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ALABAMA
SOYBEAN VARIETY TESTS
1971



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INTRODUCTION

Before a soybean variety is considered for planting, it should be evaluated at a number of locations and planting dates and over a period of years. This will tend to average the differences in soil and climatic conditions that occur throughout the State. The most critical factor in soybean production is moisture and the most critical moisture period is during pod development and filling. Since soybeans are highly photoperiodic and maturity date of a particular variety does not vary greatly from year to year, then varieties from more than one maturity group must be evaluated.

EXPERIMENTAL PROCEDURES

A randomized block design in 4 replications was used at each of 6 locations. One to three planting dates were used at each location with the first planting at the optimal time for maximum yield. All locations were on units of the Auburn University Agricultural Experiment Station. All plots were 4 rows wide and 20 ft long with 16 ft of 2 center rows harvested for yield determinations. All plots were planted with a John Deere Flexi Planter with double disc openers. Row width varied from 36 inches to 42 inches depending on location.

SEASONAL CONDITIONS

Early in the 1971 season moisture was good and adequate stands were obtained at all plantings. Moisture was good during the early growth at all locations and probably excessive for the heavy soil at Black Belt Substation. Late season moisture was adequate in 1971 at all locations. Conditions were different during the 1968 and 1969 seasons as there was moisture stress at most locations during late pod fill.

DATA RECORDED

Yield of soybeans determined by hand harvesting the 2 center rows of each plot was threshed with a plot thresher. The yields were adjusted to 13% moisture and converted to bushels (60 lb.) per acre.

Maturity was taken as the date when the pods are dry and most of the leaves have dropped. Under most conditions, the stems are also dry.

Lodging was based on a scale of 1 to 5 according to the following criteria:

1 - almost all plants erect.

2 - either all plants leaning slightly (less than 45°) or a few plants down.

3 - either all plants leaning moderately (approximately 45°) or 25 to 50% of the plants down.

4 - either all plants leaning considerably (more than 45°) or 50 to 80% of the plants down.

5 - all plants down badly.

Shattering notes were taken on the border rows 14 days after maturity. The estimates were based on a scale of 1 to 5 as follows:

1 - no shattering.

2 - 1 to 3% shattering.

3 - 4 to 8% shattering.

4 - 9 to 19% shattering.

5 - over 20% shattering.

Plant height was determined as the average length of plants in a plot from the ground to the top extremity at time of maturity.

Height of first pod was determined as the average height of pods from ground at time of maturity.

Seed size for each variety was determined from a composite sample from all replications at a given planting date and location. Seed size is reported as number of seed per bushel (60 lb.).

Seed quality was based on a rating from 1 to 5 according to the following scale: (1) very good, (2) good, (3) fair, (4) poor, and (5) very poor. The factors considered are development of seed, wrinkling damage, and brightness. Much of the poor quality reported was due to late harvesting and to excessive rain.

Purple stain ratings were given to seed samples on a scale of 1 to 5 as follows:

- 1 - no purple staining.
- 2 - 1 to 3% purple staining.
- 3 - 4 to 8% purple staining.
- 4 - 9 to 19% purple staining.
- 5 - over 20% purple staining.

VARIETY DATA

The entries included in these tests were released varieties prior to 1971 when a number of additional strains were entered. These strains were in their late stages of development in the USDA Regional Testing Program. They were all yielding above standard varieties in their maturity group and all have good nematode resistance.

Soybean varieties grown in Alabama fall in Maturity Groups V, VI, VII, and VIII. The following are a list of the varieties and strains, with source of seed, tested over the past 4 years by maturity groups. For more information of individual varieties see Bulletin 413.^{1/}

Very Early Varieties - Maturity Group V

| | |
|---------|---|
| Dare | Alabama Foundation Seed Stock Farm, Thorsby, Ala. |
| York | Tennessee Seed Products, Corp. Nashville, Tenn. |
| D68-128 | USDA Delta Branch Experiment Station, Stoneville, Miss. |

Early Varieties - Maturity Group VI

| | |
|------------|---|
| Davis | Alabama Foundation Seed Stock Farm, Thorsby, Ala. |
| Hood | Alabama Foundation Seed Stock Farm, Thorsby, Ala. |
| Lee 68 | Alabama Foundation Seed Stock Farm, Thorsby, Ala. |
| McNair 600 | McNair Seed Co., Laurinburg, N. C. |
| Pickett 71 | USDA Delta Branch Experiment Station, Stoneville, Miss. |
| D64-4636 | USDA Delta Branch Experiment Station, Stoneville, Miss. |

Mid-season Varieties - Maturity Group VII

| | |
|------------|---|
| Bragg | Alabama Foundation Seed Stock Farm, Thorsby, Ala. |
| Coker 208 | Coker Pedigreed Seed Co., Hartsville, S. C. |
| McNair 800 | McNair Seed Co., Laurinburg, N. C. |
| Ransom | Alabama Foundation Seed Stock Farm, Thorsby, Ala. |
| Semmes | Alabama Foundation Seed Stock Farm, Thorsby, Ala. |

Late Varieties - Maturity Group VIII

| | |
|--------------|---|
| Coker 318 | Coker Pedigreed Seed Co., Hartsville, S. C. |
| Hampton 266A | Coker Pedigreed Seed Co., Hartsville, S. C. |
| F63-4000 | USDA Delta Branch Experiment Station, Stoneville, Miss. |

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1/ Soybean Production--Recent Research Findings, Auburn University Agricultural Experiment Station, Bulletin 413.

Table 1. Yield of Soybean Varieties Tested at the Black Belt Substation^{1/}

| Variety | Average planting date | | | | | | | | | | | |
|--------------|-----------------------------|----------------|----------------|----------------|-----------------------------|----------------|----------------|----------------|-----------------------------|----------------|----------------|----------------|
| | May 15 | | | | June 7 | | | | June 29 | | | |
| | 1-yr. 1971 ^{2/} | 2-yr. 70-71 | 3-yr. 69-71 | 4-yr. 68-71 | 1-yr. 1971 ^{2/} | 2-yr. 70-71 | 3-yr. 69-71 | 4-yr. 68-71 | 1-yr. 1971 ^{2/} | 2-yr. 70-71 | 3-yr. 69-71 | 4-yr. 68-71 |
| Bu./A. | Bu./A. | Bu./A. | Bu./A. | Bu./A. | Bu./A. | Bu./A. | Bu./A. | Bu./A. | Bu./A. | Bu./A. | Bu./A. | |
| Dare | 38.1 ab | 35.0 | 32.2 | 31.7 | 33.8 bc | 30.9 | 29.6 | 27.3 | 22.9 bcde | 19.9 | 20.1 | 15.3 |
| Hood | 35.2 bc | 31.7 | 29.3 | 29.2 | 28.0 ef | 27.6 | 26.2 | 22.4 | 20.1 cde | 18.2 | 17.7 | 14.4 |
| McNair 600 | 37.9 ab | 33.5 | ----- | ----- | 35.3 ab | 29.7 | ----- | ----- | 21.7 bcde | 19.0 | ----- | ----- |
| Davis | 33.6 bc | 31.7 | 29.5 | 30.0 | 35.6 ab | 30.6 | 27.7 | 27.0 | 25.2 abc | 20.8 | 22.4 | ----- |
| Lee 68 | 33.8 bc | 33.9 | 31.6 | 31.8 | 30.9 cde | 26.9 | 26.7 | 25.7 | 21.0 bcde | 17.0 | 17.0 | 15.3 |
| Pickett 71 | 33.3 bc | 30.4 | ----- | ----- | 31.8 bcde | 26.4 | ----- | ----- | 24.5 abcd | 18.9 | ----- | ----- |
| McNair 800 | 31.5 c | 28.2 | 28.0 | ----- | 30.8 cde | 25.5 | 25.6 | ----- | 19.9 cde | 18.4 | 19.2 | ----- |
| Bragg | 31.9 c | 27.4 | 27.5 | 28.3 | 34.4 abc | 27.7 | 28.0 | 25.6 | 25.1 abc | 20.6 | 22.1 | 17.8 |
| Semmes | 26.4 d | 25.9 | 25.6 | 27.0 | 28.2 def | 24.6 | 24.4 | 22.8 | 25.6 ab | 20.3 | 19.8 | 17.3 |
| Ransom | 41.0 a | ----- | ----- | ----- | 38.1 a | ----- | ----- | ----- | 28.2 a | ----- | ----- | ----- |
| Coker 208 | 24.4 d | 22.7 | 24.3 | 24.5 | 25.9 f | 21.9 | 21.1 | 21.5 | 19.5 de | 17.6 | 17.3 | 15.2 |
| F63-4000 | 34.7 bc | 28.4 | ----- | ----- | 32.3 bcd | 25.2 | ----- | ----- | 21.7 bcde | 18.7 | ----- | ----- |
| Coker 318 | 26.3 d | 22.8 | 24.1 | 24.4 | 32.2 bcd | 25.4 | 25.5 | 23.9 | 25.7 ab | 19.7 | 19.8 | 18.2 |
| Hampton 266A | 18.1 e | 18.3 | 21.5 | 22.5 | 20.1 g | 19.6 | 20.9 | 21.6 | 18.2 e | 16.5 | 16.2 | 14.7 |

^{1/} Yields adjusted to 13% moisture and 60 pounds per bushel.

^{2/} Yields followed by the same letter are not significantly different at .05 probability level. Coefficient of variation was 10.2, 8.1, and 14.0%, respectively, for 1st, 2nd, and 3rd planting dates in 1971.

Table 2. Maturity Date, Lodging, Plant Height, and Height of First Pod of Soybean Varieties by Planting Dates When grown on Black Belt Substation, 1971^{1/}

| Variety | Maturity date | | | Lodging rating ^{2/} | | | Plant height | | | Height 1st pod | | |
|--------------|---------------|---------|--------|------------------------------|-----|-----|--------------|--------|--------|----------------|---------|---------|
| | Planting | | | Planting | | | Planting | | | Planting | | |
| | 1st | 2nd | 3rd | 1st | 2nd | 3rd | 1st | 2nd | 3rd | 1st | 2nd | 3rd |
| Dare | Sept 28 | Sept 30 | Oct 13 | 1.4 | 2.4 | 1.8 | In. 35 | In. 29 | In. 24 | In. 6.3 | In. 4.8 | In. 4.1 |
| Hood | Sept 30 | Oct 2 | Oct 11 | 2.5 | 2.2 | 1.5 | 31 | 24 | 21 | 4.8 | 5.0 | 3.5 |
| McNair 600 | Oct 5 | Oct 8 | Oct 12 | 1.5 | 1.8 | 1.3 | 37 | 34 | 23 | 4.9 | 5.8 | 3.4 |
| Davis | Oct 6 | Oct 12 | Oct 16 | 2.5 | 2.3 | 1.5 | 38 | 35 | 22 | 3.6 | 3.5 | 3.6 |
| Lee 68 | Oct 7 | Oct 10 | Oct 14 | 2.6 | 2.6 | 2.3 | 31 | 27 | 21 | 5.3 | 4.6 | 3.3 |
| Pickett 71 | Oct 11 | Oct 14 | Oct 18 | 2.9 | 3.0 | 2.9 | 31 | 29 | 23 | 4.6 | 4.9 | 3.8 |
| McNair 800 | Oct 12 | Oct 12 | Oct 18 | 2.0 | 1.5 | 1.0 | 38 | 27 | 17 | 6.5 | 5.3 | 1.8 |
| Bragg | Oct 15 | Oct 18 | Oct 21 | 2.5 | 2.3 | 1.4 | 42 | 34 | 25 | 6.8 | 5.6 | 3.9 |
| Semmes | Oct 17 | Oct 18 | Oct 19 | 2.1 | 1.9 | 1.0 | 37 | 33 | 23 | 6.8 | 6.8 | 4.4 |
| Ransom | Oct 18 | Oct 21 | Oct 22 | 1.6 | 1.3 | 1.1 | 35 | 30 | 22 | 6.3 | 5.5 | 3.6 |
| Coker 208 | Nov 7 | Nov 8 | Nov 8 | 1.3 | 1.6 | 1.0 | 31 | 29 | 19 | 6.4 | 6.1 | 3.5 |
| F63-4000 | Oct 19 | Oct 20 | Oct 23 | 3.8 | 2.5 | 1.3 | 40 | 30 | 23 | 6.0 | 6.3 | 3.9 |
| Coker 318 | Oct 21 | Oct 26 | Oct 28 | 1.5 | 1.4 | 1.0 | 49 | 39 | 26 | 11.5 | 11.6 | 4.9 |
| Hampton 266A | Nov 8 | Nov 8 | Nov 8 | 2.4 | 1.9 | 1.8 | 41 | 37 | 26 | 9.5 | 6.3 | 3.6 |

^{1/} Planting dates were May 19, June 8, and June 29 for 1st, 2nd, and 3rd plantings, respectively.

^{2/} Lodging ratings were on a scale from 1 to 5 according to
 1 = almost all plants erect.
 2 = all plants down badly.

Table 3. Seed Quality and Seed Size of Soybean Varieties by Planting Dates When Grown on Black Belt Substation, 1971^{1/}

| Variety | Seed quality rating ^{2/} | | | Purple stain rating ^{3/} | | | Number of seed per bushel | | |
|--------------|-----------------------------------|-----|-----|-----------------------------------|-----|-----|---------------------------|--------|--------|
| | Planting | | | Planting | | | Planting | | |
| | 1st | 2nd | 3rd | 1st | 2nd | 3rd | 1st | 2nd | 3rd |
| | | | | | | | Thous. | Thous. | Thous. |
| Dare | 2 | 3 | 2 | 2 | 1 | 2 | 227 | 235 | 272 |
| Hood | 2 | 3 | 2 | 2 | 2 | 1 | 193 | 199 | 209 |
| McNair 600 | 2 | 2 | 1 | 1 | 1 | 1 | 245 | 219 | 243 |
| Davis | 3 | 3 | 2 | 1 | 2 | 2 | 220 | 195 | 237 |
| Lee 68 | 3 | 4 | 4 | 1 | 1 | 1 | 218 | 229 | 245 |
| Pickett 71 | 3 | 4 | 3 | 1 | 1 | 1 | 252 | 221 | 231 |
| McNair 800 | 2 | 2 | 4 | 2 | 2 | 1 | 257 | 264 | 262 |
| Bragg | 3 | 3 | 3 | 2 | 2 | 1 | 203 | 213 | 225 |
| Semmes | 4 | 4 | 3 | 1 | 1 | 1 | 213 | 225 | 254 |
| Ransom | 2 | 3 | 3 | 1 | 2 | 1 | 177 | 195 | 205 |
| Coker 208 | 4 | 4 | 5 | 5 | 4 | 4 | 161 | 156 | 158 |
| F63-4000 | 2 | 3 | 4 | 1 | 1 | 1 | 179 | 194 | 205 |
| Coker 318 | 2 | 2 | 4 | 2 | 3 | 3 | 235 | 229 | 211 |
| Hampton 266A | 5 | 4 | 5 | 5 | 4 | 4 | 153 | 155 | 156 |

1/ Planting dates were May 19, June 8, and June 29 for 1st, 2nd, and 3rd plantings, respectively.

2/ Seed quality ratings were on a scale from 1 to 5 according to 1 = very good and 5 = very poor.

3/ Purple stain ratings were on a scale from 1 to 5 according to 1 = no purple staining and 5 = over 20% purple staining.

Table 4. Maturity Date and Yield of Soybean Varieties Tested at the Brewton Field, 1971^{1/}

| Variety | Maturity dates ^{3/} | | Soybean yield by average planting dates | | | | | | | |
|--------------|------------------------------|----------|---|--------|--------|--------------------|---------|--------|--------|--|
| | | | May 13 | | | | June 12 | | | |
| | Planting | | 1-yr. | 2-yr. | 3-yr. | 1-yr. | 2-yr. | 3-yr. | 4-yr. | |
| | 1st | 2nd | 1971 ^{2/} | 68-71 | 67-71 | 1971 ^{2/} | 70-71 | 69-71 | 68-71 | |
| | | Bu./A. | Bu./A. | Bu./A. | Bu./A. | Bu./A. | Bu./A. | Bu./A. | Bu./A. | |
| Dare | Sept. 17 | Sept. 27 | 40.2 cd | 41.6 | 38.8 | 25.4 abc | 25.1 | 24.6 | 26.5 | |
| Hood | Sept. 21 | Oct. 1 | 42.0 bc | 48.1 | 22.4 | 28.0 a | 32.1 | 28.8 | 30.5 | |
| McNair 600 | Oct. 5 | Oct. 3 | 40.7 cd | ----- | ----- | 28.9 a | 33.6 | ----- | ----- | |
| Davis | Sept. 28 | Oct. 3 | 42.7 bc | 45.2 | 43.9 | 27.7 a | 32.1 | 30.7 | 32.7 | |
| Lee 68 | Oct. 5 | Oct. 5 | 36.0 ef | 35.8 | 34.0 | 25.8 ab | 25.4 | 25.1 | 25.5 | |
| Pickett 71 | Oct. 8 | Oct. 5 | 37.8 de | ----- | ----- | 25.0 abcd | 27.6 | ----- | ----- | |
| McNair 800 | Oct. 5 | Oct. 3 | 42.9 bc | ----- | ----- | 25.7 ab | 32.1 | 29.9 | ----- | |
| Bragg | Oct. 8 | Oct. 8 | 31.2 gh | 35.0 | 36.2 | 20.9 de | 28.2 | 28.1 | 30.6 | |
| Semmes | Oct. 8 | Oct. 3 | 32.9 fg | 34.0 | 33.3 | 25.9 a | 25.5 | 24.8 | 26.1 | |
| Ransom | Oct. 12 | Oct. 8 | 47.5 a | ----- | ----- | 28.0 a | ----- | ----- | ----- | |
| Coker 208 | Oct. 20 | Oct. 11 | 39.5 cde | 37.6 | ----- | 21.4 cde | 29.8 | 31.4 | 31.9 | |
| F63-4000 | Oct. 13 | Oct. 11 | 46.7 ab | ----- | ----- | 22.7 bcd | 28.9 | ----- | ----- | |
| Coker 318 | Oct. 22 | Oct. 22 | 27.4 h | 26.6 | ----- | 18.1 e | 22.9 | 29.8 | 30.0 | |
| Hampton 266A | Oct. 22 | Oct. 22 | 40.7 cd | 38.8 | 40.0 | 22.0 bcde | 33.3 | 33.2 | 34.2 | |

^{1/} Yields adjusted to 13% moisture and 60 pounds per bushel.

^{2/} Yields followed by the same letter are not significantly different at .05 probability level. Coefficient of variation was 7.5 and 10.7, respectively, for 1st and 2nd planting dates in 1971.

^{3/} Planting dates were May 18 and June 22 for 1st and 2nd plantings in 1971, respectively.

Table 5. Lodging, Plant Height, Height of First Pod, Seed Quality, and Seed Size of Varieties Tested at Brewton Field, 1971^{1/}

| Variety | Lodging rating ^{2/} | | Plant height | | Height 1st pod | | Seed quality rating ^{3/} | | Purple stain rating ^{4/} | | Number of seed per bushel | |
|--------------|------------------------------|----------|--------------|----------|----------------|----------|-----------------------------------|----------|-----------------------------------|----------|---------------------------|----------|
| | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd |
| | planting | planting | planting | planting | planting | planting | planting | planting | planting | planting | planting | planting |
| | | | Inches | Inches | Inches | Inches | | | | | Thous. | Thous. |
| Dare | 1.3 | 1.8 | 32 | 23 | 4.5 | 4.3 | -- | 1 | -- | 1 | --- | 237 |
| Hood | 2.3 | 1.8 | 31 | 24 | 4.3 | 3.0 | 2 | 2 | 2 | 1 | 170 | 221 |
| McNair 600 | 1.0 | 1.8 | 34 | 26 | 3.8 | 2.5 | -- | 1 | -- | 1 | --- | 281 |
| Davis | 1.3 | 1.8 | 33 | 26 | 4.8 | 3.0 | 2 | 2 | 1 | 1 | 186 | 250 |
| Lee 68 | 2.0 | 1.8 | 33 | 22 | 4.8 | 3.0 | -- | 1 | -- | 1 | --- | 245 |
| Pickett 71 | 2.3 | 3.5 | 32 | 23 | 3.8 | 3.5 | -- | 1 | -- | 1 | --- | 272 |
| McNair 800 | 1.8 | 1.3 | 35 | 23 | 5.0 | 2.8 | 2 | 2 | 1 | 1 | 186 | 250 |
| Bragg | 1.3 | 2.3 | 40 | 28 | 6.8 | 3.0 | -- | 3 | -- | 1 | --- | 293 |
| Semmes | 1.5 | 1.5 | 36 | 27 | 5.3 | 3.3 | 2 | 1 | 1 | 1 | 195 | 231 |
| Ransom | 1.3 | 1.0 | 31 | 24 | 5.3 | 3.3 | -- | 2 | -- | 1 | --- | 227 |
| Coker 208 | 1.0 | 1.0 | 31 | 23 | 5.5 | 4.5 | -- | 2 | -- | 1 | --- | 272 |
| F-63-4000 | 2.0 | 2.3 | 39 | 26 | 5.0 | 4.3 | -- | 1 | -- | 1 | --- | 245 |
| Coker 318 | 1.8 | 2.5 | 47 | 33 | 11.5 | 6.3 | -- | 2 | -- | 1 | --- | 313 |
| Hampton 266A | 1.8 | 2.5 | 41 | 29 | 8.8 | 3.3 | 1 | 2 | 1 | 1 | 186 | 293 |

^{1/} Planting dates were May 18 and June 22 for 1st and 2nd plantings, respectively.

^{2/} Lodging ratings were recorded on a scale from 1 to 5 according to 1 = almost all plants erect and 5 = all plants down badly.

^{3/} Seed quality ratings were on a scale from 1 to 5 according to 1 = very good and 5 = very poor.

^{4/} Purple stain ratings were on a scale from 1 to 5 according to 1 = no purple staining and 5 = over 20% purple staining.

Table 6. Yield, Maturity Date, Lodging, Shattering, Plant Height, and Height of 1st Pod of Soybean Varieties Grown on Gulf Coast Substation, Planted June 9, 1971^{1/}

| Variety | Maturity date | Lodging rating ^{2/} | Plant height Inches | Height 1st pod Inches | Yield ^{2/} | | | |
|--------------|---------------|------------------------------|------------------------|--------------------------|----------------------|-----------------------|-----------------------|-----------------------|
| | | | | | 1-yr. 1971 Bu./A. | 2-yr. 70-71 Bu./A. | 3-yr. 69-71 Bu./A. | 4-yr. 70-71 Bu./A. |
| Dare | Sept. 25 | 1 | 30 | 4.4 | 44.3 cd | 38.3 | 36.7 | 36.4 |
| Hood | Oct. 5 | 1 | 32 | 4.3 | 44.1 cd | 38.7 | 38.1 | 37.6 |
| Davis | Oct. 12 | 1 | 38 | 7.8 | 47.7 bc | 44.6 | 40.8 | 38.9 |
| Lee 68 | Oct. 12 | 1 | 31 | 5.8 | 46.7 bc | 46.2 | 42.6 | 40.4 |
| McNair 600 | Oct. 15 | 1 | 34 | 6.0 | 48.5 bc | 47.1 | ----- | ----- |
| Pickett 71 | Oct. 15 | 1 | 31 | 6.0 | 44.8 cd | 44.4 | ----- | ----- |
| McNair 800 | Oct. 15 | 1 | 35 | 6.5 | 50.4 ab | 43.5 | 41.6 | ----- |
| Semmes | Oct. 10 | 1 | 32 | 4.3 | 44.3 cd | 42.0 | 38.5 | 36.8 |
| Coker 208 | Oct. 18 | 1 | 31 | 6.0 | 44.7 cd | 42.8 | 39.8 | 38.4 |
| Bragg | Oct. 20 | 1 | 38 | 6.5 | 49.9 ab | 48.2 | 45.1 | 42.2 |
| Ransom | Oct. 26 | 1 | 24 | 4.0 | 53.5 a | ----- | ----- | ----- |
| Hampton 266A | Oct. 20 | 1 | 47 | 9.3 | 46.2 bc | 42.3 | 39.1 | 38.0 |
| F63-4000 | Oct. 20 | 1 | 33 | 5.8 | 50.1 ab | 44.6 | ----- | ----- |
| Coker 318 | Oct. 26 | 1 | 47 | 9.8 | 40.8 d | 35.7 | 34.6 | 33.6 |

^{1/} Yields adjusted to 13% moisture and 60 pounds per bushel.

^{2/} Lodging ratings were on a scale of 1 to 5 according to 1 = almost all plants erect and 5 = all plants down badly.

^{3/} Yields followed by the same letter are not significantly different at .05 probability level. Coefficient of varieties was 6.6%.

Table 7. Maturity Date and Yield of Soybean Varieties Tested at the Prattville Field, 1971^{1/}

| Variety | Maturity date ^{3/} 1st planting 2nd planting | | Soybean yield by average planting dates | | | | | |
|--------------|---|---------|---|------------------|------------------|------------------|-----------------------------|------------------|
| | | | May 11 | | | | June 13 | |
| | | | 1-yr. ^{2/} 1971 | 2-yr. 1970-71 | 3-yr. 1969-71 | 4-yr. 1968-71 | 1-yr. ^{2/} 1971 | 2-yr. 1970-71 |
| | | Bu./A. | Bu./A. | Bu./A. | Bu./A. | Bu./A. | Bu./A. | |
| Dare | Oct. 1 | Oct. 12 | 41.3 ef | 42.8 | 40.5 | 39.9 | 33.9 f | 36.3 |
| York | Oct. 10 | ----- | 33.9 h | 33.6 | 33.6 | 34.8 | ----- | ----- |
| Hood | Oct. 11 | Oct. 15 | 37.0 gh | 38.7 | 37.6 | 38.5 | 35.2 ef | 35.8 |
| McNair 600 | Oct. 16 | Oct. 19 | 47.8 abcd | 43.2 | ----- | ----- | 41.2 bc | 39.0 |
| Davis | Oct. 17 | Oct. 18 | 44.5 cde | 44.4 | 42.4 | 41.1 | 39.7 cd | 40.1 |
| Lee 68 | Oct. 17 | Oct. 21 | 47.3 abcd | 42.9 | 39.7 | 38.0 | 39.8 cd | 36.7 |
| Pickett 71 | Oct. 17 | Oct. 23 | 46.5 bcd | 44.7 | ----- | ----- | 37.0 def | 35.4 |
| McNair 800 | Oct. 19 | Oct. 25 | 43.3 def | 39.2 | 35.3 | ----- | 38.4 cde | 34.0 |
| Bragg | Oct. 19 | Oct. 25 | 48.3 abc | 43.0 | 39.5 | 37.1 | 41.0 bc | 38.5 |
| Semmes | ----- | Oct. 25 | ----- | ----- | ----- | ----- | 41.1 bc | 36.0 |
| Ransom | Oct. 23 | Oct. 25 | 50.1 ab | ----- | ----- | ----- | 45.3 a | ----- |
| Coker 208 | Oct. 29 | Oct. 30 | 41.2 ef | 35.8 | 36.2 | 33.0 | 39.4 cd | 34.2 |
| F63-4000 | Oct. 25 | Oct. 27 | 51.3 a | 45.7 | ----- | ----- | 43.6 ab | 39.3 |
| Coker 318 | Oct. 30 | Nov. 5 | 39.0 fg | 33.8 | 31.8 | 29.5 | 37.7 cde | 33.7 |
| Hampton 266A | Oct. 29 | Oct. 30 | 44.1 cde | 26.3 | 36.5 | 34.2 | 40.4 bcd | 35.0 |

^{1/}Yield adjusted to 13% moisture and 60 pounds per bushel.

^{2/}Yields followed by the same letter are not significantly different at .05 probability level.

Coefficient of variation was 6.5% and 5.5%, respectively, for 1st and 2nd planting dates in 1971.

^{3/}Planting dates were May 7 and June 14 for 1st and 2nd plantings, respectively, 1971.

Table 8. Lodging, Plant Height, Height of First Pod, Seed Quality, and Seed Size of Varieties Tested at Prattville Field, 1971^{1/}

| Variety | Lodging rating ^{2/} | | Plant height | | Height 1st pod | | Seed quality rating ^{3/} | | Purple stain rating ^{4/} | | Number of seed per bushel | |
|--------------|------------------------------|----------|--------------|----------|----------------|----------|-----------------------------------|----------|-----------------------------------|----------|---------------------------|----------|
| | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd | 1st | 2nd |
| | planting | planting | planting | planting | planting | planting | planting | planting | planting | planting | planting | planting |
| | | | Inches | Inches | Inches | Inches | | | | | Thous. | Thous. |
| Dare | 1 | 1.6 | 29 | 26 | 3.0 | 2.3 | 2 | 1 | 2 | 1 | 208 | 216 |
| York | 1 | --- | 27 | -- | 2.0 | --- | 5 | - | 4 | - | 135 | --- |
| Hood | 1.3 | 2.9 | 29 | 27 | 3.0 | 2.0 | 3 | 1 | 2 | 2 | 190 | 200 |
| McNair 600 | 1 | 2.5 | 33 | 29 | 2.8 | 2.0 | 2 | 2 | 1 | 1 | 206 | 233 |
| Davis | 1 | 2.5 | 36 | 31 | 3.5 | 2.0 | 2 | 1 | 2 | 1 | 161 | 205 |
| Lee 68 | 1 | 4.1 | 33 | 29 | 3.5 | 1.8 | 2 | 1 | 1 | 1 | 199 | 218 |
| Pickett 71 | 1 | 4.5 | 30 | 25 | 3.0 | 1.5 | 2 | 1 | 1 | 1 | 229 | 206 |
| McNair 800 | 2 | 2.3 | 36 | 27 | 3.8 | 2.8 | 2 | 2 | 1 | 1 | 223 | 231 |
| Bragg | 1 | 3.0 | 40 | 32 | 5.5 | 2.5 | 1 | 1 | 1 | 1 | 180 | 192 |
| Semmes | - | 2.0 | - | 32 | --- | 3.0 | - | 2 | - | 1 | --- | 188 |
| Ransom | 1 | 1.1 | 32 | 29 | 4.3 | 3.3 | 1 | 1 | 1 | 1 | 165 | 203 |
| Coker 208 | 1 | 2.4 | 28 | 25 | 3.3 | 2.3 | 2 | 1 | 2 | 2 | 172 | 197 |
| F63-4000 | 1 | 1.6 | 40 | 32 | 4.8 | 3.5 | 1 | 1 | 1 | 1 | 156 | 184 |
| Coker 318 | 1.3 | 2.5 | 48 | 36 | 7.5 | 3.5 | 1 | 2 | 1 | 2 | 199 | 205 |
| Hampton 266A | 1 | 3.1 | 42 | 35 | 4.0 | 2.8 | 2 | 1 | 2 | 2 | 184 | 186 |

^{1/} Planting dates were May 7 and June 14 for 1st and 2nd plantings, respectively.

^{2/} Lodging ratings were recorded on a scale from 1 to 5 according to: 1=almost all plants erect and 5 = all plants down badly.

^{3/} Seed quality ratings were on a scale from 1 to 5 according to: 1=very good and 5=very poor.

^{4/} Purple stain ratings were on a scale from 1 to 5 according to: 1=no purple staining and 5=over 20% purple staining.

Table 9. Yield of Soybean Varieties Tested at the Sand Mountain Substation^{1/}

| Variety | Soybean yield by average planting date | | | | | | | | | | | |
|--------------|--|------------------|------------------|------------------|-----------------------------|------------------|------------------|------------------|-----------------------------|------------------|------------------|------------------|
| | May 2 | | | | May 27 | | | | June 18 | | | |
| | 1-yr. 1971 ^{2/} | 2-yr. 1970-71 | 3-yr. 1969-71 | 4-yr. 1968-71 | 1-yr. 1971 ^{2/} | 2-yr. 1970-71 | 3-yr. 1969-71 | 4-yr. 1968-71 | 1-yr. 1971 ^{2/} | 2-yr. 1970-71 | 3-yr. 1969-71 | 4-yr. 1968-71 |
| Bu./A. | Bu./A. | Bu./A. | Bu./A. | Bu./A. | Bu./A. | Bu./A. | Bu./A. | Bu./A. | Bu./A. | Bu./A. | Bu./A. | Bu./A. |
| Dare | 48.9 cdef | 50.6 | 46.7 | 44.6 | 37.4 c | 37.8 | 35.3 | 32.9 | 40.0 ab | 38.0 | 31.4 | 33.8 |
| D68-128 | 55.8 ab | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |
| York | 45.0 f | 47.1 | 43.5 | 42.4 | 42.0 b | 42.2 | 39.4 | 38.3 | 41.0 a | 39.6 | 33.3 | 35.1 |
| Hood | 44.4 f | 46.8 | 44.4 | 43.7 | 41.8 b | 39.8 | 36.5 | 37.4 | 37.6 abc | 34.9 | 29.7 | 32.2 |
| D64-4636 | 48.2 def | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |
| McNair 600 | 51.8 bcd | 50.4 | ---- | ---- | 43.8 ab | 42.6 | ---- | ---- | 36.4 bcd | 37.9 | ---- | ---- |
| Lee 68 | 52.5 bcd | 49.8 | 44.4 | 43.7 | 41.8 b | 38.8 | 35.7 | 37.0 | 32.5 d | 33.1 | 28.0 | 30.9 |
| Pickett 71 | 54.0 abc | 50.8 | ---- | ---- | 41.4 bc | 39.6 | ---- | ---- | 32.2 d | 34.0 | ---- | ---- |
| Davis | 51.1 bcde | 49.6 | 45.5 | 44.4 | 44.2 ab | 41.0 | 38.3 | 38.7 | 34.4 cd | 34.5 | 29.5 | 32.3 |
| McNair 800 | 46.4 ef | 45.0 | 42.1 | ---- | 43.9 ab | 40.3 | 37.2 | ---- | 40.2 ab | 37.7 | 31.8 | ---- |
| Bragg | 52.6 bcd | 49.5 | 44.0 | 43.8 | 45.7 ab | 43.3 | 40.1 | 41.0 | 32.0 d | 33.6 | 27.5 | 30.8 |
| Ransom | 58.4 a | ---- | ---- | ---- | 46.8 a | ---- | ---- | ---- | 39.1 ab | ---- | ---- | ---- |
| Coker 208 | 48.8 cdef | 43.9 | 41.8 | 42.6 | 43.6 ab | 39.2 | 38.1 | 39.5 | 32.6 d | 33.6 | 31.3 | 32.9 |
| F63-4000 | 51.6 bcd | 51.4 | ---- | ---- | 42.7 ab | 41.0 | ---- | ---- | 40.4 ab | 37.5 | ---- | ---- |
| Hampton 266A | ---- | ---- | ---- | ---- | 42.9 ab | 38.8 | 37.7 | 38.0 | 37.3 abc | 34.5 | 28.8 | 31.4 |
| Coker 318 | ---- | ---- | ---- | ---- | 43.4 ab | 37.3 | 36.1 | 35.5 | 37.5 abc | 33.1 | 27.0 | 28.3 |

^{1/}Yields adjusted to 13% moisture and 60 pounds per bushel.

^{2/}Yields followed by the same letter are not significantly different at .05 probability level. Coefficient of variation was 6.5, 6.7, and 7.5%, respectively, for 1st, 2nd, and 3rd planting dates in 1971.

Table 10. Maturity Date, Lodging, Plant Height, and Height of First Pod of Soybean Varieties by Planting Dates When Grown on Sand Mountain Substation, 1971^{1/}

| Variety | Maturity date | | | Lodging rating ^{2/} | | | Plant height | | | Height 1st pod | | |
|--------------|---------------|----------|----------|------------------------------|----------|----------|--------------|----------|----------|----------------|----------|----------|
| | 1st | 2nd | 3rd | 1st | 2nd | 3rd | 1st | 2nd | 3rd | 1st | 2nd | 3rd |
| | planting | planting | planting | planting | planting | planting | planting | planting | planting | planting | planting | planting |
| | | | | | | | Inches | Inches | Inches | Inches | Inches | Inches |
| Dare | Sept. 21 | Sept. 28 | Oct. 13 | 2.0 | 2.5 | 2.8 | 29 | 35 | 31 | 4.5 | 5.0 | 4.5 |
| D68-128 | Sept. 27 | --- | --- | 2.0 | --- | --- | 28 | --- | --- | 3.8 | --- | --- |
| York | Sept. 28 | Sept. 28 | Oct. 13 | 1.3 | 2.3 | 1.3 | 24 | 34 | 31 | 2.3 | 4.0 | 4.0 |
| Hood | Sept. 28 | Oct. 7 | Oct. 18 | 3.3 | 3.0 | 2.0 | 32 | 33 | 29 | 5.0 | 5.5 | 4.5 |
| D64-4636 | Oct. 1 | --- | --- | 1.0 | --- | --- | 25 | --- | --- | 4.0 | --- | --- |
| McNair 600 | Oct. 7 | Oct. 9 | Oct. 16 | 2.8 | 3.3 | 2.3 | 33 | 34 | 34 | 3.5 | 5.5 | 4.5 |
| Lee 68 | Oct. 8 | Oct. 8 | Oct. 13 | 2.8 | 3.8 | 3.8 | 28 | 36 | 30 | 5.5 | 6.0 | 5.5 |
| Pickett 71 | Oct. 14 | Oct. 12 | Oct. 18 | 3.0 | 3.8 | 3.5 | 30 | 34 | 30 | 5.3 | 5.3 | 5.5 |
| Davis | Oct. 15 | Oct. 18 | Oct. 21 | 2.5 | 3.3 | 2.5 | 38 | 33 | 35 | 7.3 | 7.3 | 4.8 |
| McNair 800 | Oct. 11 | Oct. 18 | Oct. 18 | 3.5 | 3.5 | 1.8 | 34 | 36 | 29 | 6.5 | 7.8 | 4.5 |
| Bragg | Oct. 17 | Oct. 17 | Oct. 20 | 3.8 | 3.4 | 2.3 | 44 | 35 | 32 | 7.3 | 8.0 | 6.5 |
| Ransom | Oct. 17 | Oct. 19 | Oct. 18 | 2.3 | 3.3 | 1.0 | 32 | 40 | 31 | 6.3 | 9.0 | 6.5 |
| Coker 208 | Oct. 20 | Oct. 21 | Oct. 25 | 1.5 | 2.8 | 2.3 | 26 | 36 | 29 | 6.0 | 8.3 | 7.3 |
| F63-4000 | Oct. 18 | Oct. 21 | Oct. 22 | 3.8 | 5.0 | 2.5 | 38 | 40 | 30 | 7.0 | 11.3 | 7.5 |
| Hampton 266A | --- | Oct. 22 | Oct. 26 | --- | 4.0 | 3.3 | --- | 36 | 36 | --- | 5.8 | 6.3 |
| Coker 318 | --- | Oct. 25 | Oct. 28 | --- | 2.8 | 2.0 | --- | 47 | 38 | --- | 12.8 | 9.8 |

^{1/} Planting dates were May 4, June 7, and July 2 for 1st, 2nd, and 3rd plantings, respectively.

^{2/} Lodging ratings were on a scale from 1 to 5 according to 1 = almost all plants erect and 5 = all plants down badly.

Table 11. Seed Quality and Seed Size of Soybean Varieties by Planting Dates when Grown on Sand Mountain Substation, 1971^{1/}

| Variety | Seed quality rating ^{2/} | | | Purple stain rating ^{3/} | | | Number of seed per bushel | | |
|--------------|-----------------------------------|--------------|--------------|-----------------------------------|--------------|--------------|---------------------------|------------------------|------------------------|
| | 1st planting | 2nd planting | 3rd planting | 1st planting | 2nd planting | 3rd planting | 1st planting Thous. | 2nd planting Thous. | 3rd planting Thous. |
| Dare | 2 | 3 | 1 | 1 | 2 | 1 | 185 | 172 | 167 |
| D68-128 | 2 | - | - | 1 | - | - | 165 | --- | --- |
| York | 2 | 2 | 2 | 1 | 2 | 1 | 131 | 136 | 143 |
| Hood | 1 | 1 | 1 | 1 | 2 | 1 | 157 | 156 | 155 |
| D64-4636 | 2 | - | - | 1 | - | - | 161 | --- | --- |
| McNair 600 | 1 | 1 | 1 | 1 | 1 | 1 | 179 | 186 | 189 |
| Lee 68 | 1 | 1 | 1 | 1 | 2 | 1 | 170 | 192 | 184 |
| Pickett 71 | 1 | 1 | 1 | 1 | 1 | 1 | 183 | 209 | 186 |
| Davis | 1 | 1 | 1 | 1 | 1 | 2 | 134 | 149 | 162 |
| McNair 800 | 1 | 1 | 1 | 1 | 2 | 2 | 194 | 181 | 203 |
| Bragg | 1 | 1 | 1 | 1 | 1 | 2 | 150 | 158 | 162 |
| Ransom | 1 | 1 | 1 | 1 | 2 | 1 | 127 | 146 | 149 |
| Coker 208 | 1 | 1 | 1 | 1 | 2 | 3 | 150 | 155 | 163 |
| F63-4000 | 2 | 2 | 2 | 1 | 1 | 1 | 141 | 142 | 145 |
| Hampton 266A | - | 2 | 1 | - | 3 | 4 | --- | 154 | 153 |
| Coker 318 | - | 1 | 2 | - | 4 | 2 | --- | 161 | 145 |

^{1/}Planting dates were May 4, June 7, and July 2 for 1st, 2nd, and 3rd plantings, respectively.

^{2/}Seed quality ratings were on a scale from 1 to 5 according to: 1=very good and 5=very poor.

^{3/}Purple stain ratings were on a scale from 1 to 5 according to: 1=no purple staining and 5=over 20% purple staining.

Table 12. Maturity Date and Yield of Soybean Varieties Tested at Upper Coastal Plain Substation, 1971^{1/}

| Variety | Maturity dates ^{3/} | | Soybean yield by average planting dates | | | | | | | |
|--------------|------------------------------|--------------|---|---------------|---------------|---------------|--------------------------|---------------|---------------|---------------|
| | 1st planting | 2nd planting | May 14 | | | | June 24 | | | |
| | | | 1-yr. ^{2/} 1971 | 2-yr. 1970-71 | 3-yr. 1969-71 | 4-yr. 1968-71 | 1-yr. ^{2/} 1971 | 2-yr. 1970-71 | 3-yr. 1969-71 | 4-yr. 1968-71 |
| | | | Bu./A. | Bu./A. | Bu./A. | Bu./A. | Bu./A. | Bu./A. | Bu./A. | Bu./A. |
| Dare | Oct. 1 | Oct. 18 | 24.6 | 34.3 | 35.0 | 32.8 | 38.8 bcd | 35.6 | 34.9 | 34.5 |
| York | Oct. 8 | Oct. 18 | 17.3 | 20.7 | 24.8 | 28.2 | 34.1 d | 30.9 | 32.9 | 33.9 |
| Hood | Oct. 15 | Oct. 18 | 24.5 | 23.3 | 26.7 | 32.9 | 41.5 abc | 38.0 | 37.8 | 39.1 |
| McNair 600 | Oct. 18 | Oct. 27 | 30.3 | 25.9 | ---- | ---- | 39.4 bcd | 34.4 | ---- | ---- |
| Davis | Oct. 18 | Oct. 25 | 26.0 | 25.9 | 30.0 | 34.2 | 44.7 ab | 38.8 | 40.9 | 42.1 |
| Lee 68 | Oct. 15 | Oct. 18 | 26.6 | 23.8 | 26.4 | 32.0 | 38.9 bcd | 33.9 | 36.6 | 36.8 |
| Pickett 71 | Oct. 18 | Oct. 25 | 24.3 | 25.8 | ---- | ---- | 38.5 bcd | 34.9 | ---- | ---- |
| McNair 800 | Oct. 18 | Oct. 29 | 23.6 | 24.3 | 28.8 | ---- | 36.5 cd | 33.6 | 35.9 | ---- |
| Bragg | Oct. 18 | Oct. 27 | 26.8 | 27.5 | 28.9 | 33.8 | 39.2 bcd | 33.4 | 36.1 | 39.0 |
| Ransom | Oct. 18 | Oct. 31 | 28.9 | ---- | ---- | ---- | 42.4 abc | ---- | ---- | ---- |
| Coker 208 | Oct. 25 | Nov. 2 | 23.5 | 24.8 | 25.8 | 31.6 | 42.9 ab | 35.3 | 39.4 | 40.6 |
| F63-4000 | Oct. 18 | Oct. 31 | 28.9 | 27.7 | ---- | ---- | 44.3 ab | 34.8 | ---- | ---- |
| Coker 318 | Oct. 25 | Nov. 1 | 18.2 | 17.6 | 16.7 | 23.0 | 38.4 bcd | 37.4 | 34.4 | 35.2 |
| Hampton 266A | Oct. 25 | Nov. 4 | 25.9 | 24.3 | 26.7 | 32.4 | 45.7 a | 37.9 | 40.5 | 42.2 |

^{1/}Yields adjusted to 13% moisture and 60 pounds per bushel.

^{2/}Yields followed by the same letter are not significantly different at .05 probability level.

Coefficient of variation was 27 and 9.3%, respectively, for 1st and 2nd planting dates in 1971.

^{3/}Planting dates were May 20 and July 1 for 1st and 2nd plantings, respectively, in 1971.

able 13. Lodging, Plant Height, Height of First Pod, Seed Quality, and Seed Size of Varieties Tested at Upper Coastal Plain Substation, 1971

| Variety | Lodging rating ^{2/} | | Plant height | | Height 1st pod | | Seed quality rating ^{3/} | | Purple stain rating ^{4/} | | Number of seed per bushel | |
|--------------|------------------------------|--------------|--------------|--------------|----------------|--------------|-----------------------------------|--------------|-----------------------------------|--------------|---------------------------|--------------|
| | 1st planting | 2nd planting | 1st planting | 2nd planting | 1st planting | 2nd planting | 1st planting | 2nd planting | 1st planting | 2nd planting | 1st planting | 2nd planting |
| | | | Inches | Inches | Inches | Inches | | | | | Thous. | Thous. |
| Dare | 1.0 | 1.5 | 26 | 32 | 3.0 | 3.3 | 1 | 1 | 2 | 1 | 239 | 185 |
| Dork | 1.0 | 1.0 | 25 | 26 | 3.0 | 2.3 | 2 | 1 | 3 | 2 | 168 | 153 |
| Dood | 1.0 | 1.0 | 27 | 29 | 4.3 | 3.3 | 2 | 2 | 2 | 2 | 173 | 176 |
| McNair 600 | 1.0 | 1.0 | 34 | 30 | 3.8 | 3.5 | 2 | 1 | 1 | 2 | 216 | 195 |
| Davis | 1.0 | 1.0 | 33 | 33 | 4.5 | 3.5 | 2 | 1 | 1 | 2 | 183 | 173 |
| Lee 68 | 1.0 | 1.5 | 29 | 29 | 4.5 | 4.0 | 1 | 1 | 1 | 2 | 225 | 199 |
| Pickett 71 | 1.0 | 1.0 | 28 | 27 | 4.0 | 2.8 | 1 | 1 | 1 | 1 | 219 | 205 |
| McNair 800 | 1.0 | 1.0 | 31 | 28 | 5.3 | 3.3 | 2 | 1 | 2 | 1 | 203 | 211 |
| Bragg | 1.0 | 1.0 | 42 | 28 | 7.8 | 4.0 | 2 | 1 | 2 | 2 | 171 | 174 |
| Ransom | 1.0 | 1.0 | 33 | 32 | 5.8 | 4.5 | 1 | 2 | 1 | 2 | 178 | 162 |
| Doker 208 | 1.0 | 1.3 | 26 | 34 | 6.3 | 6.0 | 1 | 2 | 2 | 2 | 158 | 145 |
| 63-4000 | 1.0 | 1.0 | 37 | 33 | 7.5 | 3.5 | 1 | 2 | 3 | 1 | 157 | 145 |
| Doker 318 | 1.0 | 1.0 | 41 | 42 | 10.0 | 7.8 | 2 | 1 | 2 | 2 | 211 | 169 |
| Hampton 266A | 1.0 | 1.5 | 37 | 39 | 6.0 | 5.0 | 2 | 3 | 2 | 3 | 136 | 162 |

^{1/}Planting dates were May 20 and July 1 for 1st and 2nd planting, respectively.

^{2/}Lodging ratings were recorded on a scale from 1 to 5 according to: 1=almost all plants erect and 5=all plants down

^{3/}Seed quality ratings were on a scale from 1 to 5 according to: 1=very good and 5=very poor. badly.

^{4/}Purple stain ratings were on a scale from 1 to 5 according to: 1=no purple staining and 5=over 20% purple staining.

