



SOYBEAN *Update*

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2007 Soybean Performance Results for Early Planted Roundup Ready[®] Production Systems in Arkansas

Each year numerous soybean varieties are commercially available to growers in Arkansas. However, only limited numbers have been tested in Arkansas at April plantings. Yield performance in early (April) plantings varies according to location, adaptability to soils, relative maturity, lodging, shattering potential, disease and nematode resistance, as well as herbicide and chloride sensitivity. This update contains information derived from the 2006 and 2007 University of Arkansas, Division of Agriculture soybean variety testing program and is provided as an aid in variety selection for the Early Soybean Production System (ESPS). Typically, ESPS plantings consist of planting very early maturing varieties (generally MG III or IV) in April.

Since proper variety selection involves knowledge of yield potential, maturity, disease reaction, herbicide sensitivity, etc., these and many other important characteristics are listed in **Tables 6, 7, and 10**. Varieties are considered adapted to Arkansas conditions based primarily on their

yield performance across the different geographical regions of the state. The location, soil description, and cultural information for each of the 2007 soybean early-planted performance trials are found in **Table 1**.

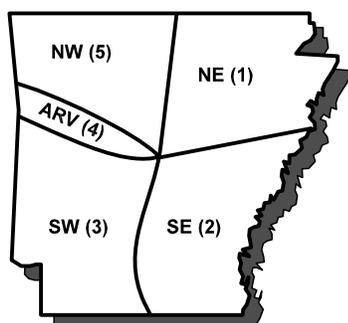
Soybean variety performance may vary from year to year, and two-year yield averages are better predictors of performance than data from a single year. Superior performance across several locations suggests that a variety has wide adaptability, thus multi-year and multi-location yields are particularly useful for making variety selection decisions.

SOYVA, an University of Arkansas, Division of Agriculture computerized variety selection program, can assist in making these field-specific variety selection decisions. Presently, **SOYVA** sorts through hundreds of adapted soybean varieties in Maturity Groups (MG) III – V, and makes variety recommendations based on responses to specific conditions described by the user. Soybean producers are encouraged to use

this publication and **SOYVA** when selecting varieties for the different production systems. Contact your county Extension agent for details concerning **SOYVA**. Additional information is available at the Cooperative Extension Service Web site (<http://www.aragriculture.org/soybean.htm>): click on the **Computer Programs** link.

ADAPTED SOYBEAN VARIETIES FOR EARLY SOYBEAN PRODUCTION

Generally, varieties within MG IV are the best adapted for these early (April) plantings in Arkansas; however, there are situations where varieties from MG III and V may perform well. Recent research indicates that indeterminate MG IV varieties can produce acceptable yields when planted early (April) and will normally mature in August through mid-September. Varieties of differing relative maturity (even within the same MG) are recommended in an attempt to spread out the risk of shattering due to adverse weather conditions or mechanical problems at harvest. In Arkansas, the following designations apply to varieties representing the various MGs: III – very early maturity; IV – early maturity; and V – mid-season maturity.



ABOUT THIS PUBLICATION

Table 1 consists of cultural information that pertains to the 2007 University of Arkansas Soybean Performance Trials. **Tables 2, 3 & 8** contain varietal information for both 2006 and 2007. **Tables 6, 7, & 10** contain the many varietal characteristics of those varieties designated as being adapted to the Arkansas soybean production environment and are grouped by MG. These adapted varieties are included in **SOYVA** and field specific variety recommendations can be obtained by utilizing this program.

Users of this publication are encouraged to review the “Key Code” page for further explanation regarding varietal ratings to disease, herbicide sensitivity and other agronomic considerations.

Figure 1. Area of Adaptation for Soybean Maturity Groups for All Production Systems

- Northeast Arkansas (1):** Groups III, IV, or V
- Southeast Arkansas (2):** Groups III, IV, or V
- Southwest Arkansas (3):** Groups III, IV, or V
- Arkansas River Valley (4):** Groups III, IV, or V
- Northwest Arkansas (5):** Groups IV or V

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| Table 1. Location, Soil Description, and Cultural Information of the Arkansas Performance Trials - 2007 | | | | | | | | |
|--|--------------------|---------------|-----------|--------------------|----------|---------|---------|---------------|
| Location | Soil Description | Planting Date | Row Width | Harvest Date by MG | | | | Previous Crop |
| | | | | III | Early IV | Late IV | Early V | |
| Keiser – Irrigated | Sharkey clay | 4/30 | Twin 10” | 9/17 | 9/21 | 10/3 | 10/5 | Soybean |
| Marianna – Irrigated | Calloway silt loam | 4/20 | 30” | 9/21 | 10/3 | 10/4 | 10/5 | Soybean |
| Rohwer – Irrigated | Hebert silt loam | 4/23 | 19” | 9/17 | 9/17 | 9/17 | 9/18 | Grain Sorghum |
| Poinsett Co. – Irrigated | Henry silt loam | 5/23 | 15” | 10/8 | --- | 10/31 | 10/31 | Rice |

**The KEY CODE for all the following tables is found on the back page.
Refer to the KEY CODE for a description of the abbreviated varietal characteristics.**

HOW TO MAKE YIELD COMPARISONS USING THE FOLLOWING TABLES: The LSD (0.05), Least Significant Difference, represents the minimum yield difference required between two varieties within the same location before concluding that their yields are truly different (while assuming a 5% risk that the yield differences are due to random chance.) Use only the LSD value listed below each column (location-maturity group) to compare variety yield averages among varieties within that column.

Note: an “*” beside a variety mean indicated that there are no statistical difference between that varietal mean and the highest yielding varietal mean “***” at the test location utilizing the appropriate LSD (0.05) value.

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Table 2. Yields (bu./A) of Early Planted, Maturity Group III Roundup Ready Soybean Cultivars at All Arkansas Locations, 2007.

| Brand/Hybrid | Keiser Irrigated | 2-Yr. Avg. | Marianna Irrigated | 2-Yr. Avg. | Rohwer Irrigated | 2-Yr. Avg. | Poinsett Co. ¹ Irrigated | 2-Yr. Avg. | Silt Loam ² Average | All Location ³ Average |
|---|------------------|------------|--------------------|------------|------------------|------------|-------------------------------------|------------|--------------------------------|-----------------------------------|
| -----bu./A----- | | | | | | | | | | |
| <u>Maturity Group III (RM 3.5 to 3.9)</u> | | | | | | | | | | |
| Armor 39-K4 | 51.0 | 64.7 | 60.5* | 66.2 | 72.6** | 68.6 | 76.3* | 70.3 | 69.8 | 65.1 |
| ASGROW AG3905 | 60.5* | 66.5 | 64.8* | 64.3 | 70.6* | 64.6 | 73.7 | 68.8 | 69.7 | 67.4 |
| ASGROW AG3906 | 57.2 | 57.2 | 65.8** | 64.8 | 71.9* | 68.9 | 84.4** | 75.7 | 74.0 | 69.8 |
| HBK R3824 | 63.5** | 64.4 | 63.9* | 63.3 | 68.7* | 65.2 | 64.8 | 63.6 | 65.8 | 65.2 |
| Progeny 3900RR | 53.9 | 56.6 | 51.7 | 57.2 | 74.0* | 70.4 | 67.0 | 66.8 | 64.2 | 61.7 |
| S03-051 | 49.9 | 49.0 | 60.3* | 63.2 | 69.2* | 62.9 | 68.9 | 70.2 | 66.1 | 62.1 |
| Mean | 56.5 | ▪ | 60.5 | ▪ | 71.3 | ▪ | 71.0 | ▪ | 67.6 | 64.8 |
| LSD (5%) | 5.2 | ▪ | 8.0 | ▪ | 8.2 | ▪ | 9.4 | ▪ | ▪ | ▪ |
| C.V. (%) | 6.4 | ▪ | 9.1 | ▪ | 7.9 | ▪ | 8.9 | ▪ | ▪ | ▪ |

Table 3. Yields (bu./A) of Early Planted, Maturity Group IV Roundup Ready Soybean Cultivars at All Arkansas Locations, 2007.

| Brand/Hybrid | Keiser Irrigated | 2-Yr. Avg. | Marianna Irrigated | 2-Yr. Avg. | Rohwer Irrigated | 2-Yr. Avg. | Poinsett Co. ¹ Irrigated | 2-Yr. Avg. | Silt Loam ² Average | All Location ³ Average |
|--|------------------|------------|--------------------|------------|------------------|------------|-------------------------------------|------------|--------------------------------|-----------------------------------|
| -----bu./A----- | | | | | | | | | | |
| <u>Maturity Group IV Early (RM 4.0 to 4.6)</u> | | | | | | | | | | |
| Armor 42-P7 | 45.9 | 52.7 | 50.7 | 61.7 | 60.6 | 66.5 | ▪ | ▪ | 55.7 | 52.4 |
| ASGROW AG4403 | 72.3* | 71.4 | 75.6** | 79.2 | 67.2* | 65.5 | ▪ | ▪ | 71.4 | 71.7 |
| ASGROW AG4404 | 61.0 | 57.7 | 65.6 | 69.4 | 69.3* | 60.8 | ▪ | ▪ | 67.5 | 65.3 |
| ASGROW DKB46-51 | 66.3 | 62.6 | 71.3* | 70.2 | 66.0* | 61.7 | ▪ | ▪ | 68.7 | 67.9 |
| Croplan Genetics RC4444 | 74.6** | 75.2 | 66.9 | 75.4 | 66.4* | 67.2 | ▪ | ▪ | 66.7 | 69.3 |
| Croplan Genetics RC4655 | 64.3 | 64.7 | 54.0 | 61.2 | 46.3 | 51.3 | ▪ | ▪ | 50.2 | 54.9 |
| Delta Grow 4150RR | 61.3 | 62.7 | 59.6 | 67.5 | 63.9* | 63.1 | ▪ | ▪ | 61.8 | 61.6 |
| Delta Grow 4460RR | 53.8 | 57.0 | 62.7 | 70.5 | 64.2* | 63.3 | ▪ | ▪ | 63.5 | 60.2 |
| Delta Grow 4660RR | 73.9* | 74.7 | 56.0 | 59.8 | 56.2 | 58.6 | ▪ | ▪ | 56.1 | 62.0 |
| Delta King DK4667 | 67.1* | 76.7 | 64.8 | 69.7 | 51.0 | 55.9 | ▪ | ▪ | 57.9 | 61.0 |
| Deltapine DP4112RR/S | 67.4* | 67.6 | 60.8 | 63.1 | 54.7 | 50.6 | ▪ | ▪ | 57.8 | 61.0 |
| Deltapine DP4546RR | 74.4* | 79.0 | 56.5 | 64.8 | 56.8 | 59.8 | ▪ | ▪ | 56.7 | 62.6 |
| Dyna-Gro 37A44 | 57.3 | 60.0 | 69.7* | 74.5 | 61.3* | 64.2 | ▪ | ▪ | 65.5 | 62.8 |
| Dyna-Gro 37F46 | 65.1 | 76.4 | 62.6 | 67.0 | 57.3 | 60.4 | ▪ | ▪ | 60.0 | 61.7 |
| MORSOY RT4485N | 56.3 | 59.7 | 68.2* | 73.7 | 59.3 | 60.2 | ▪ | ▪ | 63.8 | 61.3 |
| Progeny 4206RR | 65.7 | 69.3 | 73.9* | 83.4 | 76.5** | 68.7 | ▪ | ▪ | 75.2 | 72.0 |
| Progeny 4606RR | 62.7 | 62.1 | 68.4* | 73.6 | 65.8* | 65.6 | ▪ | ▪ | 67.1 | 65.6 |
| Terral TV44R27 | 57.8 | 60.4 | 66.0 | 68.3 | 68.5* | 64.1 | ▪ | ▪ | 67.3 | 64.1 |
| Terral TV46R15 | 68.2* | 70.4 | 57.8 | 70.2 | 48.1 | 54.9 | ▪ | ▪ | 53.0 | 58.0 |
| USG 7440NRR | 73.6* | 72.4 | 66.1 | 73.0 | 61.1* | 62.6 | ▪ | ▪ | 63.6 | 66.9 |
| USG 7466NRR | 72.2* | 76.5 | 60.7 | 64.2 | 53.8 | 59.0 | ▪ | ▪ | 57.3 | 62.2 |
| Mean | 66.9 | ▪ | 64.7 | ▪ | 63.2 | ▪ | ▪ | ▪ | 64.0 | 64.9 |
| LSD (5%) | 7.8 | ▪ | 7.4 | ▪ | 6.6 | ▪ | ▪ | ▪ | ▪ | ▪ |
| C.V. (%) | 8.4 | ▪ | 8.3 | ▪ | 7.5 | ▪ | ▪ | ▪ | ▪ | ▪ |

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Table 3 (cont.). Yields (bu./A) of Early Planted, Maturity Group IV Roundup Ready Soybean Cultivars at All Arkansas Locations, 2007.

| Brand/Hybrid | Keiser Irrigated | 2-Yr. Avg. | Marianna Irrigated | 2-Yr. Avg. | Rohwer Irrigated | 2-Yr. Avg. | Poinsett Co. ¹ Irrigated | 2-Yr. Avg. | Silt Loam ² Average | All Location ³ Average |
|---|------------------|------------|--------------------|------------|------------------|------------|-------------------------------------|------------|--------------------------------|-----------------------------------|
| -----bu./A----- | | | | | | | | | | |
| <u>Maturity Group IV Late (RM 4.7 to 4.9)</u> | | | | | | | | | | |
| ASGROW AG4703 | 65.8 | 70.0 | 57.0 | 68.2 | 67.6* | 65.6 | 72.7 | 73.5 | 65.8 | 65.8 |
| ASGROW AG4903 | 69.7 | 76.2 | 59.5 | 69.9 | 63.6 | 66.3 | 91.2** | 82.1 | 71.4 | 71.0 |
| Croplan Genetics RC4842 | 71.6* | 77.3 | 55.3 | 64.2 | 58.5 | 57.9 | 61.7 | 69.6 | 58.5 | 61.8 |
| Croplan Genetics RC4955 | 73.1* | 79.7 | 50.1 | 58.1 | 53.7 | 58.4 | 88.9* | 78.4 | 64.2 | 66.5 |
| Delta Grow 4770RR | 69.6 | 72.5 | 61.8 | 69.1 | 62.7 | 62.1 | 66.5 | 67.2 | 63.7 | 65.2 |
| Delta Grow 4840RR | 70.2 | 74.1 | 58.0 | 62.7 | 61.0 | 61.4 | 77.8 | 76.9 | 65.6 | 66.8 |
| Delta Grow 4970RR | 76.5* | 80.3 | 51.8 | 64.6 | 63.0 | 64.6 | 79.0 | 74.5 | 64.6 | 67.6 |
| Delta Grow 4975LARR | 76.4* | 78.8 | 70.4** | 77.6 | 63.0 | 64.3 | 87.4* | 82.2 | 73.6 | 74.3 |
| Delta King DK4763 | 66.7 | 74.0 | 59.0 | 63.8 | 67.8* | 64.0 | 69.1 | 71.3 | 65.3 | 65.7 |
| Delta King DK4866 | 78.8* | 82.2 | 59.5 | 72.7 | 63.3 | 65.9 | 88.4* | 77.3 | 70.4 | 72.5 |
| Delta King DK4967 | 76.5* | 79.6 | 55.3 | 63.6 | 64.9 | 63.0 | 65.5 | 73.2 | 61.9 | 65.6 |
| Deltapine DP4888RR/S | 69.0 | 75.1 | 53.1 | 64.7 | 62.5 | 63.6 | 80.4* | 77.2 | 65.3 | 66.3 |
| Deltapine DP4919RR/S | 74.8* | 79.5 | 58.2 | 66.5 | 67.6* | 64.9 | 69.1 | 70.4 | 65.0 | 67.4 |
| Dyna-Gro 36Y48 | 77.2* | 82.2 | 62.7* | 74.3 | 65.5 | 64.3 | 83.2* | 77.1 | 70.5 | 72.2 |
| HBK R4724 | 79.9* | 82.0 | 52.1 | 64.8 | 69.6* | 66.3 | 65.3 | 68.2 | 62.3 | 66.7 |
| HBK R4924 | 60.9 | 73.4 | 60.5 | 71.4 | 68.4* | 70.4 | 85.4* | 79.0 | 71.4 | 68.8 |
| MORSOY RT4802N | 78.9* | 81.8 | 50.5 | 61.5 | 60.4 | 59.6 | 73.0 | 73.3 | 61.3 | 65.7 |
| MORSOY RT4806N | 74.8* | 79.0 | 64.6* | 67.9 | 63.9 | 61.1 | 73.0 | 71.1 | 67.2 | 69.1 |
| MORSOY RT4914N | 72.5* | 76.5 | 53.3 | 67.5 | 70.6* | 68.4 | 74.8 | 76.1 | 66.2 | 67.8 |
| MORSOY RTS4706N | 65.5 | 69.3 | 65.1* | 74.1 | 65.4 | 66.9 | 82.8* | 83.8 | 71.1 | 69.7 |
| MORSOY RTS4955N | 72.5* | 75.6 | 64.7* | 74.4 | 63.7 | 64.0 | 83.4* | 77.0 | 70.6 | 71.1 |
| Pioneer 94B73 | 72.8* | 75.9 | 60.3 | 70.3 | 72.8** | 63.6 | 72.3 | 68.6 | 68.5 | 69.6 |
| Pioneer 94M80 | 70.5 | 76.0 | 46.5 | 59.0 | 62.4 | 62.4 | 52.3 | 62.9 | 53.7 | 57.9 |
| Progeny 4706RR | 73.1* | 77.5 | 64.3* | 73.2 | 66.7* | 63.0 | 72.0 | 73.2 | 67.7 | 69.0 |
| Progeny 4804RR | 69.3 | 76.5 | 57.4 | 64.0 | 63.8 | 63.0 | 69.4 | 69.4 | 63.5 | 65.0 |
| Progeny 4906RR | 78.1* | 81.3 | 66.3* | 76.8 | 62.1 | 63.6 | 87.2* | 79.0 | 71.9 | 73.4 |
| Progeny 4949RR | 70.3 | 75.2 | 56.2 | 66.5 | 63.5 | 66.4 | 74.1 | 71.1 | 64.6 | 66.0 |
| Schillinger 495RC | 79.5* | 78.9 | 49.6 | 59.1 | 61.3 | 63.1 | 84.1* | 79.2 | 65.0 | 68.6 |
| Terral TV47R17 | 74.2* | 77.9 | 50.8 | 60.3 | 54.8 | 57.3 | 66.2 | 71.3 | 57.3 | 61.5 |
| Terral TV49R17 | 70.9 | 76.8 | 44.3 | 57.2 | 51.2 | 54.9 | 71.5 | 71.4 | 55.7 | 59.5 |
| USG 7494NRR | 66.7 | 71.2 | 52.2 | 61.7 | 61.5 | 59.3 | 72.8 | 72.6 | 62.2 | 63.3 |
| USG 74A91 | 80.2** | 81.8 | 60.7 | 71.9 | 63.3 | 63.3 | 83.3* | 77.8 | 69.1 | 71.9 |
| USG 74F96 | 69.3 | 77.8 | 57.0 | 70.0 | 57.0 | 62.2 | 78.9 | 75.7 | 64.3 | 65.6 |
| Mean | 72.1 | ▪ | 56.0 | ▪ | 63.7 | ▪ | 77.6 | ▪ | 65.8 | 67.4 |
| LSD (5%) | 9.2 | ▪ | 7.9 | ▪ | 6.1 | ▪ | 11.4 | ▪ | ▪ | ▪ |
| C.V. (%) | 7.9 | ▪ | 10.2 | ▪ | 7.0 | ▪ | 10.4 | ▪ | ▪ | ▪ |

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Table 4. Nematode, Disease, and Chloride Sensitivity Ratings for MG III Soybean Cultivars⁴.

| Brand/Variety | Root Knot Nematode ⁵ | Soybean Cyst Nematode ⁶ | | | Frogeye | Stem Canker | Sudden Death Syn. | Aerial Blight | Chloride Sensitivity ⁷ | |
|----------------|---------------------------------|------------------------------------|-----|-----|---------|-------------|-------------------|---------------|-----------------------------------|----------|
| | | 2 | 5 | 6 | | | | | 2006 | 2007 |
| Armor 39-K4 | --- | --- | --- | --- | --- | 1 | --- | --- | Excluder | Mixed |
| ASGROW AG3905 | --- | --- | --- | --- | 3* | 7 | 3* | --- | Includer | Includer |
| ASGROW AG3906 | --- | --- | --- | --- | 3* | 1 | 5* | --- | Includer | Includer |
| HBK R3824 | 7 | 7 | 7 | 7 | 3^ | 1 | 3* | 5^ | Includer | Includer |
| Progeny 3900RR | --- | --- | --- | --- | --- | 1 | 3* | --- | Includer | Includer |
| S03-051RR | 7 | 7 | 7 | 7 | 3^ | 7 | --- | 3^ | Mixed | Excluder |

Table 5. Nematode, Disease, and Chloride Sensitivity Ratings for MG IV Soybean Cultivars¹.

| Brand/Variety | Root Knot Nematode ⁵ | Soybean Cyst Nematode ⁶ | | | Frogeye | Stem Canker | Sudden Death Syn. | Aerial Blight | Chloride Sensitivity ⁷ | |
|-------------------------|---------------------------------|------------------------------------|-----|-----|---------|-------------|-------------------|---------------|-----------------------------------|----------|
| | | 2 | 5 | 6 | | | | | 2006 | 2007 |
| Armor 42-P7 | --- | --- | --- | --- | 3* | 1 | 3* | --- | Includer | Includer |
| ASGROW AG4403 | 5 | 7 | 7 | 7 | 7 | 1 | 3* | 3^ | Includer | Includer |
| ASGROW AG4404 | 7 | 7 | 7 | 5 | 7 | 5 | 5* | 5^ | Includer | Includer |
| ASGROW AG4703 | 7 | 7 | 7 | 7 | 7 | 5 | 5* | 5^ | Includer | Includer |
| ASGROW AG4903 | 7 | 7 | 7 | 7 | 7 | 7 | 7^ | 7^ | Includer | Includer |
| ASGROW DKB46-51 | 7 | 7 | 7 | 5 | 7^ | 5 | 5* | 3^ | Includer | Includer |
| Croplan Genetics RC4444 | --- | --- | --- | --- | --- | 1 | --- | --- | Includer | Includer |
| Croplan Genetics RC4655 | --- | --- | --- | --- | --- | 1 | --- | --- | Excluder | Excluder |
| Croplan Genetics RC4842 | --- | --- | --- | --- | --- | 1 | --- | --- | Includer | Includer |
| Croplan Genetics RC4955 | --- | --- | --- | --- | --- | 1 | --- | --- | Includer | Includer |
| Delta Grow 4150RR | 7 | 7 | 7 | 5 | 5^ | 1 | 3* | 5^ | Excluder | Excluder |
| Delta Grow 4460RR | 7 | 7 | 7 | 3 | 3^ | 3 | 3* | 5^ | Includer | Includer |
| Delta Grow 4660RR | 5 | 7 | 7 | 5 | 5^ | 1 | 3* | 5^ | Includer | Includer |
| Delta Grow 4770RR | 7 | 7 | 7 | 5 | 3* | 1 | 3* | 7^ | --- | Includer |
| Delta Grow 4840RR | 7 | 7 | 5 | 5 | 5 | 3 | 3* | 7^ | Includer | Includer |
| Delta Grow 4970RR | 7 | 7 | 7 | 3 | 1 | 1 | 7 | 5^ | Includer | Includer |
| Delta Grow 4975LARR | 7 | 7 | 7 | 7 | 5^ | 7 | 3^ | 3^ | --- | Includer |
| Delta King DK4667 | 3 | 7 | 7 | 5 | 3^ | 1 | 3* | 3^ | Includer | Includer |
| Delta King DK4763 | 7 | 5 | 7 | 3 | 7 | 7 | 5 | 7^ | Includer | Mixed |
| Delta King DK4866 | 7 | 7 | 7 | 7 | 5 | 7 | 3 | 5^ | Mixed | Mixed |

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Table 5. (continued). Nematode, Disease, and Chloride Sensitivity Ratings for MG IV Soybean Cultivars⁴.

| Brand/Variety | Root Knot Nematode ⁵ | Soybean Cyst Nematode ⁶ | | | Frogeye | Stem Canker | Sudden Death Syn. | Aerial Blight | Chloride Sensitivity ⁷ | |
|----------------------|------------------------------------|---------------------------------------|-----|-----|---------|----------------|----------------------|------------------|-----------------------------------|----------|
| | | 2 | 5 | 6 | | | | | 2006 | 2007 |
| Delta King DK4967 | 7 | 7 | 7 | 3 | 3 | 1 | 7 | 5^ | Includer | Includer |
| Deltapine DP4112RR/S | 5 | 7 | 7 | 7 | 3^ | 1 | 5* | 5^ | Includer | Includer |
| Deltapine DP4546RR | 5 | 7 | 7 | 7 | 3 | 3 | 7 | 3^ | Excluder | Excluder |
| Deltapine DP4888RR/S | 7 | 7 | 7 | 7 | 3^ | 1 | --- | 7^ | --- | Mixed |
| Deltapine DP4919RR/S | 7 | 5 | 7 | 5 | 3^ | 1 | --- | 3^ | --- | Includer |
| Dyna-Gro 36Y48 | 7 | 7 | 5 | 7 | 5^ | 1 | 1^ | 3^ | --- | Includer |
| Dyna-Gro 37A44 | 7 | 7 | 7 | 5 | 3^ | 3 | 3* | 5^ | Includer | Includer |
| Dyna-Gro 37F46 | 5 | 7 | 7 | 7 | 3^ | 1 | 1* | 7^ | Includer | Includer |
| HBK R4724 | 7 | 7 | 7 | 7 | 5 | 1 | 5^ | 3^ | Mixed | Mixed |
| HBK R4924 | 7 | 7 | 7 | 5 | 5 | 1 | 3 | 5^ | Includer | Mixed |
| MORSOY RT4485N | 7 | 7 | 5 | 3 | 3^ | 1 | 3* | 5^ | Includer | Includer |
| MORSOY RT4802N | 7 | 7 | 7 | 5 | 1^ | 3 | 3* | 5^ | Includer | Includer |
| MORSOY RT4806N | 7 | 7 | 7 | 5 | 1^ | 1 | 1^ | 7^ | --- | Includer |
| MORSOY RT4914N | 7 | 7 | 7 | 5 | 1^ | 1 | 1* | 3^ | Includer | Includer |
| MORSOY RTS4706N | 7 | 7 | 5 | 5 | 1^ | 1 | --- | 3^ | --- | Includer |
| MORSOY RTS4955N | 5 | 5 | 7 | 5 | 5^ | 1 | 3* | 5^ | Includer | Includer |
| Pioneer 94B73 | 7 | 7 | 7 | 7 | 1 | 3 | 5* | 5^ | Includer | Includer |
| Pioneer 94M80 | 7 | 7 | 7 | 5 | 3^ | 1 | 1* | 5^ | Excluder | Excluder |
| Progeny 4206RR | 1 | 5 | 7 | 3 | 1^ | 1 | --- | 5^ | Includer | Includer |
| Progeny 4606RR | 5 | 7 | 7 | 7 | 3^ | 1 | --- | 3^ | Includer | Includer |
| Progeny 4706RR | 7 | 5 | 7 | 3 | 3^ | 1 | 1^ | 3 | --- | Includer |
| Progeny 4804RR | 5 | 7 | 7 | 5 | 5 | 1 | 3^ | 6 | Includer | Includer |
| Progeny 4906RR | 7 | 7 | 5 | 7 | 5^ | 7 | 1 | 3 | --- | Includer |
| Progeny 4949RR | 7 | 7 | 7 | 7 | 1 | 1 | 6 | 6 | Includer | Includer |
| Schillinger 495RC | 7 | 7 | 7 | 5 | 1^ | 1 | --- | 3^ | --- | Includer |
| Terral TV44R27 | 7 | 7 | 7 | 3 | 3^ | 1 | 3* | 5^ | Includer | Includer |
| Terral TV46R15 | 7 | 7 | 7 | 7 | 1^ | 1 | --- | 7^ | Includer | Includer |
| Terral TV47R17 | 7 | 7 | 5 | 7 | 1* | 5 | 1* | 7^ | Mixed | Mixed |
| Terral TV49R17 | 7 | 7 | 7 | 3 | 1^ | 5 | 1* | 7^ | Mixed | Includer |
| USG 7440NRR | 5 | 7 | 7 | 7 | 7 | 1 | 3* | 3^ | Includer | Includer |
| USG 7466NRR | 5 | 7 | 7 | 5 | 5^ | 1 | 3* | 7^ | Includer | Includer |
| USG 7494NRR | 7 | 7 | 7 | 7 | 7 | 1 | 3^ | 7^ | Includer | Includer |
| USG 74A91 | --- | --- | --- | --- | 5* | 7 | 3* | --- | --- | Includer |
| USG 74F96 | --- | --- | --- | --- | 5* | 1 | 5* | --- | --- | Includer |

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Table 6. Agronomic Characteristics for MG III Soybean Cultivars.

| Brand/Variety | Relative Maturity | Sulfonylurea Tolerance (STS) | Avg. Days to Maturity ⁸ | Lodging Score ⁹ | Shatter Score ¹⁰ | Plant Ht(in) ¹¹ | Flower Color | Pubescence Color | Pod Color | Hilum Color |
|----------------|-------------------|------------------------------|------------------------------------|----------------------------|-----------------------------|----------------------------|--------------|------------------|-----------|-------------|
| Armor 39-K4 | 3.9 | N | 121.7 | 2.9 | 2.3 | 38.5 | Purple | Brown | Tan | Black |
| ASGROW AG3905 | 3.9 | N | 121.3 | 1.3 | 1.2 | 34.0 | Purple | Tawny | Tan | Black |
| ASGROW AG3906 | 3.9 | N | 123.3 | 1.0 | 1.4 | 32.3 | Purple | Tawny | Brown | Black |
| HBK R3824 | 4.0 | N | 123.7 | 2.1 | 1.3 | 34.8 | Purple | Light Tawny | Tan | Black |
| Progeny 3900RR | 3.9 | N | 125.3 | 1.2 | 1.6 | 30.8 | Purple | Light Tawny | Tan | Black |
| S03-051RR | 3.9 | N | 122.3 | 1.8 | 3.3 | 39.8 | White | Tawny | Tan | Black |

Table 7. Agronomic Characteristics for MG IV Soybean Cultivars.

| Brand/Variety | Relative Maturity | Sulfonylurea Tolerance (STS) | Avg. Days to Maturity ⁸ | Lodging Score ⁹ | Shatter Score ¹⁰ | Plant Ht(in) ¹¹ | Flower Color | Pubescence Color | Pod Color | Hilum Color |
|-------------------------|-------------------|------------------------------|------------------------------------|----------------------------|-----------------------------|----------------------------|--------------|------------------|-----------|-------------|
| Armor 42-P7 | 4.1 | N | 128.3 | 1.8 | 1.0 | 33.7 | Purple | Brown | --- | Black |
| ASGROW AG4403 | 4.4 | N | 127.7 | 1.2 | 1.0 | 33.7 | Purple | Light Tawny | Tan | Black |
| ASGROW AG4404 | 4.4 | Y | 128.7 | 1.0 | 1.0 | 30.7 | White | Tawny | Tan | Black |
| ASGROW AG4703 | 4.7 | N | 130.3 | 1.5 | 1.1 | 29.8 | Purple | Light Tawny | Tan | Black |
| ASGROW AG4903 | 4.9 | Y | 135.3 | 1.3 | 1.4 | 32.0 | Purple | Light Tawny | Tan | Black |
| ASGROW DKB46-51 | 4.6 | N | 128.3 | 1.4 | 1.0 | 33.7 | White | Tawny | Tan | Black |
| Croplan Genetics RC4444 | 4.4 | N | 127.0 | 1.1 | 1.2 | 36.7 | Purple | Light Tawny | Brown | Black |
| Croplan Genetics RC4655 | 4.6 | N | 126.7 | 1.1 | 1.2 | 42.7 | Purple | Tawny | Tan | Black |
| Croplan Genetics RC4842 | 4.8 | N | 125.7 | 1.9 | 1.8 | 32.3 | Purple | Tawny | Tan | Black |
| Croplan Genetics RC4955 | 4.9 | N | 138.0 | 1.7 | 1.3 | 41.5 | Purple | Light Tawny | Brown | Black |
| Delta Grow 4150RR | 4.1 | N | 130.3 | 1.5 | 1.2 | 35.7 | White | Tawny | Tan | Brown |
| Delta Grow 4460RR | 4.4 | N | 124.3 | 3.5 | 1.7 | 39.7 | White/Purple | Light Tawny | Brown | Black |
| Delta Grow 4660RR | 4.6 | N | 128.3 | 3.2 | 1.2 | 38.7 | Purple | Light Tawny | Brown | Black |
| Delta Grow 4770RR | 4.7 | N | 126.7 | 1.7 | 1.9 | 36.0 | White | Light Tawny | Brown | Black |
| Delta Grow 4840RR | 4.8 | N | 130.0 | 2.9 | 1.2 | 34.8 | Purple | Light Tawny | Tan | Black |
| Delta Grow 4970RR | 4.9 | N | 134.3 | 2.5 | 1.5 | 39.0 | Purple | Tawny | Brown | Black |
| Delta Grow 4975LARR | 4.9 | N | 131.3 | 1.5 | 1.1 | 38.3 | Purple | Light Tawny | Tan | Black |
| Delta King DK4667 | 4.6 | N | 128.7 | 3.6 | 1.5 | 42.3 | Purple | Light Tawny | Brown | Black |
| Delta King DK4763 | 4.7 | N | 128.3 | 1.8 | 1.1 | 32.3 | White | Tawny | Tan | Black |
| Delta King DK4866 | 4.8 | Y | 135.7 | 1.5 | 1.1 | 37.5 | Purple | Light Tawny | Brown | Black |

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Table 7 (continued). Agronomic Characteristics for MG IV Soybean Cultivars.

| Brand/Variety | Relative Maturity | Sulfonylurea Tolerance (STS) | Avg. Days to Maturity ⁸ | Lodging Score ⁹ | Shatter Score ¹⁰ | Plant Ht(in) ¹¹ | Flower Color | Pubescence Color | Pod Color | Hilum Color |
|----------------------|-------------------|------------------------------|------------------------------------|----------------------------|-----------------------------|----------------------------|--------------|------------------|-----------|-------------|
| Delta King DK4967 | 4.9 | N | 125.7 | 1.8 | 1.5 | 33.0 | Purple | Tawny | Tan | Black |
| Deltapine DP4112RR/S | 4.1 | Y | 124.0 | 1.5 | 2.0 | 39.0 | Purple | Tawny | --- | --- |
| Deltapine DP4546RR | 4.5 | N | 124.3 | 2.4 | 1.6 | 38.7 | White | Tawny | Tan | Black |
| Deltapine DP4888RR/S | 4.8 | Y | 140.0 | 1.3 | 1.6 | 38.0 | White | Tawny | Tan | Black |
| Deltapine DP4919RR/S | 4.9 | Y | 130.0 | 1.7 | 1.9 | 37.8 | White | Tawny | Tan | Black |
| Dyna-Gro 36Y48 | 4.8 | Y | 134.3 | 2.1 | 1.1 | 36.5 | Purple | Gray | Tan | Imp. Black |
| Dyna-Gro 37A44 | 4.4 | N | 126.0 | 2.1 | 1.3 | 39.0 | Purple | Tawny | Brown | Brown |
| Dyna-Gro 37F46 | 4.6 | N | 129.3 | 3.4 | 1.4 | 39.3 | Purple | Light Tawny | Brown | Black |
| HBK R4724 | 4.7 | N | 134.7 | 1.5 | 3.2 | 37.3 | Purple | Light Tawny | Brown | Black |
| HBK R4924 | 4.9 | N | 132.7 | 2.0 | 1.1 | 40.5 | Purple | Light Tawny | Brown | Black |
| MORSOY RT4485N | 4.4 | N | 125.3 | 1.9 | 1.3 | 37.7 | Purple | Light Tawny | Brown | Brown |
| MORSOY RT4802N | 4.8 | N | 127.3 | 1.8 | 1.9 | 35.3 | Purple | Tawny | Tan | Black |
| MORSOY RT4806N | 4.8 | N | 126.0 | 2.1 | 1.5 | 35.0 | Purple | Light Tawny | Tan | Black |
| MORSOY RT4914N | 4.9 | N | 135.3 | 2.7 | 1.3 | 36.5 | Purple | Light Tawny | Brown | Black |
| MORSOY RTS4706N | 4.7 | Y | 131.0 | 1.1 | 1.0 | 28.5 | Mix | Gray | Tan | Imp. Black |
| MORSOY RTS4955N | 4.9 | Y | 135.0 | 2.2 | 1.4 | 38.5 | Purple | Gray | Tan | Imp. Black |
| Pioneer 94B73 | 4.7 | N | 131.3 | 2.6 | 1.2 | 37.8 | Purple | Light Tawny | Tan | Black |
| Pioneer 94M80 | 4.8 | N | 127.7 | 1.8 | 2.4 | 38.3 | White | Tawny | Tan | Black |
| Progeny 4206RR | 4.2 | N | 131.3 | 1.0 | 1.8 | 32.0 | White | Light Tawny | Brown | Black |
| Progeny 4606RR | 4.6 | N | 130.0 | 1.2 | 1.2 | 30.0 | Purple | Gray | Tan | Black |
| Progeny 4706RR | 4.7 | N | 126.0 | 2.2 | 1.5 | 33.0 | Purple | Tawny | Tan | Black |
| Progeny 4804RR | 4.8 | N | 127.0 | 2.4 | 1.1 | 34.0 | Purple | Light Tawny | Tan | Black |
| Progeny 4906RR | 4.9 | N | 136.7 | 1.5 | 1.1 | 37.3 | Purple | Tawny | Tan | Black |
| Progeny 4949RR | 4.9 | N | 139.7 | 1.7 | 1.3 | 38.8 | White | Tawny | Brown | Black |
| Schillinger 495RC | 4.9 | N | 135.0 | 2.6 | 1.4 | 38.8 | Purple | Light Tawny | Brown | Black |
| Terral TV44R27 | 4.4 | N | 124.3 | 2.7 | 1.2 | 39.3 | Purple | Light Tawny | Brown | Black |
| Terral TV46R15 | 4.6 | N | 125.3 | 1.9 | 1.7 | 39.3 | White | Tawny | Tan | Black |
| Terral TV47R17 | 4.7 | N | 138.7 | 2.5 | 2.0 | 44.3 | Purple | Gray | Brown | Black |
| Terral TV49R17 | 4.9 | N | 130.0 | 1.7 | 1.8 | 44.3 | White | Tawny | Brown | Black |
| USG 7440NRR | 4.4 | N | 126.7 | 1.0 | 1.3 | 35.0 | Purple | Light Tawny | Brown | Black |
| USG 7466NRR | 4.6 | N | 130.0 | 3.5 | 1.3 | 39.7 | Purple | Light Tawny | Brown | Black |
| USG 7494NRR | 5.0 | N | 128.0 | 2.3 | 1.2 | 33.8 | Purple | Light Tawny | Tan | Black |
| USG 74A91 | 4.9 | N | 133.3 | 1.7 | 1.0 | 37.3 | Purple | Light Tawny | Tan | Black |
| USG 74F96 | 4.9 | N | 128.3 | 2.6 | 1.2 | 32.3 | Purple | Light Tawny | Tan | Black |

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Table 8. Yields (bu./A) of Early Planted, Maturity Group V Roundup Ready Soybean Cultivars at All Arkansas Locations, 2007.

| Brand/Hybrid | Keiser Irrigated | 2-Yr. Avg. | Marianna Irrigated | 2-Yr. Avg. | Rohwer Irrigated | 2-Yr. Avg. | Poinsett Co. ¹ Irrigated | 2-Yr. Avg. | Silt Loam ² Average | All Location ³ Average |
|---|------------------|------------|--------------------|------------|------------------|------------|-------------------------------------|------------|--------------------------------|-----------------------------------|
| -----bu./A----- | | | | | | | | | | |
| <u>Maturity Group V (RM 5.0 to 5.3)</u> | | | | | | | | | | |
| Croplan Genetics RC5222 | 65.8* | 70.9 | 62.2* | 68.2 | 70.3** | 69.7 | 67.8 | 69.3 | 66.8 | 66.5 |
| Delta Grow 5160RR/STS | 70.5* | 69.2 | 63.6* | 74.5 | 63.8* | 63.1 | 60.9 | 62.1 | 62.8 | 64.7 |
| Delta King DK5066 | 77.8* | 74.2 | 66.8* | 75.9 | 69.5* | 64.5 | 51.8 | 61.2 | 62.7 | 66.5 |
| Delta King DK5161 | 65.3** | 72.1 | 59.5* | 64.2 | 55.3 | 56.6 | 62.0 | 63.4 | 58.9 | 60.5 |
| Delta King DK52K6 | 68.6* | 70.9 | 60.0* | 64.0 | 43.6 | 46.5 | 73.3* | 70.9 | 59.0 | 61.4 |
| Deltapine DP5115RR/S | 66.9* | 69.0 | 57.8* | 65.9 | 61.7 | 61.6 | 60.9 | 61.3 | 60.1 | 61.8 |
| Dyna-Gro 33B52 | 77.4* | 76.1 | 54.7 | 62.8 | 53.7 | 59.6 | 65.8 | 63.2 | 58.1 | 62.9 |
| HBK R5226 | 71.9* | 74.1 | 54.6 | 60.8 | 62.7* | 59.3 | 80.7** | 68.8 | 66.0 | 67.5 |
| MORSOY RT5306N | 68.4* | 71.8 | 67.4* | 69.7 | 59.7 | 62.5 | 78.1* | 71.7 | 68.4 | 68.4 |
| Progeny 5115RR | 67.2* | 68.8 | 67.6** | 71.1 | 55.7 | 57.9 | 67.3 | 63.0 | 63.5 | 64.5 |
| Mean | 68.8 | ▪ | 58.4 | ▪ | 59.4 | ▪ | 64.1 | ▪ | 60.6 | 62.7 |
| LSD (5%) | 7.6 | ▪ | 10.3 | ▪ | 8.2 | ▪ | 11.3 | ▪ | ▪ | ▪ |
| C.V. (%) | 7.8 | ▪ | 12.6 | ▪ | 9.9 | ▪ | 12.3 | ▪ | ▪ | ▪ |

Table 9. Nematode, Disease, and Chloride Sensitivity Ratings for MG V Soybean Cultivars⁴.

| Brand/Variety | Root Knot Nematode ⁵ | Soybean Cyst Nematode ⁶ | | | Frogeye | Stem Canker | Sudden Death Syn. | Aerial Blight | Chloride Sensitivity ⁷ | |
|-------------------------|---------------------------------|------------------------------------|-----|---|---------|-------------|-------------------|---------------|-----------------------------------|----------|
| | | 2 | 5 | 6 | | | | | 2006 | 2007 |
| Croplan Genetics RC5222 | 7 | 7 | 7 | 3 | --- | 1 | --- | --- | Excluder | Excluder |
| Delta Grow 5160RR/STS | 7 | 7 | 7 | 5 | 5^ | 1 | 3^ | 3^ | Includer | Includer |
| Delta King DK5066 | 7 | 7 | 7 | 7 | 5^ | 1 | 3^ | 5^ | Includer | Includer |
| Delta King DK5161 | 7 | 7 | 7 | 7 | 3^ | 1 | 7* | 7^ | Mixed | Mixed |
| Delta King DK52K6 | 5 | 7 | 7 | 5 | 3^ | 7 | 3^ | 7^ | Excluder | Mixed |
| Deltapine DP5115RR/S | 7 | 5 | 5 | 7 | 3^ | 1 | 3 | 7^ | Includer | Includer |
| Dyna-Gro 33B52 | 7 | 7 | 7 | 7 | 1 | 7 | 9 | 3^ | Mixed | Mixed |
| HBK R5226 | 5 | 5 | 7 | 5 | 3^ | 1 | 7* | 7^ | Mixed | Excluder |
| MORSOY RT5306N | 7 | 5 | --- | 7 | 3^ | 3 | 1^ | 7^ | Excluder | Mixed |
| Progeny 5115RR | 7 | 5 | 5 | 5 | 3^ | 1 | 5^ | 3^ | Includer | Includer |

Table 10. Agronomic Characteristics for MG V Soybean Cultivars.

| Brand/Variety | Relative Maturity | Sulfonylurea Tolerance (STS) | Avg. Days to Maturity ⁸ | Lodging Score ⁹ | Shatter Score ¹⁰ | Plant Ht(in) ¹¹ | Flower Color | Pubescence Color | Pod Color | Hilum Color |
|-------------------------|-------------------|------------------------------|------------------------------------|----------------------------|-----------------------------|----------------------------|--------------|------------------|-----------|-------------|
| Croplan Genetics RC5222 | 5.2 | N | 144.3 | 1.5 | 1.2 | 32.5 | White | Tawny | Tan | Black |
| Delta Grow 5160RR/STS | 5.1 | Y | 136.7 | 1.8 | 1.3 | 39.3 | Purple | Gray | Brown | Black |
| Delta King DK5066 | 5.0 | Y | 137.0 | 2.1 | 1.2 | 39.3 | Purple | Gray | Tan | Imp. Black |
| Delta King DK5161 | 5.1 | N | 140.3 | 1.1 | 1.1 | 29.3 | White | Gray | Brown | Buff |
| Delta King DK52K6 | 5.2 | N | 148.0 | 1.1 | 1.2 | 32.5 | Purple | Tawny | Tan | Black |
| Deltapine DP5115RR/S | 5.1 | Y | 136.7 | 1.2 | 1.2 | 43.0 | White | Tawny | Tan | Brown |
| Dyna-Gro 33B52 | 5.2 | N | 147.0 | 1.5 | 1.0 | 30.8 | White | Gray | Tan | Buff |
| HBK R5226 | 5.2 | N | 145.0 | 1.6 | 1.0 | 33.0 | Purple | Tawny | Tan | Black |
| MORSOY RT5306N | 5.3 | N | 144.7 | 1.5 | 1.1 | 29.3 | Purple | Tawny | Brown | Black |
| Progeny 5115RR | 5.1 | N | 139.7 | 1.6 | 1.0 | 40.3 | Purple | Light Tawny | Brown | Black |

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KEY CODES FOR TABLES FOR ALL TABLES

“*” Denotes Seed Company Data

“^” Denotes Limited Data Available

1. At the Poinsett Co. location, the MG IV Early Test will not be reported due to poor uniformity.
2. The “Silt Loam Average” yield includes yields from Marianna, Rohwer and Poinsett County locations
3. The “All Location Average” yield includes yields from all locations.
4. Soybean disease and nematode ratings were conducted by Drs. Kirkpatrick and Cartwright with support from the Arkansas Soybean Promotion Board. Disease ratings are characterized by the following scale:

1 = Resistant 3 = Moderately Resistant 5 = Moderately Susceptible 7 = Susceptible 9 = Very Susceptible

Additional soybean disease data can be accessed at the following website:
<http://comp.uark.edu/~avrtest/index.php?sb&content>
5. Root-knot nematode ratings refer to the Southern Root-Knot Nematode, *Meloidogyne incognita* (see <http://comp.uark.edu/~avrtest/index.php?sb&content> for additional information on experimental methods.)
6. Ratings for soybean cyst nematode were evaluated at the Southwest Research and Extension Center, Hope. Only races 2, 5, and 6 are currently being evaluated. Information concerning other soybean cyst nematode races may be available from seed companies.
7. Chloride Sensitivity – Excluder varieties accumulate chloride and restrict it to the roots. Includer varieties accumulate chloride throughout the plants. Varieties with a Mixed population have both Includer and Excluder plants. Don't assume that high soluble salts constitute a chloride ion problem. Chloride levels should be determined by irrigation water tests and/or plant tissue analysis.
8. Days to maturity represent the average number of days (of all locations) from planting until 80% of the soybeans in the plot were thought to be mature.
9. Soybean lodging is an average of all locations and is reported using the following criteria: **1** = all plants erect, **2** = all plants slightly leaning or a few plants down, **3** = all plants moderately leaning or 25–50% of the plants are down, **4** = all plants considerably leaning or 50–80% of the plants are down, **5** = all plants down.
10. Soybean shattering is an average of all locations and is reported by using the following criteria: **1** = no shattering, **2** = 1–3% shattered, **3** = 4–8% shattered, **4** = 9–19% shattered, **5** = 20% or more shattered.
11. Soybean plant height reported in inches and is an average of all locations.

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