.	1083.10 lbs.

COSTS OF PRODUCTION AND RETURNS

In producing the crops hogged-off in this series of experiments, accurate records of the amount and cost of labor and materials required to produce each crop were kept. The latter part of this bulletin has to do with costs and returns of each crop hogged-off.

The costs of labor and materials used in producing the crops were actual figures incurred at the time the crops were produced. Since the experiments were conducted over a period of eight years, these figures varied somewhat from year to year. Such items as tractor hire and land rent were fixed arbitrarily. The value of the pork produced from each crop was obtained by multiplying the number of pounds of pork produced by the current price of pork per pound.

Protein and mineral supplements were fed to all lots of hogs on all crops. The costs of all supplemental feeds fed in connection with hogging-off the various crops were added to the costs of production of the respective crops.

The labor and materials used in the production of each crop each year, the actual cost of these items, the total costs, the total gains in pounds of pork, and the average of each of these items per acre, together with the average per acre profit or loss for the entire experiment, are shown in Tables 12 to 26.

The costs of production and returns per acre from each crop hogged-off are as follow:

Crop	Years incl. in expt.	Av. cost of production per acre (Dollars)	Av. gain per acre (lbs. pork)	Av. value gain per acre (Dollars)	Av. profit per acre (Dollars)	Av. cost per lb. of gain (Cents)
Mature small grains (Oats, wheat and rye)	6	22.12	275.06	27.87	5.75	8.04
Early dent corn	8	17.06	501.63	44.12	27.06	3.40
Grohoma sorghum and Spanish peanuts	4	16.40	314.13	24.20	7.80	5.22
Popcorn	3	16.11	369.10	31.05	14.94	4.36
Chufas	3	16.69	338.07	27.52	10.83	4.94
Sunflowers	1	13.21	123.56	7.41	− 5.80	10.69
Corn and Spanish peanuts	3	15.31	541.72	34.26	18.95	2.83
Spanish peanuts	3	18.43	342.96	39.33	20.90	5.37
Grohoma sorghum and soybeans	2	17.70	359.94	31.42	13.72	4.92
Corn and soybeans	7	15.16	305.20	22.42	7.25	4.97
Runner peanuts	7	16.34	361.35	29.48	13.14	4.52
Sweet potatoes	7	42.50	457.42	36.10	− 6.40	9.29
Corn	8	17.16	358.28	34.14	16.98	4.79

When corn was fed as a supplement in connection with hogging-off mature small grain, the cost of production of the small grain per acre, plus the cost of the corn fed per acre, was $44.56. The average gain per acre in pounds of pork was 815.84, and the average value of the gain thus obtained was $78.41. The average profit per acre from this operation was $33.85. The average cost per pound of pork was 5.46 cents.

The items included in the computation of the cost of production of hogging-off crops are (1) man labor, (2) mule work, (3) tractor use, (4) fertilizer, (5) seed or plants, (6) land rent, and (7) supplemental feeds. No separate charges were made for supervision, overhead, or interest and depreciation on equipment (other than that included in above costs). No credit was given for the value of manure and crop residue left on the land. The value of manure and crop residue is believed to be ample to offset any intangible costs not included in these computations.

Summary Table 26 lists the crops included in these experiments, the number of years each crop was grown, the total acreage included in the tests, the per acre cost of each item included in the cost of production, the total cost per acre, the gain in pounds of pork per acre, the value of the pork produced per acre, and the profit per acre, in addition to the feed cost per pound of gain.

COSTS PER ACRE

Figure 2 shows the cost of production of the various crops in relation to each other. The costs of production ranged from $13.21 per acre to produce sunflowers to $42.50 per acre to produce sweet potatoes. The high cost of sweet potato production is due principally to the relatively large amount of man labor required for setting the plants, and the high cost of the plants themselves.

As shown in the cost-of-production tables the cost of protein and mineral supplement fed in connection with each crop hogged-off made up a considerable part of the total cost. If it is desired to compute the actual cost of growing the various crops, the cost of the protein and mineral supplement should be deducted from the total cost in each case.

Rent on land was charged at the rate of $4.00 per acre for field corn, corn and soybeans, runner peanuts, and sweet potatoes. Land rent at the rate of $3.00 per acre was charged for all the other crops, since they occupied the land less than a full year and the land could thus be used for other crops during part of the year.

Man labor costs varied considerably during the period in which these experiments were conducted. Accurate records were kept of the hours of both man labor and mule work used on each operation in the production of the crops. Man labor costs varied from ten cents per hour in the early part of the period to twenty cents per hour in 1943.

No attempt was made to determine the absolute cost of mule work or tractor use. A flat charge of ten cents per hour was made for each hour of mule work and fifty cents for each hour of tractor use. Previous studies and experience of many farmers indicate that these were reasonable rates for these items for most of the time during which the experiments were carried on.

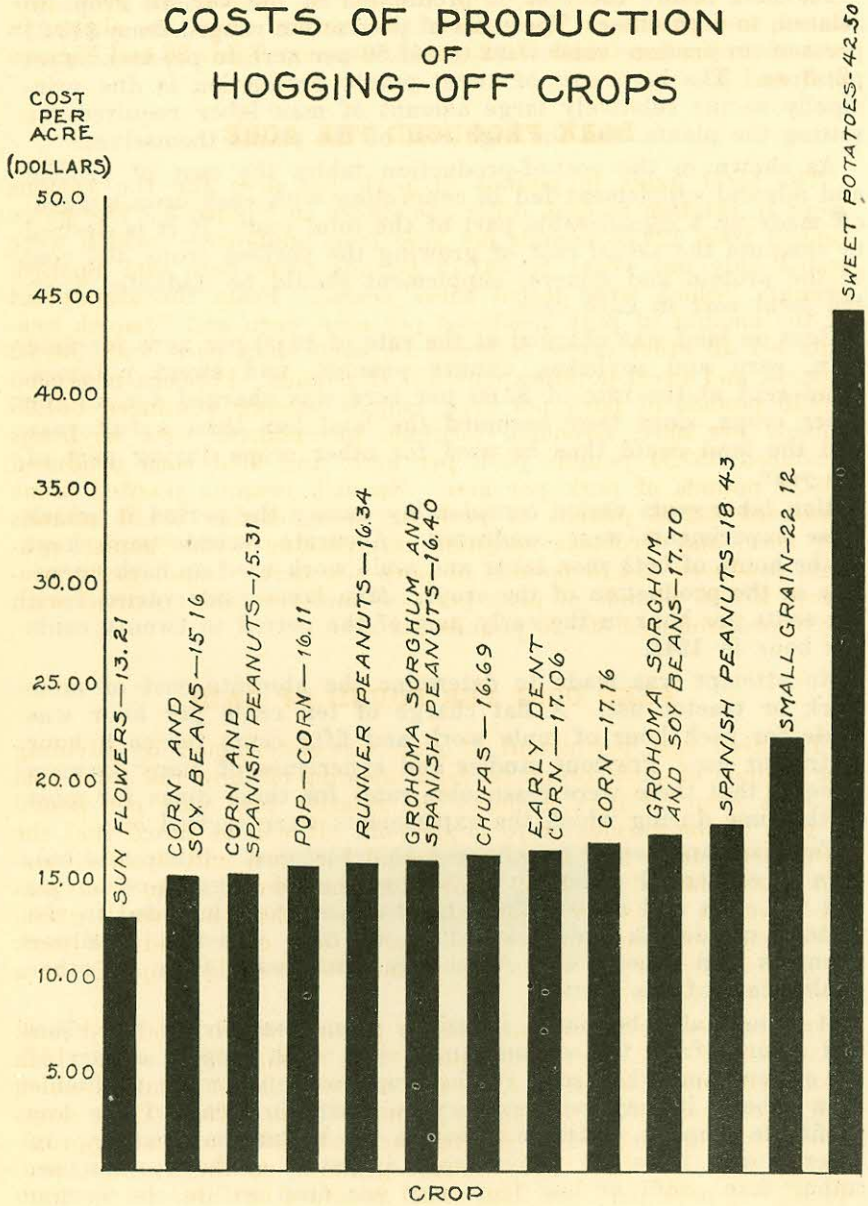
Fertilizer and seed were charged at actual cost. Since this bulletin is concerned primarily with a system of hogging-off crops, and the costs and returns from the various crops included in the system, no details are included as to crop varieties, fertilizer formulas and other items which are dealt with fully in other publications of this Station.

It should also be borne in mind, when considering the costs and returns from the various crops, that each crop is a part of the system, and while some of the crops are much more profitable than others, it may be necessary to maintain some of the less profitable crops in order to maintain the system as a whole. In other words, it is the profit from a system of hog production rather than profit or loss from any one crop within the system which is of primary importance.

In carrying on these experiments, several alternative crops for each hogging-off period were tested in order to determine the

Fig. 2

COSTS OF PRODUCTION OF HOGGING-OFF CROPS



more profitable crops to include in the system. Cost-of-production figures were not available on the small grain crops for the years 1939 and 1940. Costs of crop production, pounds of pork produced, and profits or losses from the various crops are shown in cost-of-production tables (12-25) and Summary Table 26 and Figures 2, 3 and 5.

PORK PRODUCED PER ACRE

The total gains in pounds of pork per acre for the various crops in relation to each other are shown in Figure 3. The gains ranged from 123.56 pounds per acre from sunflowers (which were tested only one year) to 541.72 pounds from corn and Spanish peanuts (which were tested three years). From the standpoint of the amount of pork produced per acre, corn and Spanish peanuts led all other crops, followed by early dent corn with 501.63 pounds, and sweet potatoes with 457.42 pounds. Popcorn produced 369.10 pounds of pork per acre, runner peanuts produced 361.35 pounds per acre, Grohoma sorghum interplanted with soybeans produced 359.94 pounds pork per acre, and field corn produced 358.28 pounds of pork per acre. Spanish peanuts planted alone produced 342.96 pounds of pork per acre, chufas 338.07 pounds per acre, and Grohoma sorghum interplanted with Spanish peanuts produced 314.13 pounds of pork per acre. Small grain produced 275.06 pounds of pork per acre and corn interplanted with soybeans produced 305.20 pounds per acre.

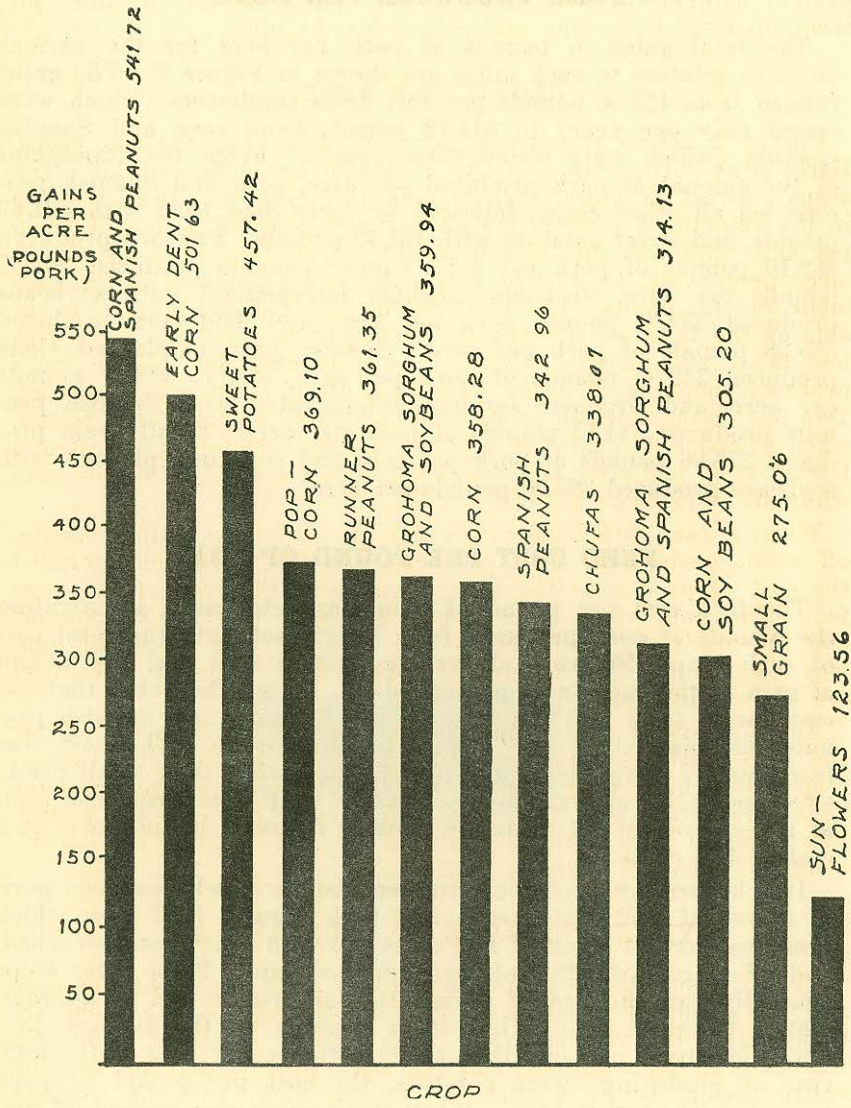
FEED COST PER POUND OF GAIN

The feed cost per pound of gain was determined by dividing the pounds of pork produced from hogging-off into the total cost of each crop. Figure 4 shows the relative feed cost per pound of gain of the various crops hogged-off. It will be noted that the cost varied from 2.83 cents per pound for corn and Spanish peanuts interplanted to 10.69 cents for sunflowers. The cost was less than six cents per pound on all crops other than small grain, sweet potatoes, and sunflowers. Early dent corn produced pork at a feed cost of 3.4 cents per pound, followed by popcorn at a cost of 4.36 cents.

It is interesting to compare runner peanuts which produced pork at a cost of 4.52 cents per pound with regular field corn which produced pork at a cost of 4.79 cents and with sweet potatoes which had a feed cost of 9.29 cents per pound of gain. These three crops generally were hogged-off during the mid-winter and at approximately the same time. The runner peanuts, on the average, produced less pork per acre than sweet potatoes but, due to the high cost of producing sweet potatoes, the cost per pound of pork produced was rather high. When small grain was hogged-off and a corn supplement was not fed, the cost per pound of gain was

Fig. 3

GAINS PER ACRE FROM HOGGING-OFF CROPS



8.04 cents, but when a corn supplement was fed to the pigs while they were hogging-off small grain, the feed cost per pound of pork was reduced to 5.46 cents. In spite of the fact that the cost per pound of gain on small grain is comparatively high, this is a very valuable crop since there are no other grain crops available during the period these crops are hogged-off.

The feed cost per pound of gain on all these crops includes the protein supplement and minerals fed, but does not include the labor involved in feeding and caring for the pigs.

PROFIT PER ACRE

Figure 5 shows the profit per acre from the various crops. Early dent corn, with a profit of $27.06 per acre, led all other crops. Sweet potatoes, even though this crop was near the top in the amount of pork produced per acre, showed a loss of $6.40 per acre, and was the least profitable of all the crops tested. A large percent of the cost of producing sweet potatoes is for man labor and for plants. If a plentiful supply of cheap labor is available on the farm, or if ways are developed to grow the crop with less labor and cheaper plants, it will become one of the more profitable hogging-off crops. The crop itself is an excellent feed. Two out of the thirteen crops or interplanted combinations tested, when considered separately, showed a loss. Sunflowers showed a loss of $5.80 per acre, and sweet potatoes a loss of $6.40 per acre while all other crops showed a profit.

When a corn supplement was fed in connection with hogging-off small grains, the cost per acre was $44.56, which included the cost of producing the small grain plus the cost of the corn fed. The gain of pork produced per acre was 815.84 pounds, and the profit per acre was $33.85. The cost per pound of gain was 5.46 cents. The amount of corn fed per acre and the cost are shown in Table 13.

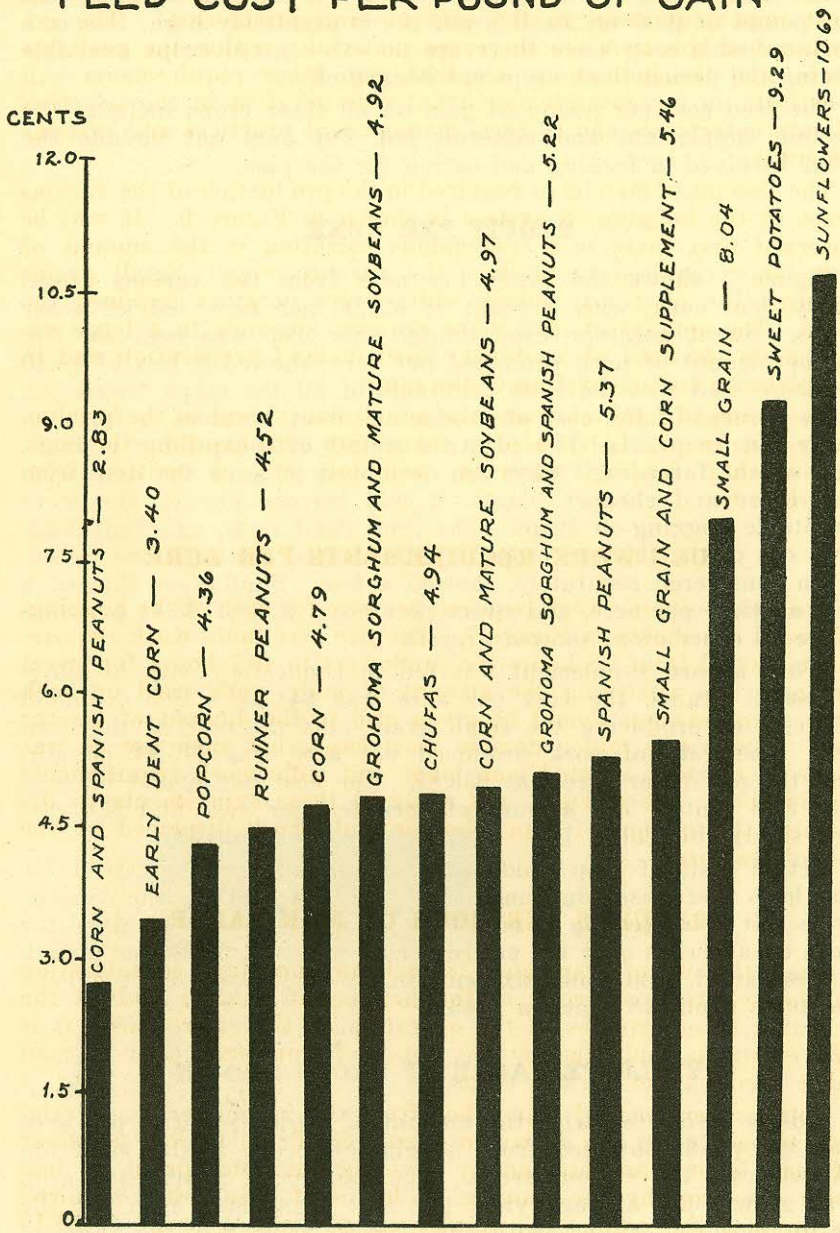
Actual costs of crop production and actual prices received for the hogs were used in computing profit or loss on the various crops. It is interesting to note that the average price received for hogs on all crops over the entire period was 9.03 cents per pound. Prices varied from about six cents in the early part of the experiments to about 13 cents in 1943.

YIELD PER ACRE OF CROPS GROWN

Closely associated with the amount of pork produced per acre and the profit obtained from hogging-off crops is the yield obtained from the various crops. The number of years each crop was grown, the average yield per acre from each crop for the entire period, together with the largest yield and the smallest yield, are shown in Table 11.

Fig. 4

FEED COST PER POUND OF GAIN



MAN LABOR REQUIREMENTS PER ACRE

The amount of man labor required has always been one of the most important items in the cost of crop production. The importance of this item has increased materially within the past few years, and the indications are that man labor requirements will constitute an increasingly important consideration in the selection of crop enterprises and in farm management practices and systems generally.

The amount of man labor required in the production of the various crops in the hogging-off system is shown in Figure 6. It will be observed that there is a tremendous variation in the amount of man labor required to produce the various crops. Small grains required the least man labor, while sweet potatoes required the most. The amount of man labor required depends to a large extent upon the kind of machinery used in land preparation and in the planting and cultivation of the crops.

The hours of man labor are the actual hours used in the production of the crops. Labor used in connection with handling the hogs, supplemental feeding, watering, weighing, etc., is omitted from the records.

MULE WORK REQUIREMENTS PER ACRE

The hours of mule work required per acre for each of the hogging-off crops are shown in Figure 7. The per acre mule work requirements varied from 9.8 hours for sunflowers to 40.7 hours for sweet potatoes. In analyzing the amount of mule work used on each crop, consideration should be given also to the amount of tractor use. This was a minor item in most cases, but such use as was made of tractors affected man labor and mule work requirements significantly. No attempt was made in these experiments to determine the amount of man labor or mule work displaced by the use of tractors.

RETURNS PER HOUR OF MAN LABOR

Since the use of man labor is such an important consideration in the selection of crops in the hogging-off system and in the selection of enterprises in the operation of the entire farm, it is interesting to study the returns obtained from each hour of man labor used on the various crops.

Returns per hour of man labor from the various crops in relation to each other are shown in Figure 8. Profit or loss per hour of man labor was obtained by dividing the total profit or loss from the crop by the number of hours of man labor required to produce the crop. The results varied from a profit of $1.15 for each hour of man labor used on early dent corn to a loss of $0.52 for each hour of man labor used on sweet potatoes. It will

Fig. 5

PROFIT PER ACRE FROM HOGGING-OFF CROPS

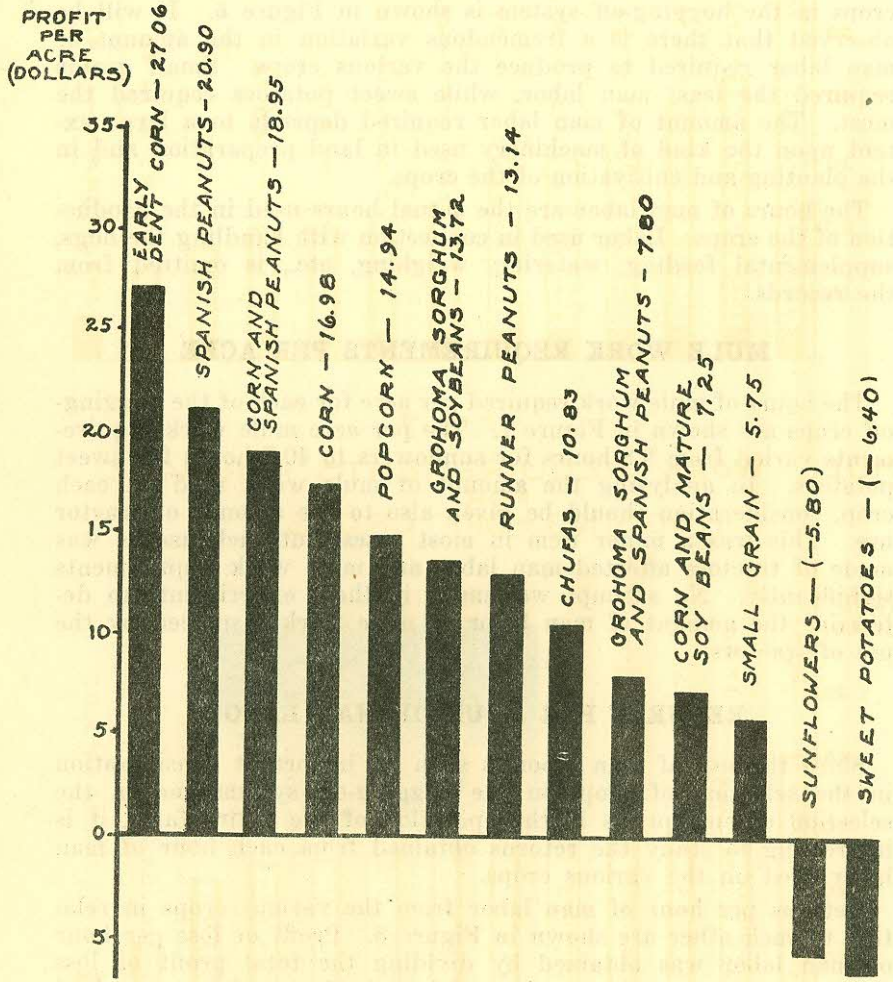


Fig. 6

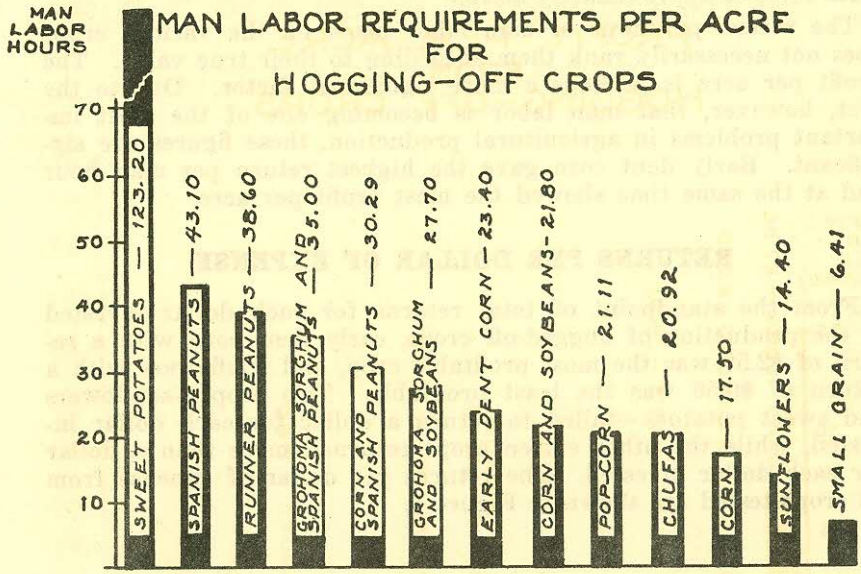
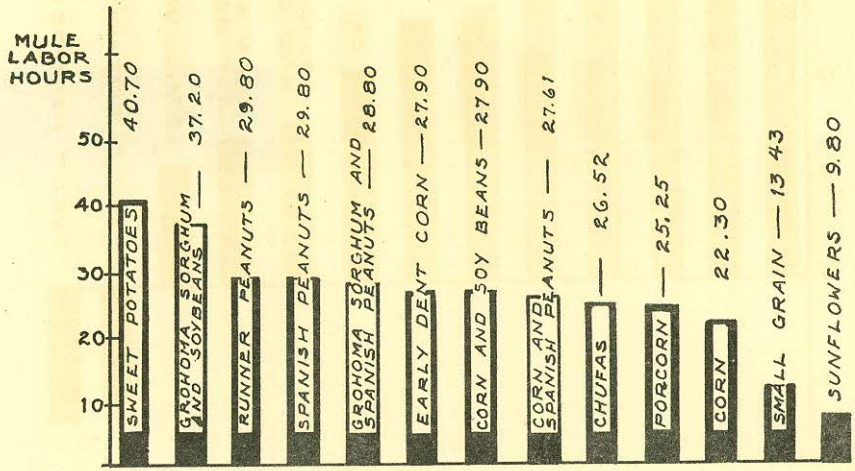


Fig. 7

MULE WORK REQUIREMENTS PER ACRE FOR HOGGING-OFF CROPS



be noted that early dent corn was the only crop that gave more than $1.00 return per man hour. In general, the profit ranged from $0.33 to approximately $0.75.

The return per hour of man labor made on the various crops does not necessarily rank them according to their true value. The profit per acre is perhaps a more significant factor. Due to the fact, however, that man labor is becoming one of the most important problems in agricultural production, these figures are significant. Early dent corn gave the highest return per man hour and at the same time showed the most profit per acre.

RETURNS PER DOLLAR OF EXPENSE

From the standpoint of total returns for each dollar invested in the production of hogged-off crops, early dent corn with a return of $2.59 was the most profitable crop, and sunflowers with a return of $0.56 was the least profitable. Two crops—sunflowers and sweet potatoes—failed to return a dollar for each dollar invested, while the other eleven crops returned more than a dollar for each dollar invested. The returns per dollar of expense from all crops tested are shown in Figure 9.

Fig. 8

PROFIT PER HOUR OF MAN LABOR
ON
HOGGING-OFF CROPS

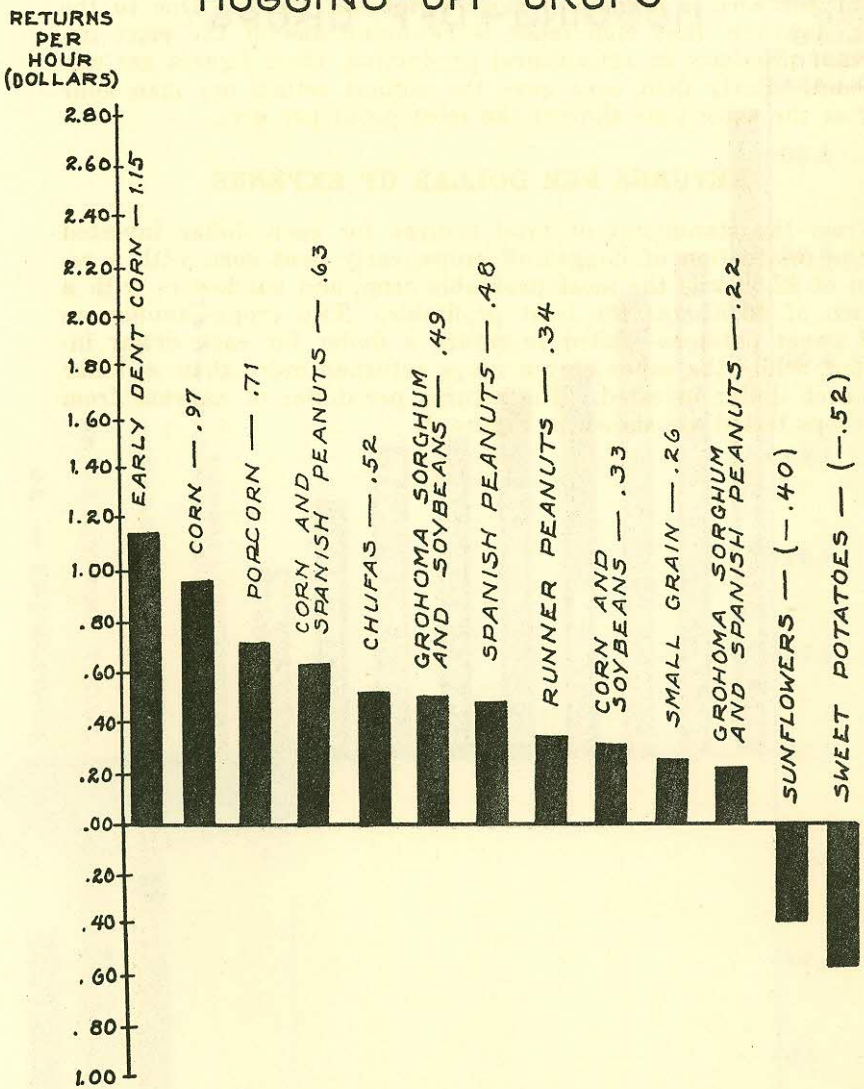
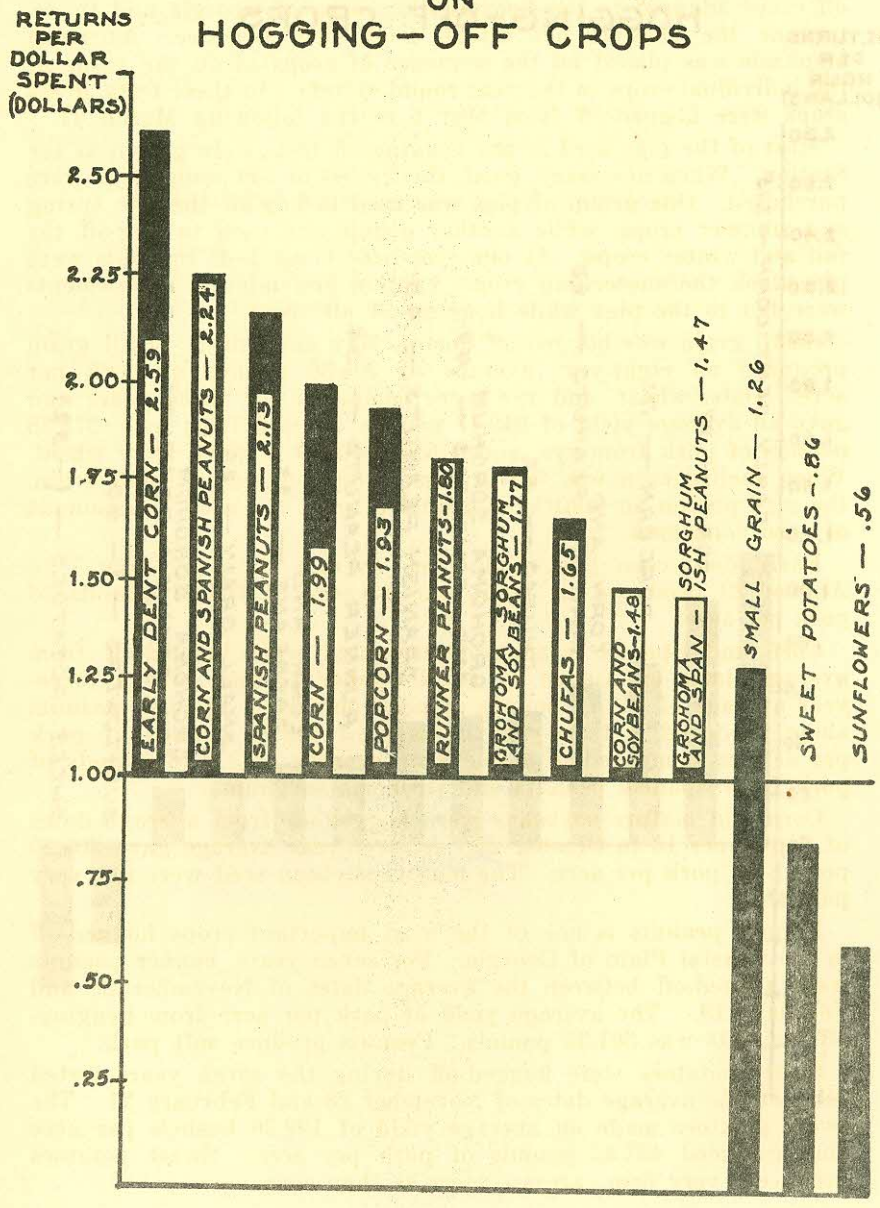


Fig. 9

RETURNS PER DOLLAR OF EXPENSE ON HOGGING-OFF CROPS



SUMMARY

A series of tests was begun in 1936 to determine the amount of pork that could be produced per acre from the various hogging-off crops adapted to the Coastal Plain area of Georgia and to determine the possible net return from such practice. As much emphasis was placed on the sequence of crops as on the value of the individual crops in the year-round system. In these tests, grain crops were hogged-off from May 6 to the following March 31.

Most of the pigs used in the hogging-off tests were grown at the Station. When necessary, good, thrifty, 80 to 130-pound pigs were purchased. One group of pigs was used to hog-off the late spring and summer crops, while another group was used to hog-off the fall and winter crops. As one crop was hogged-off the pigs were placed on the succeeding crop. Protein and mineral supplements were fed to the pigs while hogging-off all crops.

Small grain was hogged-off during May and June. Small grain produced an eight-year average of 306.30 pounds of pork per acre. Oats, wheat, and rye were compared for three years and gave an average yield of 342.77 pounds of pork from oats, 318.38 pounds of pork from rye, and 215.72 pounds of pork from wheat. When shelled corn was fed to pigs while hogging-off small grain, the pigs put on an additional pound of gain for each ~~1.89~~ 2.85 pounds of corn consumed.

Early dent corn hogged-off from average dates of July 7 to August 29 produced an eight-year average of 501.63 pounds of pork per acre.

Corn and Spanish peanuts interplanted were hogged-off from average dates of August 17 to November 13 and gave a three-year average of 541.72 pounds of pork per acre. Spanish peanuts alone produced a three-year average of 342.96 pounds of pork per acre as compared to a four-year average of 314.13 pounds of pork from Spanish peanuts and Grohoma sorghum.

Corn and mature soybeans were hogged-off from average dates of September 18 to October 25. A seven-year average gave 305.20 pounds of pork per acre. The mature soybean seed were not very palatable.

Runner peanuts is one of the most important crops hogged-off in the Coastal Plain of Georgia. For seven years, runner peanuts were hogged-off between the average dates of November 28 and February 19. The average yield of pork per acre from hogging-off the nuts was 361.35 pounds. Peanuts produce soft pork.

Sweet potatoes were hogged-off during the seven years tested between the average dates of November 28 and February 21. The sweet potatoes made an average yield of 192.36 bushels per acre and produced 457.42 pounds of pork per acre. Sweet potatoes produce a very firm carcass—more so than corn.

During the eight years that regular field corn was hogged-off between the average dates of November 29 and February 5, it produced an average of 358.28 pounds of pork per acre. Corn deteriorated very little when left standing in the field during the winter but when hogged-off in late winter the birds consumed quite a quantity of grain that otherwise would have been eaten by the hogs.

It is suggested that for the average farmer a practical sequence of crops could be (1) mature oats for hogging-off during May and June, (2) early dent corn for hogging-off during July, August, September, and October, followed by (3) either runner peanuts or sweet potatoes to be hogged-off in November, December, and January, with (4) field corn available during February and March.

Cost-of-production records were kept on all the crops hogged-off in this series of experiments. Items included in the computation of the cost of production of hogging-off crops are (1) man labor, (2) mule work, (3) tractor use, (4) fertilizer, (5) seed or plants, (6) land rent, and (7) supplemental feeds. The average cost of production for the crops varied from $13.21 to $42.50 per acre.

The average pork produced per acre ranged from 123.56 pounds from sunflowers to 541.72 pounds from interplanted corn and Spanish peanuts.

The feed cost per pound of gain varied from 2.83 cents for corn and Spanish peanuts to 10.69 cents for sunflowers. Pork was produced at less than six cents per pound on all crops other than small grain, sweet potatoes, and sunflowers.

Early dent corn gave a profit of $27.06 per acre while sweet potatoes and sunflowers showed a loss. All other crops showed a profit.

Man labor requirements proved to be one of the most important items in the cost of crop production. The per acre requirements varied from 6.41 hours for small grain to 123.20 hours for sweet potatoes. The mule work requirements per acre ranged from 9.8 hours for sunflowers to 40.7 hours for sweet potatoes.

The returns per hour of man labor varied from $1.15 for each hour used on early dent corn to a loss of $0.52 for each hour used on sweet potatoes. The returns per hour of man labor did not rank the crops according to their true value in the system.

Hogging-off crops seems to be a very economical method of pork production in the Coastal Plain area. The system has many advantages, such as, (1) enabling the farmer to utilize crops that can not be economically harvested and fed, (2) the system tends to increase soil fertility, (3) the system gives the farmer a better distribution of labor and income, and (4) the system provides an ideal arrangement for swine sanitation practices.

TABLE 12

COST RECORDS—MATURE SMALL GRAINS (OATS, WHEAT AND RYE)

Years included in experiment, acreage, amount and cost of man labor, mule work, tractor use, fertilizer, seed and plants, land rent, protein and mineral supplement, total cost, total gain, value total gain, and profit from hogging-off.

Year	Acreage	Man labor		Mule work		Tractor		Fertilizer		Seeds		Land rent		Protein & mineral supplement		Total cost	Total gain	Value total gain
		Hrs.	*Dols.*	*Hrs.*	*Dols.*	*Hrs.*	*Dols.*	*Lbs.*	*Dols.*	*Bu.*	*Dols.*	*Acres*	*Dols.*	*Lbs.*	*Dols.*	*Dols.*	*Lbs. pork*	*Dols.*
1936*	3.90	35.0	3.50	70.00	7.00	.....	.....	.....	.....	11.00	6.66	3.90	11.70	1624	32.48	61.34	1069.00	85.52
1937*	3.20	29.0	2.90	58.00	5.80	.....	.....	.....	.....	9.50	7.12	3.20	9.60	2834	56.68	82.10	892.10	80.28
1938*	5.93	53.0	5.30	107.00	10.70	.....	.....	.....	.....	18.00	9.90	5.93	17.79	3677	73.54	117.23	1387.00	110.96
1941**	4.15	16.1	2.01	41.50	4.15	.....	.....	1502	19.85	10.58	10.80	4.15	12.45	2171	43.42	92.68	1177.95	106.01
1942**	5.40	21.0	2.64	54.00	5.40	.....	.....	2970	35.10	14.40	14.58	5.40	16.20	2888	57.76	131.68	1405.80	182.75
1943**	3.49	13.1	2.62	19.70	1.97	8.2	4.10	1212	17.86	6.25	6.25	3.49	10.47	1934	48.35	91.62	1239.06	161.08
Totals	26.07	167.2	18.97	350.20	35.02	8.2	4.10	5684	72.81	69.73	55.31	26.07	78.21	15128	312.23	576.65	7170.91	726.60
Average per acre		6.41	.73	13.43	1.34	.31	.16	218	2.79	2.67	2.12	1.00	3.00	580	11.98	22.12	275.06	27.87

Profit Total $149.95
Average per acre 5.75
Average feed cost per pound of gain: 8.04 cents.

* Oats only.
** An area each of oats, rye and wheat.

TABLE 13

COST RECORDS—MATURE SMALL GRAINS AND CORN SUPPLEMENT

ears included in experiment, acreage, amount and cost of man labor, mule work, tractor use, fertilizer, seed and plants, land rent, protein and mineral supplement, corn supplement, total cost, total gain, value total gain, and profit from hogging-off.

ar	Acre-age	Man labor		Mule work		Tractor		Fertilizer		Seeds		Land rent		Protein & mineral supplement		Corn supplement		Total cost	Total gain	Value total gain
		Hrs.	*Dols.*	*Hrs.*	*Dols.*	*Hrs.*	*Dols.*	*Lbs.*	*Dols.*	*Bu.*	*Dols.*	*Acres*	*Dols.*	*Lbs.*	*Dols.*	*Lbs.*	*Dols.*	*Dols.*	*Lbs. pork*	*Dols.*
6*	3.90	35.0	3.50	70.00	7.00	.....	.....	.....	.....	11.00	6.66	3.90	11.70	1624	32.48	6725	90.04	151.38	3153	252.24
7*	3.20	29.0	2.90	58.00	5.80	.....	.....	.....	.....	9.50	7.12	3.20	9.60	2834	56.68	8105	108.53	190.63	3816	343.44
8*	5.93	53.0	5.30	107.00	10.70	.....	.....	.....	.....	18.00	9.90	5.93	17.79	3677	73.54	10713	143.45	260.68	5697	455.76
1**	4.15	16.1	2.01	41.50	4.15	.....	.....	1502	19.85	10.58	10.80	4.15	12.45	2171	43.42	3868	77.36	170.04	3143	282.87
2**	5.40	21.0	2.64	54.00	5.40	.....	.....	2970	35.10	14.40	14.58	5.40	16.20	2888.1	57.76	4910	98.20	229.88	3222	418.86
3**	3.49	13.1	2.62	19.70	1.97	8.2	4.10	1212	17.86	6.25	6.25	3.49	10.47	1934	48.35	2701	67.53	159.15	2238	290.94
als	26.07	167.2	18.97	350.20	35.02	8.2	4.10	5684	72.81	69.73	55.31	26.07	78.21	15128.1	312.23	37022	585.11	1161.76	21269	2044.11
erage er acre		6.41	.73	13.43	1.34	.31	.16	218	2.79	2.67	2.12	1.00	3.00	580	11.98	1420.09	22.44	44.56	815.84	78.41

Profit: Total $882.35
Average per acre 33.85
Average feed cost per pound of gain: 5.46 cents

*Oats alone.
**Oats, wheat and rye.

TABLE 14

COST RECORDS—EARLY DENT CORN

Years included in experiment, acreage, amount and cost of man labor, mule work, tractor use, fertilizer, seed and plants, land rent, protein and mineral supplement, total cost, total gain, value total gain, and profit from hogging-off.

Year	Acreage	Man labor		Mule work		Tractor		Fertilizer		Seeds		Land rent		Protein & mineral supplement		Total cost	Total gain	Value total gain
		Hrs.	*Dols.*	*Hrs.*	*Dols.*	*Hrs.*	*Dols.*	*Lbs.*	*Dols.*	*Lbs.*	*Dols.*	*Acres*	*Dols.*	*Lbs.*	*Dols.*	*Dols.*	*Lbs. pork*	*Dols.*
1936	6.00	145	14.50	178	17.80	.....	.....	1500	18.32	56	2.00	6.00	18.00	1514	30.28	100.90	3213	289.17
1937	10.00	215	21.50	261	26.10	.....	.....	3000	29.47	70	2.50	10.00	30.00	900	18.00	127.57	1504	135.36
1938	16.47	280	28.00	340	34.00	.. .	. .	. .	.....	212	4.00	16.47	49.41	2898	57.96	173.37	9132	730.56
1939	11.17	338	42.35	326	32.61	2.35	1.17	2569	29.94	78	2.86	11.17	33.51	4873	97.46	239.90	9699	607.61
1940	15.06	383	47.87	540	54.00	10.00	5.00	7800	88.50	112	4.00	15.06	45.18	3905	78.10	322.65	7843	525.48
1941	9.68	205	25.62	255	25.50	10.00	5.00	3200	32.00	70	2.50	9.68	29.04	1716	34.32	153.98	5799	579.90
1942	11.20	360	45.00	390	39.00	20.00	10.00	6125	65.56	80	2.89	11.20	33.60	1479	29.59	225.64	4400	528.00
1943	3.80	116	23.20	143	14.30	10.00	5.00	2200	32.80	30	1.50	3.80	11.40	81	2.03	90.23	2564	333.32
1944	11.97	193	38.60	229	22.90	10.00	5.00	5500	82.00	100	5.92	11.97	35.91	79	1.98	192.31	3676	477.88
Totals	95.35	2235	286.64	2662	266.21	62.35	31.17	31894	378.59	808	28.17	95.35	286.05	17445	349.72	1626.55	47830	4207.28
Average per acre		23.4	3.01	27.9	2.79	.65	.33	334	3.97	8.5	.30	1.00	3.00	183	3.68	17.06	501.63	44.12

Profit: Total $2580.73
Average per acre 27.06
Average feed cost per pound of gain: 3.40 cents

TABLE 15

COST RECORDS—CORN AND SPANISH PEANUTS (INTERPLANTED)

Years included in experiment; acreage, amount and cost of man labor, mule work, tractor use, fertilizer, seed and plants, land rent, protein and mineral supplement, total cost, total gain, value total gain, and profit from hogging-off.

Year	Acre-age	Man labor		Mule work		Tractor		Fertilizer		Seeds		Land rent		Protein & mineral supplement		Total cost	Total gain	Value total gain
		Hrs.	*Dols.*	*Hrs.*	*Dols.*	*Hrs.*	*Dols.*	*Lbs.*	*Dols.*	*Lbs.*	*Dols.*	*Acres*	*Dols.*	*Lbs.*	*Dols.*	*Dols.*	*Lbs. pork*	*Dols.*
1938	4.78	175.00	17.50	125.00	12.50	------	------	1000	9.00	183	8.55	4.78	14.34	137.00	2.74	64.63	2585	177.75
1939	4.57	136.50	13.65	161.50	16.15	9	4.50	700	6.30	183	8.55	4.57	13.71	589.00	11.78	74.64	2159	140.33
1940	9.68	265.00	33.12	239.00	23.90	27	13.50	600	6.00	387	19.35	9.68	29.04	1354.50	27.09	152.00	5565	333.90
Totals	19.03	576.50	64.27	525.50	52.55	36	18.00	2300	21.30	753	36.45	19.03	57.09	2080.50	41.61	291.27	10309	651.98
Average per acre		30.29	3.38	2.76	27.61	1.89	.95	120.9	1.12	39.57	1.92	1.00	3.00	109.33	2.19	15.31	541.72	34.26

Profit: Total $360.71
Average per acre 18.95
Average feed cost per pound of gain: 2.83 cents

TABLE 16

COST RECORDS—SPANISH PEANUTS

Years included in experiment, acreage, amount and cost of man labor, mule work, tractor use, fertilizer, seed and plants, land rent, protein and mineral supplement, total cost, total gain, value total gain, and profit from hogging-off.

Year	Acreage	Man labor		Mule work		Tractor		Fertilizer		Seeds		Land rent		Protein & mineral supplement		Total cost	Total gain	Value total gain
		Hrs.	*Dols.*	*Hrs.*	*Dols.*	*Hrs.*	*Dols.*	*Lbs.*	*Dols.*	*Lbs.*	*Dols.*	*Acres*	*Dols.*	*Lbs.*	*Dols.*	*Dols.*	*Lbs. pork*	*Dols.*
1941	4.60	249.0	31.12	107.0	10.70	16.0	8.00	.....	.....	294	18.40	4.60	13.80	264.0	5.28	87.30	1200.0	99.00
1942	5.20	98.0	12.25	148.0	14.80	5.0	2.50	.....	.....	332	21.40	5.20	15.60	309.1	6.18	72.73	2065.0	247.80
1943	4.98	290.0	50.75	185.0	18.50	10.0	5.00	.....	.....	320	22.40	4.98	14.94	37.0	.74	112.33	1804.0	234.52
Totals	14.78	637.0	94.12	440.0	44.00	31.0	15.50	.....	.....	946	62.20	14.78	44.34	610.1	12.20	272.36	5069.0	581.32
Average per acre		43.1	6.37	29.8	2.98	2.1	1.05	.....	.....	64	4.21	1.00	3.00	41.3	.83	18.43	342.96	39.33

Profit: Total $308.96
Average per acre 20.90
Average feed cost per pound of gain: 5.37 cents

TABLE 17

COST RECORDS—GROHOMA SORGHUM AND SPANISH PEANUTS (INTERPLANTED)

Years included in experiment, acreage, amount and cost of man labor, mule work, tractor use, fertilizer, seed and plants, land rent, protein and mineral supplement, total cost, total gain, value total gain, and profit from hogging-off.

Year	Acreage	Man labor		Mule work		Tractor		Fertilizer		Seeds		Land rent		Protein & mineral supplement		Total cost	Total gain	Value total gain
		Hrs.	*Dols.*	*Hrs.*	*Dols.*	*Hrs.*	*Dols.*	*Lbs.*	*Dols.*	*Lbs.*	*Dols.*	*Acres*	*Dols.*	*Lbs.*	*Dols.*	*Dols.*	*Lbs. pork*	*Dols.*
1936	5.45	246	24.60	222	22.20	.....	.....	500	4.82	223	13.35	5.45	16.35	1854	37.08	118.40	2233	200.97
1937	9.29	274	27.40	233	23.30	5	2.50	1100	10.80	379	22.70	9.29	27.87	1365	27.30	141.87	1650	148.50
1938	5.45	140	14.00	100	10.00	.....	.....	800	7.20	228	13.55	5.45	16.35	220	4.40	65.50	2505	162.83
1939	4.58	206	20.60	159	15.90	14	7.00	300	2.40	187	11.10	4.58	13.74	487	9.74	80.48	1393	87.06
Totals	24.77	866	86.60	714	71.40	19	9.50	2700	25.22	1017	60.70	24.77	74.31	3926	78.52	406.25	7781	599.36
Average per acre		35.0	3.50	28.8	2.88	.77	.38	109	1.02	41.05	2.45	1.00	3.00	158.5	3,17	16.40	314.13	24.20

Profit: Total $193.11
Average per acre 7.80
Average feed cost per pound of gain: 5.22 cents

TABLE 18

COST RECORDS—CORN AND MATURE SOYBEANS (INTERPLANTED)

Years included in experiment, acreage, amount and cost of man labor, mule work, tractor use, fertilizer, seed and plants, land rent, protein and mineral supplement, total cost, total gain, value total gain, and profit from hogging-off.

Year	Acreage	Man labor		Mule work		Tractor		Fertilizer		Seeds		Land rent		Protein & mineral supplement		Total cost	Total gain	Value total gain
		Hrs.	*Dols.*	*Hrs.*	*Dols.*	*Hrs.*	*Dols.*	*Lbs.*	*Dols.*	*Lbs.*	*Dols.*	*Acres*	*Dols.*	*Lbs.*	*Dols.*	*Dols.*	*Lbs. pork*	*Dols.*
1936	8.50	199.00	19.90	235	23.50	.....	.....	2100	23.81	141	6.52	8.50	34.00	806	16.12	123.85	1055	94.95
1937	5.96	100.00	10.00	169	16.90	.....	.....	1000	9.82	101	4.72	5.96	23.84	1145	22.90	88.18	2185	196.65
1938	13.80	340.00	34.00	401	40.10	.....	.....	800	7.20	200	10.21	13.80	55.20	612	12.34	158.95	1974	138.18
1939	9.38	257.00	25.70	323	32.30	10.00	5.00	1000	10.70	155	7.91	9.38	37.52	1409	28.18	147.31	2852	185.38
1940	11.48	195.20	24.40	275	27.51	34.16	17.08	1891	18.57	159	8.12	11.48	45.92	3210	64.20	205.80	6517	291.02
1941	5.40	116.00	14.50	128	12.80	18.00	9.00	1200	24.00	79	3.98	5.40	21.60	1045	20.90	106.78	2256	203.04
1942	2.59	40.00	6.00	63	6.30	4.00	2.00	600	6.00	38	1.91	2.59	10.36	118	2.38	34.95	591	70.92
Totals	57.11	1247.20	134.50	1594	159.41	66.16	33.08	8591	100.10	873	43.37	57.11	228.44	8345	166.92	865.82	17430	1280.14
Average per acre		21.80	2.36	27.9	2.79	1.16	.58	150.4	1.75	15.3	.76	1.00	4.00	146	2.92	15.16	305.20	22.42

Profit: Total $414.32
Average per acre 7.25
Average feed cost per pound of gain: 4.97 cents

TABLE 19
COST RECORDS—RUNNER PEANUTS

Years included in experiment, acreage, amount and cost of man labor, mule work, tractor use, fertilizer seed and plants, land rent, protein and mineral supplement, total cost, total gain, value total gain, and profit from hogging-off.

Year	Acreage	Man labor		Mule work		Tractor		Fertilizer		Seeds		Land rent		Protein & mineral supplement		Total cost	Total gain	Value total gain
		Hrs.	*Dols.*	*Hrs.*	*Dols.*	*Hrs.*	*Dols.*	*Lbs.*	*Dols.*	*Lbs.*	*Dols.*	*Acres*	*Dols.*	*Lbs.*	*Dols.*	*Dols.*	*Lbs. pork*	*Dols.*
1936	5.27	225.0	22.50	175	17.50	.....	.....	.....	.....	265	13.25	5.27	21.08	433	8.66	82.99	1170	102.38
1937	6.80	253.0	25.30	222	22.20	.....	.....	.....	.....	340	17.00	6.80	27.20	658	13.16	104.86	1679	144.45
1938	7.00	178.0	17.80	128	12.80	.....	.....	.....	.....	280	14.00	7.00	28.00	540	10.80	83.40	2810	168.60
1939	6.16	318.5	31.85	237	23.70	8.5	4.25	.....	.....	308	15.40	6.16	24.64	841	16.82	116.66	1555	97.18
1940	4.83	150.5	18.81	113	11.30	7.5	3.75	.....	.....	241	14.46	4.83	19.32	691	13.82	81.46	2470	160.55
1941	5.00	201.0	25.12	139	13.90	9.0	4.50	.....	.....	250	15.00	5.00	20.00	535	10.71	89.23	2295	206.55
1942	5.12	224.0	28.00	184	18.40	10.0	5.00	.....	.....	200	12.00	5.12	20.48	697	13.94	97.82	2540	304.80
Totals	40.18	1550.0	169.38	1198	119.80	35.0	17.50	.....	.....	1884	101.11	40.18	160.72	4395	87.91	656.42	14519	1184.51
Average per acre		38.6	4.22	29.8	2.98	.87	.44	.....	.....	46.9	2.52	1.00	4.00	109.4	2.19	16.34	361.35	29.48

Profit: Total $528.09
Average per acre 13.14
Average feed cost per pound of gain: 4.52 cents

TABLE 20

COST RECORDS—SWEET POTATOES

Years included in experiment, acreage, amount and cost of man labor, mule work, tractor use, fertilizer, seed and plants, land rent, protein and mineral supplement, total cost, total gain, value total gain, and profit from hogging-off.

Year	Acreage	Man labor		Mule work		Tractor		Fertilizer		Plants		Land rent		Protein & mineral supplement		Total cost	Total gain	Value total gain
		Hrs.	*Dols.*	*Hrs.*	*Dols.*	*Hrs.*	*Dols.*	*Lbs.*	*Dols.*	*No. Plants*	*Dols.*	*Acres*	*Dols.*	*Lbs.*	*Dols.*	*Dols.*	*Lbs. pork*	*Dols.*
1936	3.59	427	42.70	138	13.80	.....	.....	2600	26.00	50000	25.00	3.59	14.36	1813	36.26	158.12	1315	114.98
1937	4.08	514	51.40	127	12.70	3.0	1.50	2400	23.52	57000	28.50	4.08	16.32	707	14.14	148.08	638	54.88
1938	4.94	459	45.90	293	29.30	.....	.....	2000	18.00	69000	34.50	4.94	19.76	1606	32.12	179.58	1480	93.98
1939	4.41	584	58.45	131	13.10	3.5	1.75	2000	18.00	62000	31.00	4.41	17.64	2720	54.40	194.34	3186	207.09
1940	3.41	320	40.00	122	12.20	.....	.....	1075	9.67	51000	25.50	3.41	13.64	2763	53.46	154.47	2486	166.56
1941	2.81	252	31.50	103	10.30	.. ..	.. ..	1200	10.80	42000	21.00	2.81	11.24	1790	35.80	120.64	1796	161.64
1942	3.86	783	97.87	189	18.90	5.0	2.50	1600	16.00	58000	29.00	3.86	15.44	845	16.90	196.61	1495	179.40
Totals	27.10	3339	367.82	1103	110.30	11.5	5.75	12875	121.99	389000	194.50	27.10	108.40	12244	243.08	1151.84	12396	978.53
Average per acre		123.2	13.57	40.7	4.07	.4	.21	475	4.50	14354	7.18	1.00	4.00	452	8.97	42.50	457.42	36.10

Loss: Total $173.31
Average per acre 6.40
Average feed cost per pound of gain: 9.29 cents

TABLE 21

COST RECORDS—CORN

Years included in experiment, acreage, amount and cost of man labor, mule work, tractor use, fertilizer, seed and plants, land rent, protein and mineral supplement, total cost, total gain, value total gain, and profit from hogging-off.

Year	Acreage	Man labor		Mule work		Tractor		Fertilizer		Seeds		Land rent		Protein & mineral supplement		Total cost	Total gain	Value total gain
		Hrs.	*Dols.*	*Hrs.*	*Dols.*	*Hrs.*	*Dols.*	*Lbs.*	*Dols.*	*Lbs.*	*Dols.*	*Acres*	*Dols.*	*Lbs.*	*Dols.*	*Dols.*	*Lbs. pork*	*Dols.*
1936	5.58	77.0	7.70	112.00	11.20	.....	.....	2400	26.25	39.0	.78	5.58	22.32	677	13.54	81.79	980	88.20
1937	6.77	98.0	9.80	154.00	15.40	.....	.....	2400	23.52	47.0	.94	6.77	27.08	829	16.58	93.32	2430	212.60
1938	7.33	129.0	12.90	164.00	16.40	.....	.....	1500	13.50	51.0	1.02	7.33	29.32	1138	22.76	95.90	2799	177.74
1939	6.70	153.5	15.35	170.00	17.00	3.50	1.75	2200	18.00	47.0	.94	6.70	26.80	1425	28.50	108.34	3192	199.50
1940	3.52	71.2	8.89	76.10	7.61	14.60	7.30	1105	14.30	24.0	.48	3.52	14.08	623	12.46	65.12	1697	160.55
1941	10.52	173.0	21.62	193.00	19.30	69.00	34.50	4800	54.00	79.0	1.58	10.52	42.08	2624	52.48	225.56	4789	431.01
1942	15.08	253.0	31.62	333.00	33.30	45.00	22.50	5600	64.00	119.0	2.38	15.08	60.32	765.2	15.32	229.44	3627	435.24
1943	11.47	215.0	37.62	291.00	29.10	37.00	18.50	4800	69.40	80.0	3.20	11.47	45.88	2296	45.92	249.62	4480	581.40
Totals	66.97	1169.7	145.50	1493.10	149.31	169.10	84.55	24805	282.97	486.0	11.32	66.97	267.88	10377.2	207.56	1149.09	23994	2286.24
Average per acre		17.5	2.17	22.3	2.23	2.53	1.26	370.4	4.23	7.26	.17	1.00	4.00	155.0	3.10	17.16	358.28	34.14

Profit: Total $1137.15
Average per acre 16.98
Average feed cost per pound of gain: 4.79 cents

TABLE 22

COST RECORDS—POPCORN

Years included in experiment, acreage, amount and cost of man labor, mule work, tractor use, fertilizer, seed and plants, land rent, protein and mineral supplement, total cost, total gain, value total gain, and profit from hogging-off.

Year	Acreage	Man labor		Mule work		Tractor		Fertilizer		Seeds		Land rent		Protein & mineral supplement		Total cost	Total gain	Value total gain
		Hrs.	*Dols.*	*Hrs.*	*Dols.*	*Hrs.*	*Dols.*	*Lbs.*	*Dols.*	*Lbs.*	*Dols.*	*Acres*	*Dols.*	*Lbs.*	*Dols.*	*Dols.*	*Lbs. pork*	*Dols.*
1940	1.91	42	5.25	47	4.70	2	1.00	400	8.00	.....	.76	1.91	5.73	706.00	14.12	39.56	1074	64.44
1941	3.74	84	10.50	99	9.90	.....	.....	1200	15.00	.....	1.50	3.74	11.22	286.00	5.72	53.84	1365	122.85
1942	2.31	42	5.25	55	5.50	4	2.00	1050	11.44	.....	.93	2.31	6.93	139.70	2.80	34.85	499	59.88
Totals	7.96	168	21.00	201	20.10	6	3.00	2650	34.44	.....	3.19	7.96	23.88	1131.7	22.64	128.25	2938	247.17
Average per acre		21.11	2.64	25.25	2.53	.75	.38	332.9	4.33	.....	.40	1.00	3.00	142.2	2.84	16.11	369.10	31.05

Profit: Total $118.92
Average per acre 14.94
Average feed cost per pound of gain: 4.36 cents

TABLE 23

COST RECORDS—CHUFAS

Years included in experiment, acreage, amount and cost of man labor, mule work, tractor use, fertilizer, seed and plants, land rent, protein and mineral supplement, total cost, total gain, value total gain, and profit from hogging-off.

Year	Acreage	Man labor		Mule work		Tractor		Fertilizer		Seeds		Land rent		Protein & mineral supplement		Total cost	Total gain	Value total gain
		Hrs.	*Dols.*	*Hrs.*	*Dols.*	*Hrs.*	*Dols.*	*Lbs.*	*Dols.*	*Bu.*	*Dols.*	*Acres*	*Dols.*	*Lbs.*	*Dols.*	*Dols.*	*Lbs. pork*	*Dols.*
1940	1.86	47.00	5.88	37.00	3.70	2.00	1.00	300.00	3.00	1.86	3.72	1.86	5.58	900.00	18.00	40.88	1140.00	68.40
1941	4.38	89.00	11.12	90.00	9.00	21.00	10.50	600.00	6.00	.....	8.76	4.38	13.14	143.00	2.86	61.38	1295.00	116.55
1942	1.98	36.00	4.50	91.00	9.10	4.00	2.00	800.00	8.00	.....	3.96	1.98	5.94	73.70	1.47	34.97	344.00	41.28
Totals	8.22	172.00	21.50	218.00	21.80	27.00	13.50	1700.00	17.00	.....	16.44	8.22	24.66	1116.70	22.33	137.23	2779.00	226.23
Average per acre		20.92	2.62	26.52	2.65	3.28	1.64	206.8	2.07	0.23	2.00	1.00	3.00	135.9	2.72	16.69	338.07	27.52

Profit: Total $89.00
Average per acre 10.83
Average feed cost per pound of gain: 4.94 cents

TABLE 24

COST RECORDS—GROHOMA SORGHUM AND MATURE SOYBEANS (INTERPLANTED)

Years included in experiment, acreage, amount and cost of man labor, mule work, tractor use, fertilizer, seed and plants, land rent, protein and mineral supplement, total cost, total gain, value total gain, and profit from hogging-off.

Year	Acreage	Man labor		Mule work		Tractor		Fertilizer		Seeds		Land rent		Protein & mineral supplement		Total cost	Total gain	Value total gain
		Hrs.	*Dols.*	*Hrs.*	*Dols.*	*Hrs.*	*Dols.*	*Lbs.*	*Dols.*	*Lbs.*	*Dols.*	*Acres*	*Dols.*	*Lbs.*	*Dols.*	*Dols.*	*Lbs. pork*	*Dols.*
1936	3.24	115.00	11.50	166.00	16.60	.....	.....	400.00	3.82	71.00	5.52	3.24	9.72	1094	21.88	69.04	1350.00	114.75
1937	3.70	77.00	7.70	92.00	9.20	.....	.....	200.00	1.96	81.00	6.31	3.70	11.10	878	17.56	53.83	1148.00	103.32
Totals	6.94	192.00	19.20	258.00	25.80	.....	.....	600.00	5.78	152.00	11.83	6.94	20.82	1972	39.44	122.87	2498.00	218.07
Average per acre		27.7	2.77	37.2	3.72	.....	.....	86.50	0.83	21.90	1.70	1.00	3.00	284.10	5.68	17.70	359.94	31.42

Profit: Total $95.20
Average per acre 13.72
Average feed cost per pound of gain: 4.92 cents

TABLE 25

COST RECORDS—SUNFLOWERS

Years included in experiment, acreage, amount and cost of man labor, mule work, tractor use, fertilizer, seed and plants, land rent, protein and mineral supplement, total cost, total gain, value total gain, and profit from hogging-off.

Year	Acreage	Man labor		Mule work		Tractor		Fertilizer		Seeds		Land rent		Protein & mineral supplement		Total cost	Total gain	Value total gain
		Hrs.	*Dols.*	*Hrs.*	*Dols.*	*Hrs.*	*Dols.*	*Lbs.*	*Dols.*	*Lbs.*	*Dols.*	*Acres*	*Dols.*	*Lbs.*	*Dols.*	*Dols.*	*Lbs. pork*	*Dols.*
1940	1.74	25.0	3.12	17.0	1.70	7.0	3.50	300	3.00	4.35	.87	1.74	5.22	279.0	5.58	22.99	215.00	12.90
Average per acre		14.4	1.79	9.8	.98	4.0	2.01	172.4	1.72	2.50	.50	1.00	3.00	160.3	3.21	13.21	123.56	7.41

Loss: Total $10.09
Average per acre 5.80
Average feed cost per pound of gain: 10.69 cents

TABLE 26

Summary of years included in test; acreage included in test; amount and cost per acre for man labor, mule work, tractor use, fertilizer, seed or plants, land rent, supplemental feeds; total cost per acre, total gain per acre, average feed cost per pound of gain, value total gain per acre, and profit per acre on hogging-off crops.

Crop	Years	Acreage	Man labor		Mule work		Tractor		Fertilizer		Seed or plants		Land rent		Protein & mineral supplement		Corn supplement		Total cost	Total gain	Feed cost per lb. gain	Value total gain	Profit
			Hrs.	Dols.	Hrs.	Dols.	Hrs.	Dols.	Lbs.	Dols.	Lbs. or Bu.	Dols.	Acres	Dols.	Lbs.	Dols.	Lbs.	Dols.	Dols.	Lbs. Pork	Cents	Dols.	Dols.
Small grain (Oats, wheat & rye)	6	26.07	6.41	.73	13.43	1.34	.31	.16	218	2.79	2.67	2.12	1.00	3.00	580	11.98	.....	.....	22.12	275.06	8.04	27.87	5.75
Small grain and corn supplement (Oats, wheat and rye)	6	26.07	6.41	.73	13.43	1.34	.31	.16	218	2.79	2.67	2.12	1.00	3.00	580	11.98	1420	22.44	44.56	815.84	5.46	78.41	33.85
Early dent corn	8	95.35	23.40	3.01	27.90	2.79	.65	.33	334	3.97	8.50	.30	1.00	3.00	183	3.68	.....	.....	17.06	501.63	3.40	44.12	27.06
Grohoma sorghum and Spanish peanuts	4	24.77	35.00	3.50	28.80	2.88	.77	.38	109	1.02	41.05	2.45	1.00	3.00	159	3.17	.....	.....	16.40	314.13	5.22	24.20	7.80
Popcorn	3	7.96	21.11	2.64	25.25	2.53	.75	.38	333	4.33	.....	.40	1.00	3.00	142	2.84	.....	.....	16.11	369.10	4.36	31.05	14.94
Chufas	3	8.22	20.92	2.62	26.52	2.65	3.28	1.64	207	2.07	.....	2.00	1.00	3.00	136	2.72	.....	.....	16.69	338.07	4.94	27.52	10.83
Sunflowers	1	1.74	14.40	1.79	9.80	.98	4.00	2.01	172	1.72	2.50	.50	1.00	3.00	160	3.21	.....	.....	13.21	123.56	10.69	7.41	−5.80
Corn and Spanish peanuts	3	19.03	30.29	3.38	27.61	2.76	1.89	.95	121	1.12	39.57	1.92	1.00	3.00	109	2.19	.....	.....	15.31	541.72	2.83	34.26	18.95
Spanish peanuts	3	14.78	43.10	6.37	29.80	2.98	2.10	1.05	.....	.....	64.00	4.21	1.00	3.00	41	.83	.....	.....	18.43	342.96	5.37	39.33	20.90
Corn	8	66.97	17.50	2.17	22.30	2.23	2.53	1.26	370	4.23	7.26	.17	1.00	4.00	155	3.10	.....	.....	17.16	358.28	4.79	34.14	16.98
Grohoma sorghum and mature soybeans	2	6.94	27.70	2.77	37.20	3.72	.....	.....	86	.83	21.90	1.70	1.00	3.00	284	5.68	.....	.....	17.70	359.94	4.92	31.42	13.72
Corn and mature soybeans	7	57.11	21.80	2.36	27.90	2.79	1.16	.58	150	1.75	15.30	.76	1.00	4.00	146	2.92	.....	.....	15.16	305.20	4.97	22.42	7.25
Runner peanuts	7	40.18	38.60	4.22	29.80	2.98	.87	.44	.....	.....	46.90	2.52	1.00	4.00	109	2.19	.....	.....	16.34	361.35	4.52	29.48	13.14
Sweet potatoes	7	27.10	123.20	13.57	40.70	4.07	.40	.21	475	4.50	14,354 (Plants)	7.18	1.00	4.00	452	8.97	.....	.....	42.50	457.42	9.29	36.10	−6.40

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TABLES AND FIGURES