BULLETIN 34 JANUARY, 1942

PEANUT PRODUCTION IN THE COASTAL PLAIN OF GEORGIA

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PEANUT PRODUCTION IN THE COASTAL PLAIN AREA OF GEORGIA

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Peanuts are grown extensively in the Coastal Plain area of Georgia for both market and for hogging-off. In 1939 the acreage of peanuts planted alone was 830,473, of which about three-fourths was harvested for market. Figure 1 is an outline map showing acreage of peanuts grown alone. As will be noted, the area producing peanuts for market is centralized in Southwest Georgia. In this area peanuts are an important cash crop. Figure 2 is a map showing distribution of acreage of peanuts interplanted with other

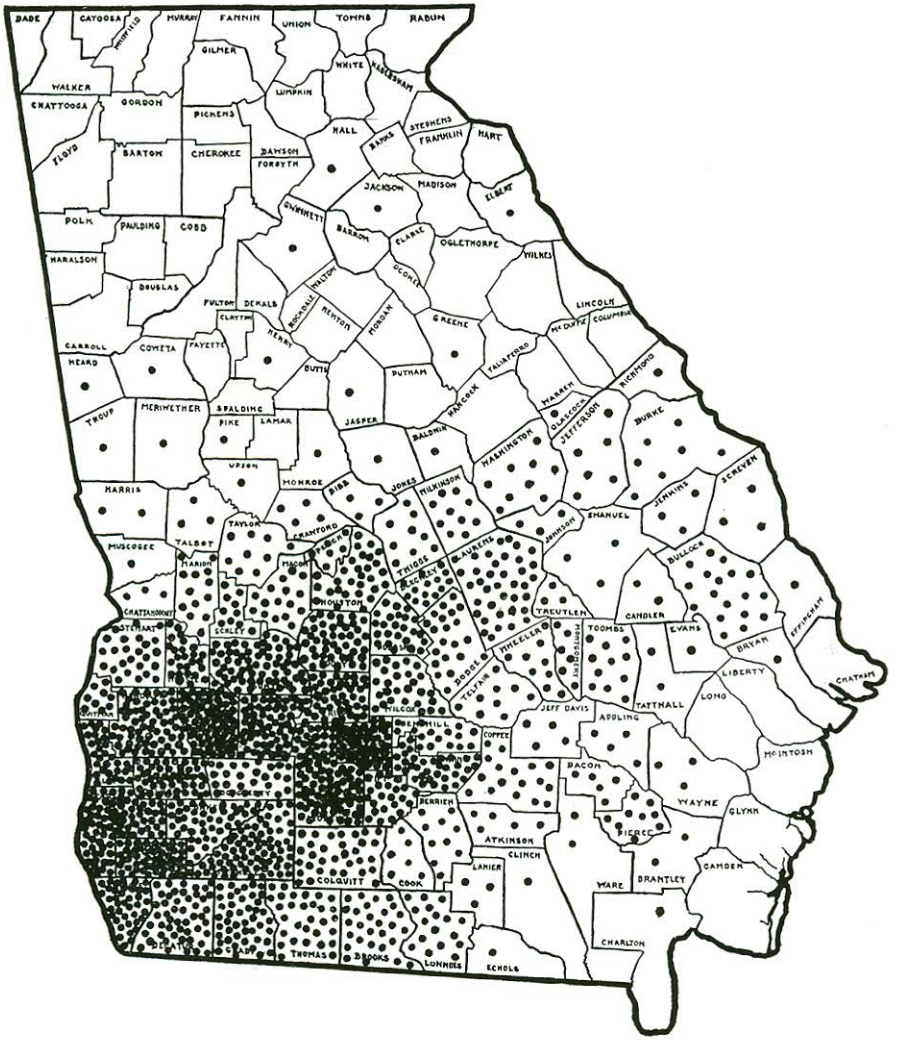

Fig. 1.—Peanuts planted alone in 1939. State acreage—830,473; Each Dot—500 Acres.

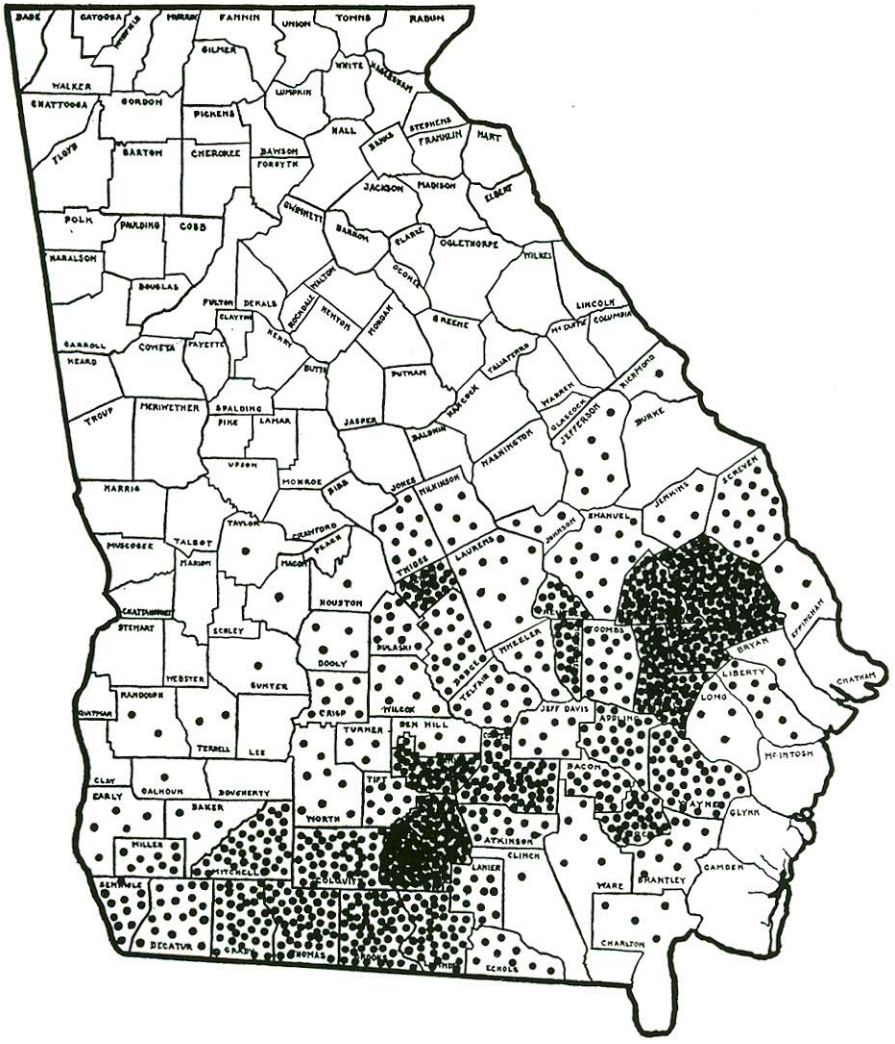

Fig. 2.—Peanuts planted with other crops in 1939. State acreage—615,236; Each Dot 500 Acres.

crops which amounted to 615,236 acres in 1939. Interplanted peanuts are seldom harvested but are used largely for hogging-off. Pork production is an important farm enterprise in areas interplanting peanuts with corn or other crops.

VARIETIES

Only two varieties of peanuts are grown extensively in Georgia at the present time. Spanish is the most important commercial variety although North Carolina Runner is used to some extent for harvest. North Carolina Runner is used most extensively for hogging-off.

The Spanish variety has an upright habit of growth with nuts clustering

about the base of plants. Both pods and nuts are small but shelling percentage is high. This variety matures uniformly and is relatively easy to harvest. At Tifton, Spanish peanuts mature in 120 to 130 days; in other words, plantings made on April 15 would be expected to be ready for harvest about the third week in August. Spanish peanuts sprout badly soon after maturing and, for this reason, this variety is not well suited for late hogging-off although it is used to some extent for early grazing. Improved Spanish is a variety similar to Spanish but vines are more vigorous, and pods and shelled nuts are larger. Shelling percentage for this variety is lower than regular Spanish. At the present time Georgia shellers prefer the small type Spanish.

North Carolina Runner is a variety with spreading type of growth, the pods forming both at the base of plant and out along stems that are close to the ground. Nuts are produced over a period of several weeks and do not mature uniformly. It is difficult to harvest this variety without losing some peanuts and, in stacking, some pods are usually exposed to the weather. North Carolina Runner produces excellent yields under Georgia conditions and is the principal variety used for planting with corn for hog feed. As nuts of this variety keep well in the ground after vines are dead, it is well suited for late hog grazing. This variety is sometimes marketed but has a lower shelling percentage, a poorer quality nut, and brings a lower price than Spanish. Runner peanuts are used to a considerable extent in the production of oil. Under South Georgia conditions, North Carolina Runner matures about one month later than Spanish, the period being 150 to 160 days.

Table 1 gives yield and shelling percentage of varieties included in test conducted at Tifton.

SOILS

In the Coastal Plain area of Georgia, soils used for peanuts vary from relatively heavy Greenville to sandy Norfolk soils. Most peanuts produced for market are grown in the southwestern area where soils are relatively heavy (see figure 1). In this area peanuts are planted on Greenville, Tifton, Magnolia, Orangeburg, and related soil types. In areas producing peanuts for hogging-off, as shown in figure 2, most of the soils are lighter. Soils used for peanuts in this area are Norfolk, Tifton, Ruston, and related types. Peanuts are not adapted to poorly drained soils and should never be planted on flat improperly drained land.

PREPARATION OF LAND

A well prepared seed bed is essential for good peanut production. Land should be thoroughly broken, disked and harrowed until soil is in the best possible condition. Litter on top of ground greatly interferes with subsequent cultivation. Where peanuts follow crops that produce large stalks, such as cotton and corn, it is considered desirable to cut stalks and disk land during the fall in order that such litter will rot as much as possible before planting season. It is a common practice in some sections to delay

TABLE 1

PEANUT VARIETY TEST

Peanuts in This Test Received 400 Pounds 2-10-4 Fertilizer at Time of Planting.

VARIETY		Yield Pounds Unshelled Nuts per Acre									9-Yr. Av.	Shelling Per Cent*
		1933	1934	1935	1936	1937	1938	1939	1940	1941		
North Carolina Runner	(R)	2135	1665	2180	1757	2185	1763	2025	1885	2056	1961	70.4
McGovern	(R)	2090	1700	2050	1555	2180	1769	2000	1850	2094	1921	70.0
Virginia Bunch	(B)	1925	973	1650	1840	2015	2267	2140	1949	2138	1877	64.0
Virginia Runner	(R)	2030	1177	1770	1479	1300	2132	1385	1715	2338	1703	61.9
Dixie Giant	(R)	2140	900	1540	1445	1353	2200	1770	1688	2138	1686	61.0
Spanish	(B)	2205	1175	1448	1457	2058	1530	1191	1669	1813	1616	76.2
Chapman's Pride	(B)	1810	1190	1443	1144	1855	1802	1593	1538	1900	1586	66.7
Improved Spanish	(B)	1932	1259	1599	1520	1890	1360	1367	1306	1863	1566	68.5

(R)—Runner varieties.

(B)—Bunch varieties.

*—Shelling per cent includes small nuts.

cutting stalks until late winter; then stalks are cut, raked and burned in order to prepare a good seed bed for peanuts. This practice should be avoided as much as possible by cutting and disking litter during fall months, or by use of rotations in which peanuts follow crops that produce less litter.

FERTILIZER

In comparison with other field crops peanuts are less sensitive to fertilizer applications than tobacco, cotton, corn and grain. Apparently peanuts are efficient in obtaining plant food from the soil and in using residual fertilizer left from applications to previous crops. While peanuts do not respond to fertilizers as other crops, they take from the soil large quantities of plant food. When harvested for market, the plant food in nuts, roots, and vines is removed from the soil causing considerable drain on plant-food resources of the land. For this reason harvested peanuts have gained a reputation of being "hard" on land. This loss can partly be corrected by light applications of fertilizer to peanuts, or by making heavier applications to crops that precede or follow peanuts.

Results of a formula test conducted at Tifton over a period of 10 years are given in Table 2. This test was located on Tifton sandy loam soil, and peanuts followed crops that had been fairly well fertilized. Fair increases were obtained from all three primary plant-food elements, nitrogen, phosphoric acid and potash. For average South Georgia conditions peanut fertilizers should contain 2 to 4 per cent nitrogen, 8 to 10 per cent phosphoric acid and 4 to 6 per cent potash. Formulas analyzing 2-10-4 or 2-10-6 are considered practical mixtures for most conditions.

Where peanuts follow a crop that has received little or no fertilizer and when planted on thin land, applications of 200 to 400 pounds of a complete fertilizer should give profitable increases in yield. Fertilizers also reduce the drain on plant food resources of the soil, often evident where peanuts are harvested for market. Where peanuts are planted in a rotation with crops that are heavily fertilized, good yields should be obtained without use of fertilizer. If this system is followed, fertilizer is applied to more responsive crops of the rotation and peanuts are allowed to use the residual plant food.

Crops following harvested peanuts often show symptoms of severe potash deficiency. The formulas recommended above do not supply sufficient potash to replace the entire amount of this element removed by a good peanut crop. However, peanuts have not given profitable increases in yield from heavy applications of potash. Probably the best method of replacing part of this potash is by increasing the application of this element to crops that follow peanuts in the rotation.

Results of a test in which complete fertilizer was applied to peanuts at varying rates are given in Table 3. This test was divided into three parts; one received no limestone, one 500 pounds of limestone and the third 1000 pounds of limestone. As will be noted, limestone has not given profitable returns on well drained Tifton sandy loam soil. This test followed a general rotation in which other crops were fairly well fertilized.

TABLE 2

PEANUT FERTILIZER FORMULA TEST

400 Pounds of Fertilizer Per Acre Applied Previous to Planting.

FORMULA*	Yield Pounds Unshelled Nuts per Acre										
	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	10-Yr. Av.
Ammonia Series:											
0-10-4	1195	790	612	1220	1341	1955	1260	1375	1225	1733	1271
2-10-4	1015	855	645	1410	1429	2095	1280	1487	1310	1745	1327
4-10-4	1060	915	660	1490	1561	2040	1373	1538	1255	1588	1348
6-10-4	1185	980	630	1455	1620	2075	1357	1600	1290	1865	1406
8-10-4	1165	910	650	1490	1544	2180	1360	1652	1385	1888	1422
Phosphoric Acid Series:											
2- 0-4	1065	835	565	1280	1323	2095	1377	1577	1237	1699	1305
2- 6-4	1215	710	605	1370	1535	2165	1392	1467	1333	1710	1350
2- 8-4	1330	910	640	1350	1419	1985	1340	1460	1265	1672	1337
2-10-4	1260	790	730	1390	1510	2040	1309	1572	1245	1725	1357
2-12-4	1330	625	560	1410	1442	2075	1267	1482	1290	1720	1320
2-16-4	1370	585	520	1390	1410	2050	1287	1558	1230	1742	1314
Potash Series:											
2-10-0	1085	725	565	1330	1399	1775	1303	1502	1300	1683	1267
2-10-2	1140	705	622	1350	1501	1955	1330	1462	1298	1800	1316
2-10-4	1290	825	625	1310	1489	2065	1333	1553	1290	1782	1356
2-10-6	1400	895	672	1320	1465	2265	1372	1625	1280	1792	1409
2-10-8	1315	740	745	1370	1426	2420	1346	1590	1250	1854	1406
No Fertilizer	1025	668	484	1125	1066	1680	1260	1261	1210	1556	1133

*Formulas expressed as ammonia, phosphoric acid and potash in order named. Since this test has been completed, ammonia is expressed as nitrogen in Georgia fertilizers. Ammonia as used in above formulas is 82.3 per cent nitrogen.

TABLE 3

PEANUT RATES OF FERTILIZER (NPK) APPLICATION AND LIME TEST

Tifton Sandy Loam Soil.

Yield of Unshelled Nuts in Pounds Per Acre.

YEAR	No Fertilizer	200 Lbs. 2-10-4*	400 Lbs. 2-10-4*	600 Lbs. 2-10-4*	800 Lbs. 2-10-4*
	No Limestone				
1931	1340	1310	1300	1370	1340
1932	1436	1556	1615	1692	1671
1933	1510	1680	1805	1710	1505
1934	1444	1506	1473	1475	1403
1935	640	702	761	916	954
1936	1195	1250	1343	1331	1295
1937	1260	1440	1560	1710	1730
1938	1720	1698	1815	1840	1805
1939	1028	1220	1362	1545	1490
1940	1340	1412	1445	1473	1575
Average	1291	1377	1448	1506	1477
	500 Lbs. Limestone				
1931	1080	1180	1320	1200	1200
1932	1386	1528	1568	1704	1730
1933	1470	1600	1660	1610	1690
1934	1352	1292	1408	1418	1490
1935	770	930	1104	1160	1100
1936	1070	1160	1164	1220	1260
1937	1480	1660	1756	1840	1902
1938	1620	1698	1728	1700	1762
1939	1158	1094	1284	1264	1320
1940	1322	1444	1506	1560	1550
Average	1271	1359	1450	1468	1500
	1000 Lbs. Limestone				
1931	990	1000	1140	1160	1180
1932	1436	1594	1774	1796	1832
1933	1460	1470	1650	1680	1490
1934	1482	1492	1546	1542	1596
1935	794	928	1040	1118	1086
1936	1046	1170	1155	1222	1246
1937	1330	1520	1624	1820	1800
1938	1724	1770	1824	1800	1878
1939	1152	1244	1320	1340	1436
1940	1240	1356	1466	1530	1494
Average	1265	1354	1454	1501	1504

*2% Ammonia (1.65% nitrogen), 10% phosphoric acid and 4% potash.

It is a common practice to make applications of fertilizer at time of planting. However, peanut seed can easily be injured by contact with fertilizer. If possible, fertilizer should be distributed one week to ten days in advance of planting. Where fertilizer is applied at time of planting it should be mixed with the soil or placed in bands to the side and below seed level. Good stands are necessary for high peanut yields, and precautions should be taken to prevent fertilizer injury to seed.

Harvested peanuts not only remove considerable quantities of plant food but also cause a reduction in organic content of the soil. When this crop is harvested, roots, nuts and vines being removed, there is no crop residue to be turned back into the soil as with most field crops. Also, peanuts are harvested during a hot season and bare soil is left to bake in the sun during part of August and September. Peanuts should not be planted on the same land oftener than once in three or four years. The rotation should include land-building crops such as Austrian winter peas, vetch, velvet beans or cowpeas.

SEED

Failure to obtain a good stand is probably the most common cause of low yields of peanuts, and every effort should be made to obtain good sound seed. Both shelled and unshelled nuts are used for seed purposes although shelled seed usually give best stands. In either case seed stocks should be carefully hand-graded and all trash, faulty and cracked nuts removed. Hand-shelled seed are best but are more expensive than machine-shelled nuts. As seed peanuts can be easily damaged by rough handling, special care should be taken where nuts are machine-shelled for seed purposes to prevent cracking or other injury. Peanuts may be hand-shelled six or eight weeks before planting, although machine-shelled nuts should be planted as soon after shelling as possible. Some shellers in the South Georgia area make a specialty of shelling seed for planting purposes, and many growers depend on these concerns for seed stocks.

Table 4 gives approximate amount of seed required to plant one acre of peanuts at different row and hill spacings. These calculations were made on the basis of sound, well-filled nuts, but as both Spanish and North Carolina Runner seed vary considerably in size, these estimates can be only approximate.

It is a practice of some growers to use pegs for planting purposes. Pegs are small and shriveled nuts that are screened out at shelling plants as peanuts are being prepared for market. So far as inherited characters are concerned, pegs are as good as larger seed. However, seedlings produced by pegs are weaker and start growth slower than plants from plump, well-filled seed. There are two grades of pegs; large pegs are undersize but sound nuts, small pegs include many shriveled, undeveloped nuts. If pegs are used for planting purposes, large pegs should be used exclusively.

SPACING

In tests conducted at Tifton with Spanish peanuts, using various row and hill spacings, highest yields were obtained from 6-inch hills with rows 18

TABLE 4

APPROXIMATE QUANTITY OF SEED REQUIRED TO PLANT ONE ACRE

VARIETY	Hill Spacing Inches	Approximate Quantity of Seed Required per Acre									
		18-inch Row		24-inch Row		30-inch Row		36-inch Row		42-inch Row	
		Shelled (lbs.)	Unshelled (lbs.)	Shelled (lbs.)	Unshelled (lbs.)	Shelled (lbs.)	Unshelled (lbs.)	Shelled (lbs.)	Unshelled (lbs.)	Shelled (lbs.)	Unshelled (lbs.)
Spanish	3	89	215	67	161	55	129	45	108	--	--
Spanish	6	45	107	34	81	27	65	22	54	--	--
Spanish	8	34	81	25	61	20	48	17	40	--	--
Spanish	10	27	65	20	48	16	39	13	32	--	--
Spanish	12	22	54	17	40	13	32	11	27	--	--
N. C. Runner	6	--	--	47	118	37	94	31	78	27	67
N. C. Runner	8	--	--	35	88	28	71	23	59	20	50
N. C. Runner	10	--	--	28	71	22	57	19	47	16	40
N. C. Runner	12	--	--	23	59	19	47	16	39	13	34
N. C. Runner	14	--	--	20	50	16	34	13	33	11	29

inches apart. However, such narrow rows require larger quantities of seed and are harder to cultivate than wider rows. Rows spaced 24 to 30 inches with hills six inches apart are considered most practical for the Spanish variety. See Table 5. North Carolina Runner peanuts should be planted in wider rows and hills than are commonly used for Spanish. Hills for runner peanuts should be 8 to 12 inches apart with row widths from 36 to 42 inches.

TIME OF PLANTING

Table 6 gives yields obtained from plantings made at 15-day intervals from March 15 through June 1. Spanish peanuts gave satisfactory yields when planted between March 15 and May 1. After May 1, yields declined and yields from June 1 plantings were very poor. When this variety is planted for early hog grazing, plantings should be made the latter part of March if possible. In the latitude of Tifton, Spanish peanuts intended for harvest can be planted from the latter part of March until the first of May. Farther north, plantings should probably be made somewhat later. It is a common practice with many growers to plant peanuts as soon as cotton planting has been completed. Apparently runner peanuts require earlier plantings for maximum yields than is the case with Spanish. March 15 plantings gave highest yields and after April 15 yields declined. It is not always safe to plant peanuts as early as March 15. When weather has been cold during the first part of March, plantings should be delayed until the ground has warmed up to a good germinating temperature.

PLANTING

Peanuts are usually planted in a shallow furrow and should be covered to a depth of 1½ to 2 inches on lighter soils and 1 to 1½ inches on heavier soil types. After seed are covered, the top of seed bed should be slightly below ground level. This allows early cultivation with weeders without danger of injury to young plants. Most commercial corn and bean planters carry plates for planting both Spanish and Runner varieties. The planter should be carefully operated to be sure the machine is dropping and covering properly.

TABLE 5

SPANISH PEANUT SPACING TEST

No Fertilizer.

SPACING	Yield Pounds Unshelled Nuts per Acre							
	1930	1931	1932	1933	1934	1935	1936	7-Yr. Av.
3-Foot Row, 3 inches in drill	760	1455	1505	1720	1100	1953	1260	1393
3-Foot Row, 6 inches in drill	785	1465	1373	1620	1083	1977	1215	1360
3-Foot Row, 12 inches in drill	690	1225	1200	1460	1003	1798	1105	1212
3-Foot Row, 18 inches in drill	600	1202	1074	1315	941	1822	965	1131
3-Foot Row, 24 inches in drill	555	965	816	1170	671	1495	850	932
6 Inches in drill, 6-inch row	765	1445	1731	2250	1156	1676	1538	1509
6 Inches in drill, 18-inch row	1030	1635	1721	2205	1252	1634	1450	1561
6 Inches in drill, 24-inch row	895	1530	1620	2065	1201	1793	1420	1503
6 Inches in drill, 30-inch row	830	1435	1484	1890	997	1483	1370	1356
6 Inches in drill, 36-inch row	715	1120	1368	1525	887	1340	1020	1139

TABLE 6

DATES OF PLANTING SPANISH AND NORTH CAROLINA RUNNER PEANUTS AT TIFTON, GA., 1934-1941

No Fertilizer.

DATE OF PLANTING	Yield Pounds Unshelled Nuts per Acre								
	1934	1935	1936	1937	1938	1939	1940	1941	8-Yr. Av.
Spanish March 15	----	----	1028	1906	2045	1123	1010	1070	1364*
Spanish April 1	1200	1069	1293	1513	1841	1093	999	1288	1287
Spanish April 15	1088	956	1238	1600	1862	1063	1096	1214	1264
Spanish May 1	1065	984	1269	1350	1756	1281	856	1064	1203
Spanish May 15	1025	638	1347	1269	1400	1194	848	825	1068
Spanish June 1	981	454	1000	700	570	588	494	500	661
Spanish June 15	564	184	---	---	---	---	---	---	374**
N. C. Runner March 15	----	2102	1562	1906	2125	1325	1675	2038	1819***
N. C. Runner April 1	2153	2083	1444	1950	1696	1456	1431	1888	1762
N. C. Runner April 15	2048	1975	1362	1987	1794	1838	1325	1763	1761
N. C. Runner May 1	1909	1771	1275	1300	1404	1681	1481	1438	1532
N. C. Runner May 15	1864	1464	1175	1475	1050	1056	1356	1113	1319
N. C. Runner June 1	1041	997	987	750	429	738	981	713	830

* 6-Year average.
** 2-Year average.
*** 7-Year average.

Fig. 3.—Cultivating peanuts with weeder. This implement is effective in controlling small weeds and grass and can be used for several cultivations when peanut plants are small.

CULTIVATION

Peanut cultivation should begin as soon as seedlings begin to emerge. A common weeder is probably the most satisfactory tool for early cultivation as it destroys small weeds and does little injury to young peanut plants. This tool can be used for several cultivations while plants are small. It is a usual practice to run weeders over peanuts at least once a week or even more frequently if conditions are favorable for germination of weed seeds. Proper early cultivation is very important as it reduces the amount of expensive hoe work in controlling weeds. After peanuts become too large for working with weeders it is necessary to cultivate the crop several times with sweeps and shovels. Common farm tools such as cultivators or hayman stocks can be used for this purpose. Soil should gradually be worked toward the plants, making a broad, flat bed with a slight water furrow between the rows. After nuts begin to form, plants should not be disturbed and cultivation should be limited to the middle only. Peanuts usually require at least one hoeing and this is normally done about the time plants begin to spread. As a weedy crop is difficult and expensive to harvest, every effort should be made to lay-by the crop as clean as possible.

Fig. 4.—Peanuts plowed out and ready for shaking. One-horse turn plows are commonly used for this operation.

HARVESTING

It is sometimes difficult to determine the proper time to harvest peanuts. As the crop matures there is a slight yellowing of foliage, at which time most pods are well filled, and the insides of shells beginning to color and show darkened veins. Most nuts should be fully developed before digging; but, on the other hand, Spanish peanuts cannot be allowed to remain in the ground long after maturing as pods will shed from vines and sprout badly if rainy weather occurs.

Peanuts are usually dug with peanut points on one-horse turn plows. The wing of the plow is usually left off during this operation. It is necessary to shake soil from vines and place the plants in small windrows. By placing two rows together, some trouble will be saved in stacking. Stacking should be done when leaves are thoroughly wilted but before they have become brittle. When weather conditions are favorable for curing, stacking can begin a few hours after digging; however, it is sometimes necessary to delay stacking until a day after plants have been dug.

Peanuts are stacked on six- or seven-foot poles with two cross arms nailed at right angles about one foot from the ground. Fifteen to thirty poles are required per acre, depending on stand and size of vine growth. Poles are usually set in middles 12 to 14 rows apart and should be placed well in the

ground to prevent wind from leaning or blowing over stacks. With Spanish peanuts, the nuts should be placed next to the pole with vines out to prevent weather damage to pods. Runner peanuts are more difficult to stack but nuts should be as well protected as possible. It is considered a good practice to cap stacks with a small amount of straw or dried crab grass to prevent weather damage. Peanuts cure rather slowly and it is usually necessary to allow four to six weeks before picking nuts from the vines.

The entire Georgia crop of harvested peanuts is picked by mechanical pickers that are handled in about the same way as grain threshing machines. These pickers move from farm to farm throughout the community and are paid on a basis of tons of picked nuts. Peanuts are sometimes moved direct from picker to market or may be stored until a more convenient time for hauling. Hay balers are usually operated in conjunction with pickers, the hay being baled as it comes from picker without previous stacking. Hay is a valuable by-product of peanut production and, when weather has been favorable throughout the curing season, hay of fair quality is obtained.

HOGGING-OFF

As may be seen from the outline map in figure 2, there is a large acreage of peanuts interplanted with other crops for hogging-off. Most of this acreage is planted to corn and North Carolina runner peanuts. There are several ways in which peanuts are planted with corn such as (1) one row of

Fig. 5.—Removing peanuts from windrows for stacking. After shaking dirt from nuts, two or more rows are placed in small windrows and vines allowed to wilt before completing the stacking operation. Vines in foreground are ready for stacking.

Fig. 6.—Hogging-off peanuts interplanted with corn. As may be seen in Fig. 2, this is a common practice in the eastern part of the Georgia peanut belt.

corn, one row of peanuts, (2) two rows of corn, one row of peanuts, or (3) peanuts planted in the corn row. In addition to acreage of interplanted peanuts, there is also a considerable acreage of peanuts planted solid for pork production. North Carolina Runner is the variety used largely for hogging-off. This variety makes good yields, and nuts keep well after vines are dead. Runner peanuts can be depended on to keep fairly well until February, although it is considered better to have this crop hogged-off by January 1 if possible. Spanish peanuts are used to some extent for early hogging-off and should be ready for hogs by August 15. As nuts of this variety sprout badly soon after maturing, it is necessary to hog-off the crop within a period of four to six weeks.

The effect on soil fertility resulting from hogging-off peanuts is quite different from harvesting peanuts. When this crop is harvested for market, the plant-food content of roots, nuts and vines is removed. Also there is no crop residue to help maintain organic content of the soil. On the other hand, hogs grazing on peanuts remove only the soil elements that have been converted into pork. Hogging-off also leaves considerable litter to be turned back into the land. It has been the experience of many practical growers that hogging-off peanuts is an excellent land-building practice.

INSECTS AND DISEASES

Caterpillars are the most important insect pests that attack peanuts in the Georgia Coastal Plain area. While caterpillars do not appear over the entire peanut area each year, the damage in certain localities may amount to a considerable loss. Caterpillars usually appear late in the season and sometimes cause complete defoliation of plants. While little data are available on control of these pests on peanuts, the following control measures are suggested: (1) Calcium arsenate that contains a zinc safener should give effective control when used as a dust at a rate of 8 to 10 pounds per acre. Straight calcium arsenate will cause serious burn when applied to peanut foliage and for this reason a zinc safener should always be included. (2) Lead arsenate is an effective poison but is difficult to apply as a dust. Where spray equipment is available the following mixture should control caterpillars. Add 4 pounds of arsenate of lead per 100 gallons of water and use spray at a rate of 150 gallons per acre. For effective control, it is very important that either dust or spray be applied while caterpillars are small. Poison must remain on plants 24 to 36 hours to be considered effective. If rain occurs before poison has been on this length of time, it should be re-applied. Normally, one or two effective applications of either dust or spray should be sufficient to control caterpillars on peanuts.

There are two diseases that cause serious damage to peanuts in the South Georgia area. Southern root rot (Sclerotium rolfsii) attacks random plants or small areas in many fields causing plants to rot off just above the ground. When this disease occurs late in the season, plants may not be killed but pods become detached from vines and lost. This disease can be identified by rotting of vines at surface of ground accompanied by a white spider-web-like fungus growth. As the disease develops, fruiting bodies that look like small mustard seed may be observed on plants where rot has occurred. There is no known control of this disease. Rotations that include resistant crops, such as corn and small grains, should help in reducing losses caused by this root rot.

Leaf spot (Cercospora personata) is common throughout the entire peanut area. This disease often causes partial or almost complete defoliation of plants during late growing periods. Yields and quality of both nuts and hay are often seriously affected. Recent investigations indicate that this loss can be materially reduced by dusting with sulphur. Dusting should begin about the first of July in normal seasons or earlier if leaf spot appears in June. Dusting sulphur should be applied at a rate of 15 to 20 pounds per acre for first dusting and 20 to 30 pounds per acre for succeeding applications. Dust should be applied at 2-week intervals, and three applications are usually sufficient.