

Soybean Variety Tests in Tennessee

2016

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Variety test results are posted on UT's website at:

**<http://varietytrials.tennessee.edu/>
and
www.utcrops.com**

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2016 Soybean County Standard Tests

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Group III

County	Cooperator(s)	Agent
Dyer	Shane & Malcolm Burchfiel	Tim Campbell
Franklin	Kelly & Whitson Moore	Ed Burns
Gibson	Denton Parkins	Philip Shelby
Hickman	Claude Callicott	Troy Dugger
Henry	Wilson Farms	Ranson Goodman
Lake	Keiser Farms	Greg Allen
Madison	David Martin	Jake Mallard
Obion	Kenneth & Blake Cheatham	Tim Smith
Weakley	Ronnie & Jay Yeargin	Jeff Lannom

Group IV Early

County	Cooperator(s)	Agent
Ballard, KY	Jeff Sullivan	Bob Middleton
Calloway, KY	Mike Dixon	Tim Lax
Cannon	Johnny & Judy Powell	Bruce Steelman
Crockett	Ashely Elmore	Richard Buntin
Dyer	Mike Underwood	Tim Campbell
Franklin	Kelly & Whitson Moore	Ed Burns
Gibson	Denton Parkins	Philip Shelby
Giles	Richard Sulcer	Kevin Rose
Henry	Wilson Farms	Ranson Goodman
Madison	David Martin	Jake Mallard
Obion	Kenneth & Blake Cheatham	Tim Smith
Perry	Tim & Craig Byrd	Amanda Mathenia
Trousdale	Kyle Cato	Jason Evitts
Warren	A.P. Bouldin	Heath Nokes
Weakley	Ronnie & Jay Yeargin	Jeff Lannom

Group IV Late

County	Cooperator(s)	Agent
Benton	Jack Garland	Justin Hargrove
Crockett	Stoney Hargett	Richard Buntin
Decatur	Stacy Vise	Sam Plank
Dyer	Mike Underwood	Tim Campbell
Fayette	Ames Plantation	Jeff Via
Franklin	Myron & David Denton	Ed Burns
Gibson	Denton Parkins	Philip Shelby
Giles	Mike Mayfield	Kevin Rose
Haywood	Chester King	Walter Battle
Henry	Jared & Autumn Barker	Ranson Goodman
Loudon	David Richesin	John Goddard
Madison	Matt Griggs	Jake Mallard
Marion	Randy & Dewey Gilliam	Matthew Deist
Montgomery	Matt Thomas	Rusty Evans
Obion	Kenneth & Blake Cheatham	Tim Smith

Group IV Late, continued

County	County	County
Tipton	Ray Sneed	Becky Muller
Weakley	J.D. McDaniel	Jeff Lannom
<i>McCracken, KY</i>	Lester & Tracy Sullivan	Bob Middleton

Group V Early

County	Cooperator(s)	Agent
Carlisle, KY	Curtsinger Farms	Bob Middleton
Coffee	Jared Hale	Steve Harris
Dyer	Mike Underwood	Tim Campbell
Franklin	Myron & David Denton	Ed Burns
Gibson	Denton Parkins	Phillip Shelby
Madison	Chris Street	Jake Mallard
Tipton	Scott Johnson	Becky Muller
Wayne	Brent Dickson	Jason McGarrh

Liberty Link MG4 Late (4.6 – 4.9)

County	Cooperator(s)	Agent
Dyer	YF&R	Tim Campbell
Fulton, KY	Johnson Linder	Ben Rudy
Gibson	Denton Parkins	Philip Shelby
Henry	Wilson Farms	Ranson Goodman
Lake	John Dickey	Gregg Allen
Madison	David Martin	Jake Mallard
Obion	Bill Sellers	Tim Campbell
Tipton	Scott Johnson	Becky Muller
Wayne	Brent Dickson	Jason McGarrh
Weakley	Brian Garner	Jeff Lannom

Table of Contents

Experimental Procedures.....	7
Interpretation of data.....	8
Results.....	8
Research and Education Center Information.....	10
Roundup Ready Maturity Group III Soybean Tests	
2016 Yield Data.....	12
2016 Agronomic Data.....	13
2 Year Yield Data.....	14
2 Year Agronomic Data.....	14
2016 County Yield Data.....	15
Comparison of REC and County Data.....	16
2016 Disease Data.....	17
Roundup Ready Early Maturity Group IV Soybean Tests (4.0 – 4.5)	
2016 Yield Data.....	18
2016 Agronomic Data.....	19
2 Year Yield Data.....	20
2 Year Agronomic Data.....	21
3 Year Yield Data.....	22
3 Year Agronomic Data.....	22
2016 County Yield Data.....	23
Comparison of REC and County Data.....	24
2016 Disease Data.....	25
Roundup Ready Late Maturity Group IV Soybean Tests (4.6 – 4.9)	
2016 Yield Data.....	26
2016 Agronomic Data.....	28
2 Year Yield Data.....	30
2 Year Agronomic Data.....	31
3 Year Yield Data.....	32
3 Year Agronomic Data.....	33
2016 County Yield Data.....	34
Comparison of REC and County Data.....	35
2016 Disease Data.....	36
Roundup Ready Early Maturity Group V Soybean Tests (5.0 – 5.5)	
2016 Yield Data.....	38
2016 Agronomic Data.....	39
2 Year Yield Data.....	40
2 Year Agronomic Data.....	41
3 Year Yield Data.....	42
3 Year Agronomic Data.....	43
2016 County Yield Data.....	44
Comparison of REC and County Data.....	45
2016 Disease Data.....	46
Roundup Ready Late Maturity Group V Soybean Tests (5.6 – 5.9)	
2016 Yield Data.....	47
2016 Agronomic Data.....	48
2 Year Yield Data.....	49
2 Year Agronomic Data.....	49

Liberty Link Maturity Group IV Soybean Tests

2016 Yield Data.....	50
2016 Agronomic Data.....	51
2 Year Yield Data.....	52
2 Year Agronomic Data.....	53
3 Year Yield Data.....	54
3 Year Agronomic Data.....	54
2016 County Yield Data.....	55
Comparison of REC and County Data.....	56
2016 Disease Data.....	57

Liberty Link Maturity Group V Soybean Tests

2016 Yield Data.....	58
2016 Agronomic Data.....	59
2 Year Yield Data.....	60
2 Year Agronomic Data.....	60
3 Year Yield Data.....	61
3 Year Agronomic Data.....	61

Conventional Maturity Group IV Soybean Tests

2016 Yield Data.....	62
2016 Agronomic Data.....	63
2 Year Yield Data.....	64
2 Year Agronomic Data.....	64

Conventional Maturity Group V Soybean Tests

2016 Yield Data.....	65
2016 Agronomic Data.....	66
2 Year Yield Data.....	67
2 Year Agronomic Data.....	68
3 Year Yield Data.....	69
3 Year Agronomic Data.....	70

Soybean Characteristics.....	71
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Seed Company Contact Information.....	77
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SOYBEAN VARIETY TESTS IN TENNESSEE

2016

Experimental Procedures

Research & Education Center Tests: All soybean variety trials were conducted in each of the physiographic regions of the state. Tests were conducted at the Agricenter International Research Center (Memphis), Ames Plantation (Grand Junction), Highland Rim (Springfield), East Tennessee (Knoxville), and Milan (Milan), Research & Education Centers (**REC**). Entries were divided into the following tests based on herbicide tolerance traits and relative maturity: **Roundup Ready** - RR3 (relative maturity 3.0-3.9), RR4 early (relative maturity 4.0– 4.5), RR4 late (RM 4.6-4.9) RR5 early (RM 5.0-5.5), and RR5 late (RM 5.6-5.9), **Liberty Link** - LL4 (RM 4.0 – 4.9) and LL5 (RM 5.0 – 5.9), and **Conventional** - CV4 (RM 4.0 – 4.9) and CV5 (RM 5.0 – 5.9). Soybeans containing the **Roundup Ready 2 Xtend** herbicide tolerance trait, which confers tolerance to both Glyphosate and Dicamba herbicides, were evaluated in the Roundup Ready tests according to maturity group. Duplicate plantings of all nine tests were made at the **Milan and Highland Rim RECs** for performance testing **with and without irrigation**.

The plot size at all REC locations was two, 30-ft. rows with 30 inch row spacing. All varieties were planted at approximately 6 seeds per foot of row (i.e., approximately 140,000 seed per acre in the REC tests). Plots were replicated three times at each location in a randomized complete block design. Plots at Milan and Springfield were sprayed with a foliar fungicide approximately one month after planting, and again approximately 21 days later as a preventative treatment for fungal diseases such as soybean rust. Soybean rust was detected in Coffee County in Tennessee on August 29, 2016, putting late planted soybeans at risk. Because of the large number of varieties in some tests and the field variation at each location, an incomplete block design was imposed *ex post facto* prior to data analysis in order to reduce the within-block field variability and the experimental error.

Genetics plus Seed Treatments: Seed of all varieties included in the REC tests were treated with one or more fungicides plus an insecticide. Research has shown that seed treatments can influence yield, therefore **the yields of varieties reported herein are the combined result of the genetic potential of the varieties plus the seed treatment “packages”**. The seed treatments that were included on each variety were determined by the company or organization and are listed in Table 66. Many soybean varieties are now being marketed with combinations of fungicide and insecticides on the seed, similar to corn. A decision was made to test the varieties in the UT soybean performance tests with the seed treatments so the results would be comparable to what producers could expect from seed they purchase.

County Standard Tests: The County Standard Soybean Tests were conducted in 25 counties in Tennessee, and five in Western Kentucky. The number of county locations depended on the test (e.g., 8 - 18). The County Standard Tests were divided into **RR3, RR4 early (relative maturity 4.0-4.5), RR4 late (RM 4.6-4.9), RR5 early (RM 5.0-5.5) and a Liberty Link (RM 4 late) test**. Each variety was evaluated in a large strip-plot at each location, thus each county test was considered as one replication of the test in calculating the overall average yield and in conducting the statistical analysis to determine significant differences. At each location, plots were planted, sprayed, fertilized, and harvested with the equipment used in the cooperating producer's farming operation. The width and length of strip-plots were different in each county; however, within a location in a county, the strips were trimmed on the ends so that the lengths were the same for each variety, or if the lengths were different then the harvested length was measured for each variety and appropriate harvested area adjustments were made to determine the yield per acre.

Interpretation of Data

The tables on the following pages have been prepared with the entries listed in order of performance, the highest-yielding entry being listed first. **All yields presented have been adjusted to 13% moisture.** At the bottom of the tables, **LSD** values stand for **Least Significant Difference**. The mean yields of any two varieties being compared must differ by at least the amount shown (minimum) to be considered different in yielding ability at the 5% level of probability of significance. For example, given that the LSD for a test is 8.0 bu/a and the mean yield of Variety A was 30 bu/a and the mean yield of Variety B was 35 bu/a, then the two varieties are not statistically different in yield because the difference of 5 bu/a is less than the minimum of 8 bu/a required for them to be significant. On the other hand, if the average yield of Variety C was 43 bu/a then it is significantly higher yielding than both Variety B ($43 - 35 = 8 \text{ bu/a} = \text{LSD of } 8$) and Variety A ($43 - 30 = 13 \text{ bu/a} > \text{LSD of } 8$).

Also, the **coefficient of variation (C.V.)** values are shown at the bottom of each table. This value is a measure of the error variability found within each experiment. It is the percentage that the error variation is of the overall test mean yield at that location. For example, a C.V. of 10% indicates that the size of the error variation is about 10% of the size of the test mean. Similarly, a C.V. of 30% indicates that the size of the error variation is nearly one-third as large as the test mean. A goal in conducting each yield test is to keep the C.V. as low as possible, preferably below 20%.

Results

Yield and Agronomic Traits. Two hundred and fifteen soybean varieties were evaluated in the 2016 **Research & Education Center (REC)** tests in Tennessee. There were 10 varieties in the RR3, 42 in the RR4E, 64 in the RR4L, 24 in the RR5E, 9 in the RR5L, 23 in the LL4, 9 in the LL5, 16 in the CV4, and 20 in the CV5 test. A total of 56 **Xtend** varieties were entered into the 2016 test, including 2 MG3, 14 MG4E, 28 MG4L, 8 MG5E, and 4 MG5L. The **County Standard tests (CST)** involved 77 varieties total, consisting of a RR3 test (six varieties at eight locations), a RR4E test (19 varieties at 14 locations), a RR4L test (21 varieties at 17 locations), a RR5E test (nine varieties at eight locations), and a Liberty Link MG4 and MG5 test (22 varieties at nine locations). In addition to 25 Tennessee counties, the County Standard Tests involved five counties in Western Kentucky (Ballard, Calloway, Carlisle, Fulton, and McCracken).

Tables 2-65 contain data on yield and agronomic traits such as maturity, plant height, lodging, shattering, seed quality, seed protein and oil content. **Sudden Death Syndrome (SDS)** was observed in both irrigated and non-irrigated plots within the LL tests at the Milan location. Ratings were taken on September 13th. Ratings for SDS were taken for disease incidence (DI; percentage of plants with symptoms), disease severity (DS; score of leaf chlorosis and necrosis on a scale of 1 to 9 where a score of 1 = no disease and 9 = heavy disease), and disease index ($\text{DI} \times \text{DS} / 9$). Ratings are included in tables reporting agronomic traits for tests in which these diseases were present. **Table 66** lists the names and the companies descriptive characteristics of the varieties included in the REC tests in 2016. **Table 67** contains the contact information for each soybean seed company with entries in the 2016 REC tests.

Irrigated vs. Non-irrigated Yields. Duplicate tests were conducted at the Milan and Highland Rim Research and Education Centers with and without irrigation. A difference in irrigated and non-irrigated soybean yields was observed, however this varied by maturity group. Early maturing soybeans tended to do better in the non-irrigated test or show little difference between irrigated and non-irrigated tests. At both locations, the MG3 non-irrigated test exhibited a yield advantage (5-6 bu/a). This was also true in the RR4E test at Springfield (5 bu/a) and the LL4 test at Milan (4 bu/a). The remaining tests exhibited a yield advantage in the irrigated test compared to the non-irrigated test, ranging from 1 bu/a to 12 bu/a. The

largest yield advantage was observed in the irrigated Roundup Ready MG5E (6-7 bu/a), Roundup Ready MG5L (5-12 bu/a) and Liberty Link MG5 at Springfield (12 bu/a).

Growing Season: Heavy rains and hail followed by cool, wet weather in the spring resulted in replanting and slow plant development in some areas. The remainder of the growing season was characterized by hot, dry conditions. By late September, 78 percent of the crop rated good to excellent. Dry conditions throughout the fall facilitated timely harvest. By the end of October, 86% of soybeans had been harvested, well ahead of the five year average of 62%. According to the National Agricultural Statistics Service, Tennessee producers planted 1.67 million acres of soybeans this year, a decrease of 90,000 acres from 2015. Acreage harvested for grain is projected to be 1.64 million, a decrease of 80,000 acres from last season. Soybean production for 2016 is projected to be 72.16 million bushels, a decrease of 9% from the previous year. The state soybean yield average is projected to be 44 bu/a, which is 2 bu/a less than the 2015 yield.

Table 1. Location information from AgResearch and Education Centers (RECs) where the soybean variety tests were conducted in 2016.

Research Center	Location	Planting Date	Harvest Date	Seeding Rate	Soil Type
Roundup Ready Maturity Group III					
Highland Rim (Irrigated)	Springfield	5/24/2016	9/21/2016	140000	Dickson Silt Loam
Highland Rim (Non Irrigated)	Springfield	5/24/2016	9/21/2016	140000	Dickson Silt Loam
Knoxville	Knoxville	5/9/2016	9/16/2016	140000	Shady Loam
Milan (Irrigated)	Milan	6/3/2016	9/27/2016	140000	Grenada Silt Loam
Milan (Non Irrigated)	Milan	6/2/2016	9/27/2016	140000	Grenada Silt Loam
Roundup Ready Maturity Group Early IV (4.0 - 4.5)					
Agricenter International	Memphis	lost - herbivore damage		140000	Falaya Silt Loam
Ames	Grand Junction	5/5/2016	9/28/2016	140000	Lexington Silt Loam
Highland Rim (Irrigated)	Springfield	5/24/2016	9/21/2016	140000	Dickson Silt Loam
Highland Rim (Non Irrigated)	Springfield	5/24/2016	9/22/2016	140000	Dickson Silt Loam
Knoxville	Knoxville	5/9/2016	9/28/2016	140000	Shady Loam
Milan (Irrigated)	Milan	6/3/2016	10/11/2016	140000	Grenada Silt Loam
Milan (Non Irrigated)	Milan	6/2/2016	10/7/2016	140000	Grenada Silt Loam
Roundup Ready Maturity Group Late IV (4.6 - 4.9)					
Agricenter International	Memphis	lost - herbivore damage		140000	Falaya Silt Loam
Ames	Grand Junction	5/5/2016	9/29/2016	140000	Lexington Silt Loam
Highland Rim (Irrigated)	Springfield	5/24/2016	10/3/2016	140000	Dickson Silt Loam
Highland Rim (Non Irrigated)	Springfield	5/24/2016	10/4/2016	140000	Dickson Silt Loam
Knoxville	Knoxville	5/9/2016	9/29/2016	140000	Shady Loam
Milan (Irrigated)	Milan	6/3/2016	10/18/2016	140000	Grenada Silt Loam
Milan (Non Irrigated)	Milan	6/2/2016	10/7/2016	140000	Grenada Silt Loam
Roundup Ready Maturity Group Early V (5.0 - 5.5)					
Agricenter International	Memphis	lost - herbivore damage		140000	Falaya Silt Loam
Ames	Grand Junction	5/5/2016	10/11/2016	140000	Lexington Silt Loam
Highland Rim (Irrigated)	Springfield	5/24/2016	10/5/2016	140000	Dickson Silt Loam
Highland Rim (Non Irrigated)	Springfield	5/24/2016	10/17/2016	140000	Dickson Silt Loam
Knoxville	Knoxville	5/10/2016	10/6/2016	140000	Shady Loam
Milan (Irrigated)	Milan	6/3/2016	10/18/2016	140000	Grenada Silt Loam
Milan (Non Irrigated)	Milan	6/2/2016	10/17/2016	140000	Grenada Silt Loam
Roundup Ready Maturity Group Late V (5.6 - 5.9)					
Agricenter International	Memphis	lost - herbivore damage		140000	Falaya Silt Loam
Ames	Grand Junction	5/5/2016	10/11/2016	140000	Lexington Silt Loam
Highland Rim (Irrigated)	Springfield	5/24/2016	10/17/2016	140000	Dickson Silt Loam
Highland Rim (Non Irrigated)	Springfield	5/24/2016	10/17/2016	140000	Dickson Silt Loam
Knoxville	Knoxville	5/10/2016	10/10/2016	140000	Shady Loam
Milan (Irrigated)	Milan	6/3/2016	10/18/2016	140000	Loring Silt Loam
Milan (Non Irrigated)	Milan	6/2/2016	10/17/2016	140000	Loring Silt Loam
Liberty Link Maturity Group IV (4.0 - 4.9)					
Agricenter International	Memphis	lost - herbivore damage		140000	Falaya Silt Loam
Highland Rim (Irrigated)	Springfield	5/24/2016	10/3/2016	140000	Dickson Silt Loam
Highland Rim (Non Irrigated)	Springfield	5/24/2016	10/4/2016	140000	Dickson Silt Loam
Knoxville	Knoxville	lost - weed pressure		140000	Shady Loam
Milan (Irrigated)	Milan	6/2/2016	10/18/2016	140000	Loring Silt Loam
Milan (Non Irrigated)	Milan	5/31/2016	10/17/2016	140000	Loring Silt Loam
Liberty Link Maturity Group V (5.0 - 5.9)					
Agricenter International	Memphis	lost - herbivore damage		140000	Falaya Silt Loam
Highland Rim (Irrigated)	Springfield	5/24/2016	10/17/2016	140000	Dickson Silt Loam
Highland Rim (Non Irrigated)	Springfield	5/24/2016	10/18/2016	140000	Dickson Silt Loam
Knoxville	Knoxville	5/10/2016	9/30/2016	140000	Shady Loam
Milan (Irrigated)	Milan	6/2/2016	10/18/2016	140000	Loring Silt Loam
Milan (Non Irrigated)	Milan	5/31/2016	10/17/2016	140000	Loring Silt Loam

Table 1. (continued)**Conventional Maturity Group IV (4.0 - 4.9)**

Highland Rim (Irrigated)	Springfield	5/24/2016	10/5/2016	140000	Dickson Silt Loam
Highland Rim (Non Irrigated)	Springfield	5/24/2016	10/5/2016	140000	Dickson Silt Loam
Knoxville	Knoxville	5/10/2016	9/30/2016	140000	Shady Loam
Milan (Irrigated)	Milan	6/2/2016	10/18/2016	140000	Loring Silt Loam
Milan (Non Irrigated)	Milan	5/31/2016	10/17/2016	140000	Loring Silt Loam

Conventional Maturity Group V (5.0 - 5.9)

Highland Rim (Irrigated)	Springfield	5/24/2016	10/17/2016	140000	Dickson Silt Loam
Highland Rim (Non Irrigated)	Springfield	5/24/2016	10/19/2016	140000	Dickson Silt Loam
Knoxville	Knoxville	5/10/2016	10/6/2016	140000	Shady Loam
Milan (Irrigated)	Milan	6/2/2016	10/18/2016	140000	Loring Silt Loam
Milan (Non Irrigated)	Milan	5/31/2016	10/17/2016	140000	Loring Silt Loam

Table 2. Mean yields of 10 Maturity Group III Roundup Ready soybean varieties evaluated in five REC tests in Tennessee during 2016.

Variety [†]	Avg. Yield [‡]	Knoxville		Springfield		Milan	
	± Std Err.	Irr.	Irr.	Non-Irr.	Irr.	Non-Irr.	
	(n=5)						
	-----bu/a-----						
Credenz CZ 3991 RY	64 ± 1	58	62	64	67	68	
Warren Seed DS 3838 R2Y	59 ± 1	57	59	65	60	57	
NK Seed S39-C4 (RR2)	59 ± 1	51	54	63	61	64	
Warren Seed DS 3745 R2Y	58 ± 1	58	55	66	51	58	
Asgrow AG38X6 (R2X)	57 ± 1	55	54	58	56	62	
Credenz CZ 3560 RY	56 ± 1	45	55	64	58	59	
Dyna-Gro S38RY87 (RR2)	56 ± 1	54	57	56	51	62	
LG Seeds C3911RX	55 ± 1	55	53	59	52	58	
Terral-REV Brand REV 38R10 (RR)	55 ± 1	51	56	62	48	59	
Credenz CZ 3383 RY	51 ± 1	36	57	61	47	53	
Average (bu/a)	57	52	56	62	55	60	
L.S.D. _{.05} (bu/a)	4	11	10	7	8	6	
C.V. (%)	8.6	12.1	9.9	6.2	8.5	6.0	

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

Table 3. Mean yields and agronomic characteristics of 10 Maturity Group III Roundup Ready soybean varieties evaluated in five REC tests in Tennessee during 2016.

Variety [†]	Avg. Yield [‡]	Moisture §	Lodging	Height	Maturity	Protein	Oil
	± Std Err. (n=5)						
	bu/a	%	Score	in.	DAP	%	%
Credenz CZ 3991 RY	64 ± 1	13.7	1.6	37	113	38.5	23.3
Warren Seed DS 3838 R2Y	59 ± 1	13.8	1.7	38	114	37.3	24.3
NK Seed S39-C4 (RR2)	59 ± 1	13.3	1.3	38	113	37.7	23.7
Warren Seed DS 3745 R2Y	58 ± 1	13.5	2.3	37	114	40.9	22.8
Asgrow AG38X6 (R2X)	57 ± 1	14.5	1.9	40	114	38.9	24.0
Credenz CZ 3560 RY	56 ± 1	13.1	1.7	37	111	38.8	22.3
Dyna-Gro S38RY87 (RR2)	56 ± 1	13.5	1.9	39	113	38.0	23.5
LG Seeds C3911RX	55 ± 1	13.7	2.3	39	114	40.9	21.8
Terral-REV Brand REV 38R10 (RR)	55 ± 1	13.2	2.3	38	113	38.3	24.3
Credenz CZ 3383 RY	51 ± 1	12.7	1.7	35	110	39.1	23.2
Average	57	13.5	1.9	38	113	38.8	23.3

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

§ Average moisture at harvest.

Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

Maturity = days after planting (DAP).

Protein & Oil on dry weight basis.

Table 4. Mean yields of two Maturity Group 3 Roundup Ready soybean varieties evaluated in five REC tests in Tennessee for two years, 2015 - 2016 (n=10).

Variety [†]	Avg. Yield [‡] ± Std Err. (n=10)	Knoxville	Springfield		Milan	
		Irr.	Irr.	Non-Irr.	Irr.	Non-Irr.
		-----bu/a-----				
Warren Seed DS 3838 R2Y	60 ± 1	72	57	50	60	61
Credenz CZ 3560 RY	58 ± 1	64	59	51	59	57
Average (bu/a)	59	68	58	51	60	59
L.S.D._{.05} (bu/a)	4	16	7	9	7	13
C.V. (%)	11.7	15.2	7.7	11.6	6.9	13.4

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

Table 5. Mean yields and agronomic characteristics of two Maturity Group 3 Roundup Ready soybean varieties evaluated in five REC tests in Tennessee for two years, 2015 - 2016 (n=10).

Variety [†]	Avg. Yield [‡] ± Std Err. (n=10)	Moisture §	Lodging	Height	Maturity	Protein	Oil
		(n=10)	(n=7)	(n=10)	(n=10)	(n=2)	(n=2)
	bu/a	%	Score	in.	DAP	%	%
Warren Seed DS 3838 R2Y	60 ± 1	13.4	1.8	37	119	36.9	24.4
Credenz CZ 3560 RY	58 ± 1	12.9	1.6	36	116	39.3	21.6
Average	59	13.2	1.7	37	118	38.1	23.0

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

§ Average moisture at harvest.

Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

Maturity = days after planting (DAP).

Protein & Oil on dry weight basis.

Table 6. Yields of six Late Maturity Group III (3.6 - 3.9) Roundup Ready soybean varieties in 8 County Standard Tests in Tennessee during 2016.

MS	Variety	Avg. Yield [†]	Moist. [‡]	Dyer	Franklin	Gibson	Henry	Hickman	Lake	Obion	Weakley
		bu/a	%	5/6 [§]	5/16	5/6	6/14	5/16	5/5	5/6	5/16
A	NK S39-T3	64	12	77	38	77	61	60	66	61	66
AB	*Beck's 393R4	63	12	72	45	76	56	68	58	63	65
AB	*Warren Seed DS3838	63	12	67	41	79	61	59	59	60	64
AB	Dyna-Gro S39RY65	61	12	73	40	70	64	52	65	68	51
AB	Warren Seed DS3745	60	12	71	38	76	62	49	58	63	58
B	Terral 38R10	59	12	72	40	76	61	59	62	64	61
Average (bu/a)		62	12	72	40	75	61	58	61	63	61

† Yields have been adjusted to 13% moisture.

‡ Moisture at harvest.

§ Planting date.

Each variety was evaluated in a large strip-plot at each location, thus each county test was considered as one replication of the test in calculating the average yield and in conducting the statistical analysis to determine significant differences (MS).

All county tests were non-irrigated except for Lake county

MS= Varieties with any MS letter in common are not statistically different at the 5% level of probability.

Data provided by Ryan Blair, Ext. Area Specialist, Grain and Cotton Variety Testing, and the extension agents in the counties shown above.

Table 7. Overall average yields and moistures of three Maturity Group III (3.0 - 3.9) Roundup Ready soybean varieties evaluated in County Standard Tests (n=8) and REC Tests (n=5) in Tennessee during 2016.

Variety[†]	Averages of CST & REC Tests		County Standard Tests		REC Tests	
	Avg. Yield[‡]	Moisture	Avg. Yield[‡]	Moisture	Avg. Yield[‡]	Moisture
	bu/a	%	bu/a	%	bu/a	%
Warren Seed DS 3838 R2Y	61	13.1	63	12.4	59	13.8
Warren Seed DS 3745 R2Y	59	12.8	60	12.2	58	13.5
Terral-REV Brand REV 38R10 (RR)	57	12.6	59	12.0	55	13.2
Average (bu/a)	59	12.9	61	12.2	57	13.5

[†] If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

[‡] All yields are adjusted to 13% moisture.

Table 8. Yields and disease ratings of 6 Maturity Group III Roundup Ready soybean varieties in 8 County Standard Tests and in small plot trials at one Research and Education Center and one on-farm location in Tennessee during 2016

Summary from 8 County Tests			Summary from Small Plot Research								
MS	Brand/Variety	AvgYld bu/a	RECM - Moderate Disease Presssure						JAX - Severe Disease Pressure		
			RECM - YLD		Frogeye	Brown	Target	Other Diseases	JAX - YLD		Frogeye
			*Treated	Non-treated	leaf spot	Spot	Spot	RECM	*Treated	Non-treated	leaf spot
A	NK S39-T3	64.3	60.8	51.8	MOD	LOW	LOW		62.9	47.9	MOD
AB	*Beck's 393R4	63.3	53.0	52.8	LOW	LOW	LOW		55.3	50.9	LOW
AB	*Warren Seed DS3838	62.9	56.3	49.8	MOD	LOW	LOW	SC	56.1	48.6	HIGH
AB	Dyna-Gro S39RY65	61.1	53.3	48.1	LOW	LOW	LOW	SC	50.7	45.3	MOD
AB	Warren Seed DS3745	60.2	48.2	43.4	MOD	LOW	HIGH		44.0	36.7	HIGH
B	Terral 38R10	59.4	52.0	51.0	LOW	LOW	LOW	SC, SDS	52.9	46.7	LOW
Average (bu/a)		61.9	53.9	49.5					53.7		

YLD= Avg. Yield @ 13% moisture

MS= Varieties that have any MS letter in common are not statistically different in yield at the 5% level of probability.

Varieties denoted with an asterisks (*) or (**) etc. were in the top performing group for consecutive years.

County locations include: Dyer, Franklin, Gibson, Henry, Hickman, Lake, Obion, Weakley

*Treated plots sprayed with Quadris TOP @ 8 oz./Acre + 1% Induce @ R3 growth stage. RECM varieties planted June 1 and JAX planted May 23

LOW, MOD, and HIGH is a relative ranking of disease severity at each location. Other diseases noted: SC=Stem Canker, CLB=Cercospora Leaf Blight, SDS=Sudden Death Syndrome; ' - ' indicate variety was not tested at that location

Disease ratings at RECM: Frogeye leaf spot ranged from 0 - 6% with an average of 3%; Brown spot ranged from 9 - 14% with an average of 11%; and Target spot ranged from 0 - 15% with an average of 2%.

Disease ratings at JAX: Frogeye leaf spot ranged from 1 - 14% with an average of 8%; other diseases were not rated or noted at this location for this maturity group

Disease ratings & yield data compiled by Dr. Heather Kelly from replicated plots at the Research and Education Center at Milan (RECM, which is irrigated and had moderate disease pressure), and on-farm location in Jackson (JAX, which is dry land and had severe disease pressure). County data provided by Ryan Blair, Ext. Area Specialist, and the extension agents.

Table 9. Mean yields of 42 Early Maturity Group IV (4.0 - 4.5) Roundup Ready soybean varieties evaluated in six REC tests in Tennessee during 2016.

	Avg. Yield [‡]						
	± Std Err.	Knoxville	Springfield		Milan	Ames	
Variety [†]	(n=6)	Irr.	Irr.	Non-Irr.	Irr.	Non-Irr.	Non-Irr.
		-----bu/a-----					
Credenz CZ 4181 RY	61 ± 1	57	60	59	70	65	54
Asgrow AG43X7 (R2X,SR)	60 ± 1	63	53	55	67	67	58
Armor 44-D40 (R2X)	60 ± 1	58	57	56	70	68	52
Steyer 4402R2	59 ± 1	62	52	56	71	65	48
Mycogen 5N414R2	59 ± 1	56	52	56	69	65	53
Beck's Hybrids 4453X2 (R2X)	58 ± 1	58	56	54	70	64	47
Pfister 45R203 (RR2)	58 ± 1	61	52	54	66	66	49
LG Seeds C4145R2 (STS)	58 ± 1	55	53	57	69	59	55
Beck's Hybrids 437R4* (RR)	57 ± 1	62	50	53	71	66	43
Caverndale Farms CF 452 RR2Yn	57 ± 1	56	45	56	70	68	48
Mycogen 5N433R2	57 ± 1	63	54	56	62	63	46
Pfister 41RS01 (RR2)	57 ± 1	59	47	54	66	64	54
Dyna-Gro S43RY95 (RR2)	57 ± 1	62	47	50	71	63	49
NK Seed S45-R7 (RR2,STS)	57 ± 1	57	47	51	67	70	48
Asgrow AG45X7 (R2X,SR)	57 ± 1	63	43	58	65	58	54
LG Seeds C4458RX (R2X,STS)	57 ± 1	53	51	58	67	65	44
Dyna-Gro S45XS66 (R2X, STS)	57 ± 1	65	48	50	60	68	48
Dyna-Gro 31RY45 (RR2)	57 ± 1	60	45	46	68	69	52
Terral-REV Brand REV 45A46 (RR)	56 ± 1	61	50	50	68	68	41
Steyer 4403XR (R2X,STS)	56 ± 1	55	46	56	64	64	53
Croplan 4000 (RR)	56 ± 1	61	48	55	68	61	41
Asgrow AG44X6 (R2X)	56 ± 1	55	48	49	68	64	50
NK Seed S42-P6 (RR2)	56 ± 1	57	50	56	71	62	41
Beck's Hybrids 453R4* (RR)	56 ± 1	60	50	49	64	69	43
USG 74F53RS (RR2,STS)	56 ± 1	62	50	52	60	62	48
USG 7426XTS (R2X,STS)	55 ± 1	62	40	50	67	62	51
Credenz CZ 4590 RY	55 ± 1	58	44	42	69	67	53
Progeny 4516RXS (R2X,STS)	55 ± 1	62	36	50	65	66	51
Dyna-Gro S43XS27 (R2X,STST)	55 ± 1	55	48	49	68	65	46
Warren Seed DS 4340 R2Y	55 ± 1	59	42	57	63	60	49
Asgrow AG42X6 (R2X)	55 ± 1	60	47	52	63	61	47
Warren Seed DS 4225 R2Y	55 ± 1	54	51	53	69	61	42
Mycogen 5N424R2	55 ± 1	52	51	52	67	62	44
Pfister 43R29 (RR2)	55 ± 1	60	45	53	64	61	43
Progeny 4211RY	54 ± 1	58	51	52	60	60	47
AGS GS43R216 (RR)	54 ± 1	59	51	53	61	64	37
TN Exp TN11-4506R2	54 ± 1	61	43	47	69	61	42
Armor 43-D34 (R2X)	53 ± 1	59	46	48	65	57	44
Asgrow AG45X6 (R2X,SR)	53 ± 1	58	37	48	62	58	55
Mycogen 5N406R2	53 ± 1	50	49	55	65	61	38
Progeny 4588RY (R2)	49 ± 1	59	44	51	46	52	42
TN Exp TN11-3519R2	48 ± 1	51	42	47	60	54	36
Average (bu/a)	56	59	48	53	66	63	47
L.S.D. _{.05} (bu/a)	3	7	12	6	7	7	10
C.V. (%)	9.1	7.3	15.2	6.5	6.5	6.4	13.0

[†] If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

[‡] All yields are adjusted to 13% moisture.

Table 10. Mean yields and agronomic characteristics of 42 Early Maturity Group IV (4.0 - 4.5) Roundup Ready soybean varieties evaluated in six REC tests in Tennessee during 2016.

Variety [†]	Avg. Yield [‡]	Moisture §	Lodging	Height	Maturity	Leaf		
	± Std Err.					Holding	Protein	Oil
	(n=6)	(n=6)	(n=3)	(n=5)	(n=5)	(n=1)	(n=1)	(n=1)
	bu/a	%	Score	in.	DAP	Score	%	%
Credenz CZ 4181 RY	61 ± 1	13.3	2.0	43	119	2.1	40.2	22.4
Asgrow AG43X7 (R2X,SR)	60 ± 1	13.5	2.4	42	122	2.1	39.2	22.0
Armor 44-D40 (R2X)	60 ± 1	14.2	1.6	44	123	1.8	39.5	22.1
Steyer 4402R2	59 ± 1	13.0	1.8	44	122	1.0	39.1	23.4
Mycogen 5N414R2	59 ± 1	12.9	2.0	43	120	1.5	39.5	22.4
Beck's Hybrids 4453X2 (R2X)	58 ± 1	14.8	1.9	44	123	2.5	40.0	22.0
Pfister 45R203 (RR2)	58 ± 1	13.1	1.8	43	121	1.2	39.3	23.4
LG Seeds C4145R2 (STS)	58 ± 1	12.5	1.3	40	117	1.8	40.3	22.8
Beck's Hybrids 437R4* (RR)	57 ± 1	13.3	1.6	41	122	1.7	40.5	22.7
Caverndale Farms CF 452 RR2Yn	57 ± 1	13.2	2.0	43	122	1.0	39.5	23.2
Mycogen 5N433R2	57 ± 1	12.7	2.6	43	123	1.4	39.0	23.8
Pfister 41RS01 (RR2)	57 ± 1	12.9	1.7	43	120	1.8	40.2	22.3
Dyna-Gro S43RY95 (RR2)	57 ± 1	13.0	2.2	43	123	1.8	39.2	23.7
NK Seed S45-R7 (RR2,STS)	57 ± 1	12.9	1.6	39	119	2.5	39.2	23.7
Asgrow AG45X7 (R2X,SR)	57 ± 1	14.6	2.3	47	119	1.4	39.7	22.5
LG Seeds C4458RX (R2X,STS)	57 ± 1	13.2	1.9	43	122	2.2	40.2	21.9
Dyna-Gro S45XS66 (R2X, STS)	57 ± 1	14.4	2.7	44	124	1.6	39.4	22.8
Dyna-Gro 31RY45 (RR2)	57 ± 1	13.8	2.2	41	122	1.1	37.6	23.2
Terral-REV Brand REV 45A46 (RR)	56 ± 1	12.7	2.1	43	122	1.2	38.3	24.1
Steyer 4403XR (R2X,STS)	56 ± 1	13.4	1.7	44	123	1.9	39.7	22.1
Croplan 4000 (RR)	56 ± 1	12.5	1.4	39	117	1.3	39.1	22.8
Asgrow AG44X6 (R2X)	56 ± 1	12.9	1.8	42	122	1.9	40.8	22.0
NK Seed S42-P6 (RR2)	56 ± 1	13.6	1.3	40	120	1.0	37.8	24.6
Beck's Hybrids 453R4* (RR)	56 ± 1	12.9	2.2	42	123	1.9	38.5	23.7
USG 74F53RS (RR2,STS)	56 ± 1	14.1	1.9	43	120	1.3	40.9	22.9
USG 7426XTS (R2X,STS)	55 ± 1	14.9	2.0	42	122	1.3	39.9	22.8
Credenz CZ 4590 RY	55 ± 1	12.4	1.8	43	122	1.0	40.7	21.0
Progeny 4516RXS (R2X,STS)	55 ± 1	15.3	2.2	43	123	1.5	39.1	22.8
Dyna-Gro S43XS27 (R2X,STST)	55 ± 1	14.1	2.6	42	124	1.3	38.8	22.4
Warren Seed DS 4340 R2Y	55 ± 1	13.1	1.9	38	119	2.1	40.2	23.1
Asgrow AG42X6 (R2X)	55 ± 1	13.9	2.2	41	119	1.6	40.0	21.8
Warren Seed DS 4225 R2Y	55 ± 1	12.8	1.1	36	118	1.3	40.5	22.6
Mycogen 5N424R2	55 ± 1	13.0	1.1	35	118	1.2	40.3	22.7
Pfister 43R29 (RR2)	55 ± 1	13.3	2.3	38	119	2.4	40.2	23.0
Progeny 4211RY	54 ± 1	12.9	1.9	37	119	2.2	40.1	22.9
AGS GS43R216 (RR)	54 ± 1	12.4	1.9	38	120	1.3	39.1	23.6
TN Exp TN11-4506R2	54 ± 1	14.3	2.1	41	124	1.3	41.6	21.9
Armor 43-D34 (R2X)	53 ± 1	13.1	1.6	40	119	2.3	39.8	22.6
Asgrow AG45X6 (R2X,SR)	53 ± 1	15.7	1.6	40	122	2.1	40.8	21.8
Mycogen 5N406R2	53 ± 1	12.6	1.5	38	115	1.0	40.3	23.1
Progeny 4588RY (R2)	49 ± 1	12.8	2.3	43	120	1.1	39.2	23.6
TN Exp TN11-3519R2	48 ± 1	13.7	1.8	39	120	1.1	40.3	22.9
Average	56	13.4	1.9	41	121	1.6	39.7	22.8

[†] If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

[‡] All yields are adjusted to 13% moisture.

§ Average moisture at harvest.

Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

Maturity = days after planting (DAP).

Leaf Holding = 1 to 5 scale; where 1 = no leaves remaining on stems at maturity; 5 = 90+% of leaves remaining on stems at maturity.

Protein & Oil on dry weight basis.

Table 11. Mean yields of 12 Early Maturity Group IV (4.0 - 4.5) Roundup Ready soybean varieties evaluated in six REC tests in Tennessee for two years, 2015 - 2016 (n=12).

	Avg. Yield [†]	Knoxville		Springfield		Milan		Ames
Variety [†]	± Std Err. (n=12)	Irr.	Irr.	Non-Irr.	Irr.	Non-Irr.	Non-Irr.	
	-----bu/a-----							
Credenz CZ 4181 RY	64 ± 1	71	69	47	71	74	55	
NK Seed S45-R7 (RR2,STS)	63 ± 1	73	64	38	74	71	60	
Beck's Hybrids 453R4* (RR)	62 ± 1	81	64	38	70	66	55	
Dyna-Gro 31RY45 (RR2)	62 ± 1	77	57	42	68	65	59	
Dyna-Gro S43RY95 (RR2)	61 ± 1	76	59	40	68	62	59	
USG 74F53RS (RR2,STS)	61 ± 1	69	60	44	68	67	55	
Caverndale Farms CF 452 RR2Yn	60 ± 1	69	57	46	74	64	54	
Credenz CZ 4590 RY	60 ± 1	73	57	35	71	67	55	
Mycogen 5N433R2	59 ± 1	71	60	44	67	63	50	
Warren Seed DS 4340 R2Y	59 ± 1	75	59	48	56	55	59	
TN Exp TN11-4506R2	57 ± 1	70	51	42	62	57	57	
Progeny 4211RY	56 ± 1	73	62	37	53	56	54	
Average (bu/a)	60	73	60	42	67	64	56	
L.S.D. _{.05} (bu/a)	3	6	9	6	6	5	7	
C.V. (%)	9.3	6.9	12.2	12.3	7.7	7.3	10.7	

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

Table 12. Mean yields and agronomic characteristics of 12 Early Maturity Group IV (4.0 - 4.5) Roundup Ready soybean varieties evaluated in six REC tests in Tennessee for two years, 2015 - 2016 (n=12).

Variety [†]	Avg. Yield [‡]	Moisture §	Lodging	Height	Maturity	Leaf Holding	Protein	Oil	SDS			Frogeye
	± Std Err. (n=12)								DI	DS	DX	
	bu/a	%	Score	in.	DAP	Score	%	%	%	0 - 9	index	%
Credenz CZ 4181 RY	64 ± 1	13.1	1.8	43	124	2.1	39.9	22.0	0.0	0.0	0.0	4.2
NK Seed S45-R7 (RR2,STS)	63 ± 1	12.8	1.6	38	125	2.5	39.0	23.1	0.0	0.0	0.0	5.0
Beck's Hybrids 453R4* (RR)	62 ± 1	13.7	2.2	41	128	1.9	38.1	23.4	1.0	0.7	0.2	1.5
Dyna-Gro 31RY45 (RR2)	62 ± 1	14.5	2.2	41	128	1.1	37.1	23.1	0.0	0.0	0.0	1.7
Dyna-Gro S43RY95 (RR2)	61 ± 1	13.0	2.2	42	128	1.8	38.2	23.5	1.7	1.0	0.6	4.3
USG 74F53RS (RR2,STS)	61 ± 1	14.5	2.1	42	127	1.3	40.5	22.6	0.0	0.0	0.0	3.2
Caverndale Farms CF 452 RR2Yn	60 ± 1	13.2	1.8	43	127	1.0	38.9	22.9	6.7	3.0	6.7	4.8
Credenz CZ 4590 RY	60 ± 1	12.7	1.6	43	128	1.0	40.3	21.0	0.0	0.0	0.0	3.8
Mycogen 5N433R2	59 ± 1	13.1	2.5	43	128	1.4	38.0	23.5	0.0	0.0	0.0	4.7
Warren Seed DS 4340 R2Y	59 ± 1	12.9	2.1	38	123	2.1	39.4	23.0	0.0	0.0	0.0	3.5
TN Exp TN11-4506R2	57 ± 1	14.8	2.3	40	129	1.3	40.7	21.8	0.0	0.0	0.0	1.5
Progeny 4211RY	56 ± 1	12.7	2.1	37	124	2.2	39.5	22.8	1.7	2.7	1.5	3.8
Average	60	13.4	2.0	41	127	1.6	39.1	22.7	0.9	0.6	0.8	3.5

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

§ Average moisture at harvest

Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

Maturity = days after planting (DAP).

Leaf Holding = 1 to 5 scale; where 1 = no leaves remaining on stems at maturity; 5 = 90+% of leaves remaining on stems at maturity.

Protein & Oil on dry weight basis.

SDS disease ratings were taken at the East Tennessee Research and Education Center on 9/7/2015

DI = disease incidence = percentage of plants with symptoms

DS = disease severity = score of leaf chlorosis and necrosis; 0 = no symptoms; 9 = plant death before normal defoliation due to senescence.

DX = disease index = (DI x DS / 9)

Disease ratings for Frogeye Leaf Spot are from 1-9, where 0=no disease & 10=maximum amount of plant disease or plant death. Ratings were taken at the East Tennessee Research and Education Center on 9/7/2015 and at the Highland Rim Experiment Station on 9/3/2015

Table 13. Mean yields of five Early Maturity Group IV (4.0 - 4.5) Roundup Ready soybean varieties evaluated in six REC tests in Tennessee for three years, 2014 - 2016 (n=18).

Variety [†]	Avg. Yield [‡] ± Std Err. (n=18)	<u>Knoxville</u> Irr.	<u>Springfield</u> Irr. Non-Irr.	<u>Milan</u> Irr. Non-Irr.	<u>Ames</u> Non-Irr.
	bu/a				
Dyna-Gro 31RY45 (RR2)	62 ± 1	78	61 40	70 65	58
USG 74F53RS (RR2,STS)	61 ± 1	72	62 42	71 66	54
Dyna-Gro S43RY95 (RR2)	61 ± 1	76	63 39	67 61	57
Warren Seed DS 4340 R2Y	60 ± 1	75	59 46	61 56	61
Progeny 4211RY	56 ± 1	72	62 36	56 55	55
Average (bu/a)	60	75	61 41	65 61	57
L.S.D._{.05} (bu/a)	2	5	6 6	6 5	5
C.V. (%)	9.5	6.4	10.7 14.8	9.1 8.3	9.8

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

Table 14. Mean yields and agronomic characteristics of five Early Maturity Group IV (4.0 - 4.5) Roundup Ready soybean varieties evaluated in six REC tests in Tennessee for three years, 2014 - 2016 (n=18).

Variety [†]	Avg. Yield [‡] ± Std Err. (n=18)	Moisture § (n=18)	Lodging (n=10)	Height (n=15)	Maturity (n=15)	Leaf Holding (n=3)	Protein (n=3)	Oil (n=3)	SDS			Frogeye (n=3)
	bu/a	%	Score	in.	DAP	Score	%	%	DI (n=1)	DS (n=1)	DX (n=1)	Score
Dyna-Gro 31RY45 (RR2)	62 ± 1	14.1	1.9	39	130	1.1	37.9	22.8	0.0	0.0	0.0	1.7
USG 74F53RS (RR2,STS)	61 ± 1	14.1	2.1	40	129	1.5	41.0	22.4	0.0	0.0	0.0	2.8
Dyna-Gro S43RY95 (RR2)	61 ± 1	13.1	2.3	40	129	1.6	38.6	23.1	1.7	1.0	0.6	4.1
Warren Seed DS 4340 R2Y	60 ± 1	13.0	1.9	36	127	2.3	40.0	22.5	0.0	0.0	0.0	3.3
Progeny 4211RY	56 ± 1	13.1	1.9	35	127	2.1	40.1	22.5	1.7	2.7	1.5	3.7
Average	60	13.5	2.0	38	128	1.7	39.5	22.7	0.7	0.7	0.4	3.1

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

§ Average moisture at harvest

Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

Maturity = days after planting (DAP).

Leaf Holding = 1 to 5 scale; where 1 = no leaves remaining on stems at maturity; 5 = 90+% of leaves remaining on stems at maturity.

Protein & Oil on dry weight basis.

SDS disease ratings were taken at the East Tennessee Research and Education Center on 9/7/2015

DI = disease incidence = percentage of plants with symptoms

DS = disease severity = score of leaf chlorosis and necrosis; 0 = no symptoms; 9 = plant death before normal defoliation due to senescence.

DX = disease index = (DI x DS / 9)

Disease ratings for Frogeye Leaf Spot are from 1-9, where 0=no disease & 10=maximum amount of plant disease or plant death. Ratings were taken at the East Tennessee Research and Education Center on 9/7/2015 and 8/28/2014 and at the Highland Rim Experiment Station on 9/3/2015

Table 15. Yields of 19 Early Maturity Group IV (4.0 - 4.5) Roundup Ready soybean varieties in 14 County Standard Tests in Tennessee and Kentucky during 2016.

MS	Variety	Avg.		Ballard	Calloway	Cannon	Crockett	Dyer	Franklin	Gibson	Giles	Henry	Obion	Perry	Trousdale	Warren	Weakley
		Yield [†]	Moist. [‡]														
		bu/a	%	6/11 [§]	6/14	6/17	6/9	5/10	5/16	5/6	5/26	6/14	5/6	5/16	6/13	6/6	5/16
A	*Mycogen 5N433R2	67	12	50	59	72	74	73	46	77	81	66	68	68	73	62	67
AB	Bayer CZ 4181	66	12	57	62	72	56	74	47	80	80	73	65	62	64	69	66
AB	***Dyna-Gro 31RY45	65	12	66	55	76	59	67	46	68	78	62	63	63	76	66	69
AB	Beck's 453R4	65	12	66	61	60	61	67	45	78	75	67	66	67	60	65	74
AB	*Warren Seed DS4340	65	12	61	54	70	57	70	45	79	79	61	65	61	70	70	65
AB	*Dyna-Gro S43RY95	65	12	57	64	70	53	71	46	75	78	62	67	66	61	69	66
AB	**Mycogen 5N452R2	64	12	62	67	71	55	67	41	72	78	62	63	63	71	63	67
AB	Progeny P4211RY	64	12	52	56	71	57	71	45	79	84	67	68	60	58	60	68
AB	NK S42-P6	64	12	66	59	68	38	72	41	75	69	67	68	76	69	59	65
AB	Terral 45A46	64	12	61	65	67	57	65	48	84	75	47	67	64	61	61	67
AB	Steyer 4402R2	63	12	55	60	57	55	70	44	76	78	59	65	78	66	62	64
AB	NK S45-R7	63	12	53	65	70	56	68	47	74	79	67	64	70	64	62	49
AB	Warren Seed DS4225	63	12	64	52	66	54	67	45	85	76	58	69	61	47	65	73
B	Bayer CZ 4590	63	12	48	64	70	65	63	43	69	82	62	67	75	57	58	56
B	Croplan R2C 4000	63	12	55	61	63	50	69	48	78	74	63	62	63	60	67	64
BC	Armor 44-R08	62	12	57	52	66	58	66	44	76	80	65	64	58	58	63	65
CD	Croplan R2C 4345	59	12	41	52	62	52	62	42	69	73	64	62	68	52	63	61
DE	Beck's 433R2	58	12	52	48	71	48	61	43	68	68	61	64	48	49	67	63
E	Progeny 4588	54	12	45	46	72	49	52	39	62	60	60	53	51	57	59	59
Average (bu/a)		63	12	56	58	68	55	67	44	75	76	63	65	64	62	64	65

[†] Yields have been adjusted to 13% moisture.

[‡] Moisture at harvest.

[§] Planting date.

Each variety was evaluated in a large strip-plot at each location, thus each county test was considered as one replication of the test in calculating the average yield and in conducting the statistical analysis to determine significant differences (MS).

Varieties denoted with an asterisks (*) or (**) etc. were in the top performing group for consecutive years.

MS= Varieties with any MS letter in common are not statistically different at the 5% level of probability.

Data provided by Ryan Blair, Ext. Area Specialist, Grain and Cotton Variety Testing, and the extension agents in the counties shown above.

Table 16. Overall average yields and moistures of 15 Early Maturity Group IV (4.0 - 4.5) Roundup Ready soybean varieties evaluated in County Standard Tests (n=14) and REC Tests (n=6) in Tennessee during 2016.

Variety [†]	Averages of CST & REC Tests		County Standard Tests		REC Tests	
	Avg. Yield [‡]	Moisture	Avg. Yield [‡]	Moisture	Avg. Yield [‡]	Moisture
	bu/a	%	bu/a	%	bu/a	%
Credenz CZ 4181 RY	64	12.7	66	12.1	61	13.3
Mycogen 5N433R2	62	12.3	67	12.0	57	12.7
Steyer 4402R2	61	12.6	63	12.3	59	13.0
Dyna-Gro 31RY45 (RR2)	61	13.0	65	12.1	57	13.8
Dyna-Gro S43RY95 (RR2)	61	12.6	65	12.1	57	13.0
Beck's Hybrids 453R4* (RR)	61	12.5	65	12.1	56	12.9
NK Seed S45-R7 (RR2,STS)	60	12.5	63	12.1	57	12.9
NK Seed S42-P6 (RR2)	60	12.8	64	12.1	56	13.6
Warren Seed DS 4340 R2Y	60	12.6	65	12.2	55	13.1
Terral-REV Brand REV 45A46 (RR)	60	12.3	64	12.0	56	12.7
Croplan 4000 (RR)	59	12.3	63	12.1	56	12.5
Warren Seed DS 4225 R2Y	59	12.5	63	12.3	55	12.8
Progeny 4211RY	59	12.5	64	12.1	54	12.9
Credenz CZ 4590 RY	59	12.2	63	11.9	55	12.4
Progeny 4588RY (R2)	52	12.5	54	12.3	49	12.8
Average (bu/a)	60	12.5	64	12.1	56	13.0

[†] If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

[‡] All yields are adjusted to 13% moisture.

Table 17. Yields and disease ratings of 19 Early Maturity Group IV (4.0 - 4.5) Roundup Ready soybean varieties in 15 County Standard Tests and in small plot trials at two Research and Education Centers and one on-farm location in Tennessee during 2016.

Summary from 15 County Tests			Summary from Small Plot Research															
MS	Brand/Variety	AvgYld bu/a	RECM - Moderate Disease Presssure						JAX - Severe Disease Pressure				WTREC - After Wheat (Low-Mod Disease Pressure)					
			RECM - YLD		Frogeye	Brown	Target	Other	JAX - YLD		Frogeye	Other	WTREC - YLD		Frogeye	Brown	Target	Other
			*Treated	Non-treated	leaf spot	spot	spot	Diseases	*Treated	Non-treated	leaf spot	Disease	*Treated	Non-treated	leaf spot	spot	spot	Disease
A	*Mycogen 5N433R2	66.9	53.5	48.6	MOD	HIGH	LOW		50.5	41.6	MOD	BS	61.6	58.2	MOD	MOD	LOW	
AB	Bayer CZ 4181	66.0	56.6	50.2	HIGH	HIGH	MOD		49.9	45.5	MOD	BS	56.9	56.4	MOD	MOD	LOW	CLB
AB	***Dyna-Gro 31RY45	65.3	53.9	45.7	LOW	MOD	HIGH	SDS	48.4	45.5	LOW	BS, TS	60.8	60.2	MOD	LOW	MOD	CLB
AB	Beck's 453R4	65.0	55.1	52.2	LOW	MOD	LOW	SDS	51.4	48.8	LOW	BS	62.5	61.3	LOW	MOD	LOW	
AB	*Dyna-Gro S43RY95	64.7	52.0	47.1	MOD	HIGH	LOW		46.8	43.4	MOD	BS	60.0	58.9	MOD	MOD	LOW	
AB	*Warren Seed DS4340	64.7	49.3	44.2	MOD	HIGH	MOD	CLB, SC	44.0	39.8	HIGH	BS	60.3	56.7	MOD	MOD	MOD	CLB
AB	**Mycogen 5N452R2	64.2	52.1	49.5	LOW	HIGH	LOW	SC	47.6	45.2	LOW	BS	59.4	60.7	LOW	MOD	LOW	
AB	Progeny P4211RY	63.9	51.7	44.9	HIGH	HIGH	MOD	CLB, SC	42.5	39.1	HIGH	BS	63.3	59.5	MOD	LOW	LOW	CLB
AB	NK S42-P6	63.8	54.4	47.6	LOW	MOD	LOW		59.0	51.0	LOW	BS,TS	57.8	54.3	LOW	HIGH	LOW	
AB	Terral 45A46	63.5	53.7	52.4	MOD	HIGH	LOW		52.3	43.4	MOD	BS	62.4	55.6	LOW	MOD	LOW	CLB
AB	Steyer 4402R2	63.4	54.1	51.0	MOD	HIGH	LOW		50.8	44.0	MOD	BS	60.9	52.1	MOD	MOD	LOW	CLB
AB	NK S45-R7	63.4	57.9	52.0	MOD	HIGH	LOW		53.2	45.8	HIGH	BS	48.4	54.7	MOD	HIGH	LOW	
AB	Warren Seed DS4225	63.0	51.5	43.6	MOD	MOD	HIGH		39.7	34.5	LOW	BS, TS	60.6	57.3	LOW	MOD	HIGH	
B	Bayer CZ 4590	62.8	55.4	48.8	MOD	MOD	LOW		48.6	41.6	MOD	BS	59.9	56.3	MOD	LOW	LOW	CLB
B	Croplan R2C 4000	62.6	51.0	47.8	HIGH	HIGH	LOW		46.2	43.1	HIGH	BS	53.9	50.0	MOD	MOD	LOW	
BC	Armor 44-R08	62.3	49.0	43.4	HIGH	HIGH	MOD	SC	39.7	38.0	HIGH	BS	58.1	56.6	MOD	MOD	LOW	CLB
CD	Croplan R2C 4345	58.6	55.0	45.4	HIGH	MOD	LOW		39.7	33.3	HIGH	BS	59.3	56.4	HIGH	LOW	LOW	CLB
DE	Beck's 433R2	57.9	48.9	42.7	LOW	HIGH	HIGH		40.4	36.4	LOW	BS	52.7	52.9	MOD	MOD	HIGH	CLB
E	Progeny 4588	54.4	37.8	40.7	LOW	HIGH	MOD		44.1	37.8	LOW	S, TS, CL	48.0	52.1	LOW	MOD	MOD	CLB
Average (bu/a)			63.0	52.3	47.3				47.1	42.0			58.3	56.3				

YLD= Avg. Yield @ 13% moisture

MS= Varieties that have any MS letter in common are not statistically different in yield at the 5% level of probability.

Varieties denoted with an asterisks (*) or (**) etc. were in the top performing group for consecutive years.

County locations include: Cannon, Crockett, Dyer, Franklin, Gibson, Giles, Hardeman, Henry, Obion, Perry, Trousdale (KY), War ren, Weakley, Ballard (KY), Calloway (KY)

*Treated plots sprayed with Quadris TOP @ 8 oz./Acre + 1% Induce @ R3-R4 growth stage. RECM varieties planted June 1, JAX planted May 23, and WTREC planted June 13 after wheat

LOW, MOD, and HIGH is a relative ranking of disease severity at each location. Other diseases noted: SC=Stem Canker, CLB=Cerc ospora Leaf Blight, SDS=Sudden Death Syndrome; ' - ' indicate variety was not tested at that location.

Disease ratings at RECM: Frogeye leaf spot ranged from 0 - 56% with an average of 12%; Brown spot ranged from 23 - 65% with an average of 39%; and Target spot ranged from 0 - 23% with an average of 5%.

Disease ratings at JAX: Frogeye leaf spot ranged from 1 - 63% with an average of 20%; Brown spot and Target spot were only rated as present or absent (noted in 'Other Diseases' column)

Disease ratings at WTREC: Frogeye leaf spot ranged from 0 - 21% with an average of 5%; Brown spot ranged from 15 - 35% with an average of 22%; and Target spot ranged from 0 - 13% with an average of 2%. Lodging was recorded for a plot if >50% of the plants were leaning at angle $\geq 45^\circ$ and is reported on a 0 to 4 scale based on the 4 replicate plots for each variety (e.g. 4=4 of 4 plots, 3=3 of 4 plots, etc.)

Disease ratings & yield data compiled by Dr. Heather Kelly from replicated plots at the Research and Education Center at Mila n (RECM, which is irrigated and had moderate disease pressure), on-farm location in Jackson (JAX, which is dry land and had severe disease pressure), and the West Tennessee Research and Education Center (WTREC, which was planted after wheat, is dry land and had low to moderated disease pressure due to regular crop rotation). County data provided by Ryan Blair, Ext. Area Specialist, and the extension agents.

Table 18. Mean yields of 64 Late Maturity Group IV (4.6 - 4.9) Roundup Ready soybean varieties evaluated in six REC tests in Tennessee during 2016.

Variety [†]	Avg. Yield [‡]	Knoxville		Springfield		Milan		Ames
	± Std Err.							
	(n=6)	Irr.	Irr.	Non-Irr.	Irr.	Non-Irr.	Non-Irr.	
		-----bu/a-----						
USG 7496XTS (R2X,STS)	62 ± 1	74	46	46	76	72	56	
Armor 47-R70 (RR2)	60 ± 1	67	52	52	76	70	44	
Asgrow AG47X6 (R2X,SR)	60 ± 1	59	55	53	70	71	53	
Progeny 4757RY	60 ± 1	64	48	48	76	71	53	
Terral-REV Brand REV 48A26 (RR)	59 ± 1	70	53	49	68	63	50	
Progeny 4613RYS	58 ± 1	63	47	50	71	70	48	
Progeny 4799RXS (R2X,STS)	58 ± 1	60	49	50	70	68	53	
Asgrow AG4632 (RR2)	58 ± 1	66	51	47	66	65	51	
Warren Seed DS 4633 R2Y	58 ± 1	67	52	50	66	64	47	
Asgrow AG46X7 (R2X,SR)	58 ± 1	71	41	44	67	67	55	
USG 7487XTS (R2X,STS)	58 ± 1	68	50	47	64	67	50	
Dyna-Gro S49XS76 (R2X,STS)	57 ± 1	62	44	43	69	73	53	
Terral-REV Brand REV 48A76 (RR)	57 ± 1	69	42	51	65	63	53	
Progeny 4620RXS (R2X,STS)	57 ± 1	62	46	45	72	68	50	
Dyna-Gro S46XS87 (R2X,STS)	57 ± 1	62	43	45	69	69	53	
Dyna-Gro SX16848XS (R2X,STS)	57 ± 1	60	41	48	68	73	50	
USG 74K95RS (RR2,STS)	57 ± 1	67	47	42	65	65	54	
Asgrow AG48X7 (R2X,SR)	56 ± 1	61	47	44	70	65	51	
NK Seed S48-D9 (RR2)	56 ± 1	61	48	44	68	67	47	
Progeny 4788RY	56 ± 1	51	45	49	76	65	48	
Asgrow AG49X6 (R2X)	56 ± 1	67	43	44	71	64	44	
Caverndale Farms CF 478 RR2Y/STSN	56 ± 1	60	49	43	67	64	52	
Terral-REV Brand REV 49R94 (RR)	56 ± 1	65	49	44	68	65	43	
LG Seeds C4615RX (R2X,STS)	56 ± 1	58	42	48	71	67	49	
LG Seeds C4845RX (R2X,STS)	56 ± 1	62	44	41	72	68	48	
Croplan 4775 (RR)	56 ± 1	62	44	45	71	70	42	
Terral-REV Brand REV 47R34 (RR)	56 ± 1	66	43	51	64	65	44	
Pfister 48RS01 (RR2)	56 ± 1	56	45	45	64	65	58	
Dyna-Gro S48RS53 (RR2,STS)	56 ± 1	59	45	45	68	66	49	
Warren Seed DS 4850 R2Y/STS	56 ± 1	62	47	45	65	65	50	
Mycogen 5N480R2	56 ± 1	61	44	42	67	65	54	
Warren Seed DS 47-003 R2Y	55 ± 1	65	44	46	73	62	41	
Armor 47-D17 (R2X)	55 ± 1	66	50	41	62	63	48	
Croplan 4700 (RR)	55 ± 1	59	40	45	71	66	49	
Armor 46-D08 (R2X)	55 ± 1	63	41	45	65	67	49	
Beck's Hybrids 487R4* (RR)	55 ± 1	66	43	46	69	62	43	
Steyer 4704XR (R2X,STS)	55 ± 1	62	45	43	68	66	44	
Steyer 4803XR (R2X,STS)	55 ± 1	63	39	44	68	66	48	
BiOWiSH BWTSBH1WCL	55 ± 1	63	45	45	64	65	47	
Armor 48-D70 (R2X)	55 ± 1	63	44	45	67	64	46	
Pfister 47R22 (RR2,STS)	54 ± 1	56	44	45	63	67	52	
Armor 49-D90 (R2X)	54 ± 1	58	38	44	68	67	51	
Beck's Hybrids 465R4* (RR)	54 ± 1	61	47	47	64	64	42	
BiOWiSH BWTSBH1WOCL	54 ± 1	61	40	42	66	68	47	
TN Exp TN12-5508R2	54 ± 1	66	41	42	62	64	47	
TN Exp TN13-4508R2	54 ± 1	62	43	41	64	61	51	
AGS GS48R216 (RR)	53 ± 1	64	40	42	66	58	49	
Progeny 4816RX (R2X)	53 ± 1	55	42	38	70	68	46	
Asgrow AG46X6 (R2X)	53 ± 1	61	45	40	69	59	43	
Armor 48-D24 (R2X)	52 ± 1	55	43	40	71	66	40	
TN Exp TN13-5741R2	52 ± 1	58	42	36	70	61	48	
Beck's Hybrids 4991X2 (R2X)	52 ± 1	65	39	34	67	62	44	

Table 18 (continued)

Variety [†]	Avg. Yield [‡]	Knoxville	Springfield		Milan		Ames
	± Std Err.		Irr.	Non-Irr.	Irr.	Non-Irr.	
	(n=6)						
			-----bu/a-----				
Progeny 4900RY	52 ± 1	64	41	38	66	59	43
Credenz CZ 4656 RY	52 ± 1	60	37	31	66	64	52
Progeny 4944RX (R2X)	51 ± 1	68	36	36	61	64	41
Dyna-Gro S48XT56 (R2X)	51 ± 1	61	36	40	62	56	50
Armor 49-D66 (R2X)	51 ± 1	65	38	37	62	61	40
Armor ARX4906 (R2X)	50 ± 1	58	40	39	61	56	47
LG Seeds C4900RX (R2X,STS)	49 ± 1	60	39	39	62	52	45
Credenz CZ 4898 RY	49 ± 1	54	47	40	55	57	41
Credenz CZ 4959 RY	49 ± 1	51	35	35	65	60	46
GoSoy 49G16 (RR)	47 ± 1	57	37	43	53	47	48
VA V11-3485 (RR)	47 ± 1	65	35	33	61	56	33
Terral-REV Brand REV 52A94 (RR,STS)	47 ± 1	62	34	33	54	51	46
Average (bu/a)	55	62	44	43	67	64	48
L.S.D._{.05} (bu/a)	3	10	7	6	8	8	6
C.V. (%)	8.4	9.4	9.5	8.7	7.0	7.7	8.1

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

Table 19. Mean yields and agronomic characteristics of 64 Late Maturity Group IV (4.6 - 4.9) Roundup Ready soybean varieties evaluated in six REC tests in Tennessee in 2016.

Variety [†]	Avg. Yield [‡]	Moisture §	Lodging	Height	Maturity	Leaf		
	± Std Err.					Holding	Protein	Oil
	(n=6)	(n=6)	(n=3)	(n=5)	(n=5)	(n=1)	(n=1)	(n=1)
	bu/a	%	Score	in.	DAP	Score	%	%
USG 7496XTS (R2X,STS)	62 ± 1	14.8	1.7	44	129	1	39.5	22.5
Armor 47-R70 (RR2)	60 ± 1	14.2	1.8	44	125	1	37.6	23.0
Asgrow AG47X6 (R2X,SR)	60 ± 1	14.0	1.6	47	124	2	38.8	22.4
Progeny 4757RY	60 ± 1	13.7	1.8	45	126	1	38.0	22.8
Terral-REV Brand REV 48A26 (RR)	59 ± 1	14.0	2.1	45	126	2	38.6	24.1
Progeny 4613RYS	58 ± 1	14.2	1.8	44	123	2	39.9	22.3
Progeny 4799RXS (R2X,STS)	58 ± 1	13.7	1.1	44	125	1	40.4	21.7
Asgrow AG4632 (RR2)	58 ± 1	13.7	2.1	44	124	2	37.9	22.6
Warren Seed DS 4633 R2Y	58 ± 1	13.7	2.4	42	124	1	38.6	22.7
Asgrow AG46X7 (R2X,SR)	58 ± 1	13.4	1.6	42	125	1	38.8	22.4
USG 7487XTS (R2X,STS)	58 ± 1	13.5	1.6	48	127	1	38.3	23.1
Dyna-Gro S49XS76 (R2X,STS)	57 ± 1	13.8	1.7	44	128	1	38.0	22.9
Terral-REV Brand REV 48A76 (RR)	57 ± 1	13.2	1.8	42	125	1	39.0	23.2
Progeny 4620RXS (R2X,STS)	57 ± 1	12.8	2.4	44	126	1	39.7	21.6
Dyna-Gro S46XS87 (R2X,STS)	57 ± 1	12.8	1.9	47	125	1	38.1	22.8
Dyna-Gro SX16848XS (R2X,STS)	57 ± 1	14.3	1.5	47	126	1	38.2	23.1
USG 74K95RS (RR2,STS)	57 ± 1	13.9	1.9	47	127	1	40.3	22.4
Asgrow AG48X7 (R2X,SR)	56 ± 1	14.4	1.6	46	126	1	38.1	23.5
NK Seed S48-D9 (RR2)	56 ± 1	13.8	1.8	42	126	2	39.3	23.0
Progeny 4788RY	56 ± 1	13.8	1.6	43	124	2	39.7	22.0
Asgrow AG49X6 (R2X)	56 ± 1	14.1	1.4	42	127	1	37.9	23.2
Caverndale Farms CF 478 RR2Y/STSN	56 ± 1	13.7	1.7	45	126	1	39.9	21.6
Terral-REV Brand REV 49R94 (RR)	56 ± 1	13.3	2.0	43	126	2	39.1	23.0
LG Seeds C4615RX (R2X,STS)	56 ± 1	13.0	1.6	47	125	1	38.1	23.0
LG Seeds C4845RX (R2X,STS)	56 ± 1	14.2	1.3	40	128	2	40.3	22.4
Croplan 4775 (RR)	56 ± 1	14.2	1.9	44	125	1	37.7	23.0
Terral-REV Brand REV 47R34 (RR)	56 ± 1	13.5	2.1	44	124	1	39.8	23.0
Pfister 48RS01 (RR2)	56 ± 1	13.5	1.6	45	125	1	39.5	21.7
Dyna-Gro S48RS53 (RR2,STS)	56 ± 1	13.5	1.7	46	125	1	39.0	22.4
Warren Seed DS 4850 R2Y/STS	56 ± 1	13.8	1.4	46	125	1	40.4	21.8
Mycogen 5N480R2	56 ± 1	13.5	1.6	45	126	1	40.3	21.5
Warren Seed DS 47-003 R2Y	55 ± 1	13.8	1.9	44	126	1	38.4	22.9
Armor 47-D17 (R2X)	55 ± 1	14.1	2.3	44	125	1	39.0	22.6
Croplan 4700 (RR)	55 ± 1	13.7	1.4	44	127	1	40.3	22.2
Armor 46-D08 (R2X)	55 ± 1	13.1	2.1	44	125	1	39.4	21.6
Beck's Hybrids 487R4* (RR)	55 ± 1	13.5	1.9	41	125	1	38.4	23.7
Steyer 4704XR (R2X,STS)	55 ± 1	12.7	1.6	48	125	1	39.1	22.8
Steyer 4803XR (R2X,STS)	55 ± 1	13.5	1.4	47	126	1	38.2	23.3
BiOWiSH BWTSBH1WCL	55 ± 1	13.8	2.2	43	124	2	37.5	23.0
Armor 48-D70 (R2X)	55 ± 1	13.7	1.3	46	126	1	37.7	23.1
Pfister 47R22 (RR2,STS)	54 ± 1	14.1	1.7	46	125	1	40.0	22.2
Armor 49-D90 (R2X)	54 ± 1	15.0	1.7	43	129	1	37.6	23.0
Beck's Hybrids 465R4* (RR)	54 ± 1	13.7	1.2	38	124	2	39.3	23.6
BiOWiSH BWTSBH1WOCL	54 ± 1	13.7	2.1	43	124	1	38.8	22.5
TN Exp TN12-5508R2	54 ± 1	13.2	2.1	45	127	1	37.7	22.4
TN Exp TN13-4508R2	54 ± 1	13.8	2.2	43	126	1	38.3	22.1
AGS GS48R216 (RR)	53 ± 1	13.8	2.3	37	125	1	37.8	23.5
Progeny 4816RX (R2X)	53 ± 1	13.4	1.2	39	127	2	40.2	22.4
Asgrow AG46X6 (R2X)	53 ± 1	13.5	1.8	42	126	2	38.5	22.6
Armor 48-D24 (R2X)	52 ± 1	14.2	1.2	38	128	2	39.4	22.4
TN Exp TN13-5741R2	52 ± 1	13.3	1.3	32	126	1	40.8	21.3
Beck's Hybrids 4991X2 (R2X)	52 ± 1	14.0	1.2	38	128	2	39.6	22.3
Progeny 4900RY	52 ± 1	14.1	1.3	39	126	2	39.3	22.6
Credenz CZ 4656 RY	52 ± 1	13.7	1.7	43	124	1	40.1	22.5

Table 19 (continued)

Variety [†]	Avg. Yield [‡]	Moisture §	Lodging	Height	Maturity	Leaf	Protein	Oil
	± Std Err. (n=6)					Holding (n=1)		
	bu/a	%	Score	in.	DAP	Score	%	%
Progeny 4944RX (R2X)	51 ± 1	13.6	1.9	43	126	1	38.1	22.2
Dyna-Gro S48XT56 (R2X)	51 ± 1	13.9	1.2	37	128	2	39.3	22.5
Armor 49-D66 (R2X)	51 ± 1	13.7	1.9	42	126	1	37.2	22.3
Armor ARX4906 (R2X)	50 ± 1	13.5	1.9	44	126	1	38.2	22.2
LG Seeds C4900RX (R2X,STS)	49 ± 1	14.1	1.9	44	126	1	38.0	22.0
Credenz CZ 4898 RY	49 ± 1	13.5	1.8	43	123	1	39.3	22.4
Credenz CZ 4959 RY	49 ± 1	13.8	1.3	41	127	1	41.4	21.9
GoSoy 49G16 (RR)	47 ± 1	13.2	3.1	40	126	1	39.6	22.3
VA V11-3485 (RR)	47 ± 1	16.2	2.3	34	129	1	40.4	22.2
Terral-REV Brand REV 52A94 (RR,STS)	47 ± 1	13.7	2.4	37	126	1	40.0	21.8
Average	55	13.8	1.8	43	126	1	39.0	22.5

[†] If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

[‡] All yields are adjusted to 13% moisture.

§ Average moisture at harvest.

Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

Maturity = days after planting (DAP).

Leaf Holding = 1 to 5 scale; where 1 = no leaves remaining on stems at maturity; 5 = 90+% of leaves remaining on stems at maturity.

Protein & Oil on dry weight basis.

Table 20. Mean yields of 19 Late Maturity Group IV (4.6 - 4.9) Roundup Ready soybean varieties evaluated in six REC tests in Tennessee for two years, 2015 - 2016 (n=12).

Variety [†]	Avg. Yield [‡]						
	± Std Err.	<u>Knoxville</u>	<u>Springfield</u>		<u>Milan</u>	<u>Ames</u>	
	(n=12)	Irr.	Irr.	Non-Irr.	Irr.	Non-Irr.	Non-Irr.
			-----bu/a-----				
Armor 47-R70 (RR2)	65 ± 1	79	67	40	81	69	54
Warren Seed DS 4633 R2Y	63 ± 1	79	67	41	70	64	58
Progeny 4757RY	63 ± 1	74	62	38	75	68	58
NK Seed S48-D9 (RR2)	62 ± 1	75	61	40	75	70	53
Progeny 4613RYS	62 ± 1	71	63	42	78	71	50
Asgrow AG4632 (RR2)	62 ± 1	76	65	36	70	72	54
Progeny 4788RY	62 ± 1	71	63	44	71	65	56
Dyna-Gro S48RS53 (RR2,STS)	61 ± 1	71	58	38	72	71	59
Terral-REV Brand REV 47R34 (RR)	61 ± 1	74	61	42	71	64	53
Terral-REV Brand REV 49R94 (RR)	61 ± 1	73	63	39	69	65	55
Warren Seed DS 4850 R2Y/STS	61 ± 1	72	59	39	71	68	56
USG 74K95RS (RR2,STS)	60 ± 1	69	63	35	65	66	63
Beck's Hybrids 465R4* (RR)	59 ± 1	73	61	39	67	63	53
Croplan 4700 (RR)	59 ± 1	66	51	38	74	67	56
TN Exp TN12-5508R2	58 ± 1	72	58	35	66	59	55
Progeny 4900RY	57 ± 1	64	58	37	70	60	52
TN Exp TN13-4508R2	56 ± 1	68	59	35	62	55	55
Credenz CZ 4959 RY	54 ± 1	65	51	30	69	63	48
Terral-REV Brand REV 52A94 (RR,STS)	53 ± 1	63	51	29	62	58	53
Average (bu/a)	60	71	60	38	70	65	55
L.S.D._{.05} (bu/a)	3	9	5	6	7	6	7
C.V. (%)	9.5	10.4	6.6	12.6	8.9	8.5	10.3

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

Table 21. Mean yields and agronomic characteristics of 19 Late Maturity Group IV (4.6 - 4.9) Roundup Ready soybean varieties in six REC tests in Tennessee for two years, 2015 - 2016 (n=12).

Variety [†]	Avg. Yield [‡]	Moisture §	Lodging	Height	Maturity	Leaf	Protein	Oil	SDS			Frogeye
	± Std Err.					Holding			DI	DS	DX	
	(n=12)	(n=12)	(n=6)	(n=10)	(n=10)	(n=2)	(n=2)	(n=2)	(n=1)	(n=1)	(n=1)	(n=1)
	bu/a	%	Score	in.	DAP	Score	%	%	%	0 - 9	index	Score
Armor 47-R70 (RR2)	65 ± 1	14.4	2.3	42	131	1.1	37.7	22.9	6.7	1.0	2.2	1.5
Warren Seed DS 4633 R2Y	63 ± 1	13.8	2.3	41	129	1.3	38.2	22.9	5.0	2.0	3.3	2.7
Progeny 4757RY	63 ± 1	14.0	2.2	43	131	1.1	37.6	22.9	15.0	4.3	6.9	1.8
NK Seed S48-D9 (RR2)	62 ± 1	13.9	1.9	41	132	1.9	39.4	22.8	11.7	4.0	5.4	2.3
Progeny 4613RYS	62 ± 1	14.1	2.2	43	130	2.3	39.9	21.9	0.0	0.0	0.0	4.8
Asgrow AG4632 (RR2)	62 ± 1	13.9	2.4	42	130	1.6	37.9	22.6	13.3	2.0	8.9	1.7
Progeny 4788RY	62 ± 1	14.0	1.8	43	131	1.7	39.1	22.3	5.0	0.7	1.1	2.0
Dyna-Gro S48RS53 (RR2,STS)	61 ± 1	14.1	1.9	45	132	1.0	39.2	22.0	12.0	4.7	5.4	3.7
Terral-REV Brand REV 47R34 (RR)	61 ± 1	13.6	2.1	43	130	1.4	39.3	22.7	1.7	2.3	1.3	2.3
Terral-REV Brand REV 49R94 (RR)	61 ± 1	13.6	2.4	42	131	1.6	39.1	22.8	33.3	6.3	23.7	1.5
Warren Seed DS 4850 R2Y/STS	61 ± 1	13.8	1.7	45	131	1.2	39.9	21.8	20.0	3.3	11.1	3.8
USG 74K95RS (RR2,STS)	60 ± 1	13.1	2.1	46	131	1.1	39.6	22.1	25.0	5.0	13.3	4.7
Beck's Hybrids 465R4* (RR)	59 ± 1	13.6	1.5	38	130	1.8	39.4	23.1	0.0	0.0	0.0	1.5
Croplan 4700 (RR)	59 ± 1	13.8	1.8	43	132	1.4	39.7	22.0	16.7	2.0	7.0	4.5
TN Exp TN12-5508R2	58 ± 1	13.6	2.3	43	133	1.0	37.1	22.3	1.7	1.7	0.9	2.5
Progeny 4900RY	57 ± 1	14.0	1.5	38	133	1.7	39.4	22.4	8.3	2.7	3.1	4.8
TN Exp TN13-4508R2	56 ± 1	14.1	2.4	42	133	1.3	37.7	22.2	5.0	1.7	1.5	2.5
Credenz CZ 4959 RY	54 ± 1	14.4	1.6	40	133	1.2	41.0	21.9	26.7	3.7	11.5	4.3
Terral-REV Brand REV 52A94 (RR,STS)	53 ± 1	13.8	2.7	37	133	1.0	39.8	21.6	11.7	5.3	6.1	1.8
Average	60	13.9	2.1	42	131	1.4	39.0	22.4	11.5	2.8	5.9	2.9

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

§ Average moisture at harvest.

Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

Maturity = days after planting (DAP).

Leaf Holding = 1 to 5 scale; where 1 = no leaves remaining on stems at maturity; 5 = 90+% of leaves remaining on stems at maturity.

Shattering = 1 to 5 scale; where 1 = no shattering; 5 = 90+% of pods shattered.

Seed Quality = 1 to 5 scale; where 1 = < 5% of seeds showing disease or split seed coats; 5=95+% of seed are diseased or have split seed coats.

Protein & Oil on dry weight basis.

SDS disease ratings were taken at the East Tennessee Research and Education Center on 9/7/2015

DI = disease incidence = percentage of plants with symptoms

DS = disease severity = score of leaf chlorosis and necrosis; 0 = no symptoms; 9 = plant death before normal defoliation due to senescence.

DX = disease index = (DI x DS / 9)

Disease ratings for Frogeye Leaf Spot are from 1-9, where 0=no disease & 10=maximum amount of plant disease or plant death. Ratings were taken at the East Tennessee Research and Education Center on 9/7/2015

Table 22. Mean yields of 11 Late Maturity Group IV (4.6 - 4.9) Roundup Ready soybean varieties evaluated in six REC tests in Tennessee for three years, 2014 - 2016 (n=18).

Variety [†]	Avg. Yield [‡]	Knoxville		Springfield		Milan		Ames
	± Std Err.							
	(n=18)	Irr.	Irr.	Non-Irr.	Irr.	Non-Irr.	Non-Irr.	
		-----bu/a-----						
Warren Seed DS 4633 R2Y	62 ± 1	78	71	38	66	62	55	
Dyna-Gro S48RS53 (RR2,STS)	61 ± 1	72	64	37	66	71	58	
Progeny 4788RY	61 ± 1	72	66	41	67	63	58	
Terral-REV Brand REV 47R34 (RR)	61 ± 1	73	66	43	69	61	54	
Warren Seed DS 4850 R2Y/STS	60 ± 1	72	62	39	68	65	57	
Asgrow AG4632 (RR2)	60 ± 1	75	67	35	64	68	52	
Progeny 4613RYS	60 ± 1	69	63	39	71	68	48	
Terral-REV Brand REV 49R94 (RR)	59 ± 1	70	66	37	64	61	56	
Progeny 4900RY	55 ± 1	64	60	36	65	59	48	
Credenz CZ 4959 RY	54 ± 1	65	56	30	64	59	50	
Terral-REV Brand REV 52A94 (RR,STS)	53 ± 1	66	53	35	59	55	51	
Average (bu/a)	59	71	63	37	66	63	53	
L.S.D. _{.05} (bu/a)	2	5	4	4	6	5	6	
C.V. (%)	9.4	8.1	6.9	12.4	10.3	8.7	11.0	

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

Table 23. Mean yields and agronomic characteristics of 11 Late Maturity Group IV (4.6 - 4.9) Roundup Ready soybean varieties evaluated in six REC tests in Tennessee for three years, 2014 - 2016 (n=18).

Variety [†]	Avg. Yield [‡]	Moisture §	Lodging	Height	Maturity	Leaf	Protein	Oil	SDS			Frogeye
	± Std Err. (n=18)					Holding			DI	DS	DX	
	bu/a	%	Score	in.	DAP	Score	%	%	(n=1)	(n=1)	(n=1)	(n=2)
Warren Seed DS 4633 R2Y	62 ± 1	13.9	2.3	39	131	1.3	38.5	22.7	5.0	2.0	3.3	2.3
Dyna-Gro S48RS53 (RR2,STS)	61 ± 1	14.1	2.0	43	133	1.2	39.4	21.8	12.0	4.7	5.4	3.4
Progeny 4788RY	61 ± 1	13.9	1.8	41	132	1.7	39.4	22.1	5.0	0.7	1.1	2.0
Terral-REV Brand REV 47R34 (RR)	61 ± 1	13.7	2.3	42	131	1.6	39.5	22.5	1.7	2.3	1.3	2.0
Warren Seed DS 4850 R2Y/STS	60 ± 1	14.1	1.8	43	133	1.1	40.1	21.6	20.0	3.3	11.1	3.4
Asgrow AG4632 (RR2)	60 ± 1	13.8	2.5	39	132	1.7	38.1	22.5	13.3	2.0	8.9	1.8
Progeny 4613RYS	60 ± 1	14.1	2.2	41	132	2.5	40.2	21.8	0.0	0.0	0.0	4.7
Terral-REV Brand REV 49R94 (RR)	59 ± 1	13.5	2.3	40	132	1.4	39.3	22.6	33.3	6.3	23.7	1.3
Progeny 4900RY	55 ± 1	13.8	1.5	36	134	1.6	39.7	22.1	8.3	2.7	3.1	4.4
Credenz CZ 4959 RY	54 ± 1	14.2	1.7	38	134	1.3	41.0	21.8	26.7	3.7	11.5	4.0
Terral-REV Brand REV 52A94 (RR,STS)	53 ± 1	13.9	2.6	36	135	1.2	40.1	21.3	11.7	5.3	6.1	1.9
Average	59	13.9	2.1	40	133	1.5	39.6	22.1	12.5	3.0	6.9	2.8

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

§ Average moisture at harvest.

Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

Maturity = days after planting (DAP).

Leaf Holding = 1 to 5 scale; where 1 = no leaves remaining on stems at maturity; 5 = 90+% of leaves remaining on stems at maturity.

Protein & Oil on dry weight basis.

SDS disease ratings were taken at the East Tennessee Research and Education Center on 9/7/2015

DI = disease incidence = percentage of plants with symptoms

DS = disease severity = score of leaf chlorosis and necrosis; 0 = no symptoms; 9 = plant death before normal defoliation due to senescence.

DX = disease index = (DI x DS / 9)

Disease ratings for Frogeye Leaf Spot are from 1-9, where 0=no disease & 10=maximum amount of plant disease or plant death. Ratings were taken at the East Tennessee Research and Education Center on 8/28/2014 and 9/7/2015

Table 24. Yields of 21 Late Maturity Group IV (4.6-4.9) Roundup Ready soybean varieties in 17 County Standard Tests in Tennessee and Kentucky during 2016.

MS	Variety	Avg.		Crockett IR	Decatur	Dyer	Fayette	Franklin	Gibson	Giles	Haywood	Henry	Loudon	Madison	Marion	Montgomery	Obion	Tipton	Weakley	McCracken
		Yield [†]	Moist. ‡																	
		bu/a	%	6/22 [§]	6/10	5/10	5/31	6/10	5/6	5/24	6/29	6/3	5/6	6/15	5/6	6/21	5/6	5/6	6/14	6/15
A	Progeny P4757RY	61	12	47	73	76	40	65	79	70	41	60	62	64	43	62	70	47	61	71
A	Armor 47-R70	61	12	52	81	71	41	64	79	60	42	63	64	65	42	51	71	49	61	74
AB	Terral 48A76	60	11	55	77	70	45	61	73	60	45	62	62	57	45	54	63	56	59	73
AB	***Warren Seed DS4633	60	12	51	75	70	40	60	74	69	43	62	70	61	43	53	66	51	62	67
ABC	NK S47-K5	59	12	46	67	73	46	60	72	74	36	64	70	.	43	47	64	63	56	63
ABCD	***Asgrow AG4632	58	12	45	63	71	43	60	71	65	47	57	67	57	39	59	64	53	59	66
ABCD	Terral 48A26	58	12	56	73	65	.	62	79	51	43	60	68	.	42	51	68	42	59	66
BCDE	Terral 47R34	57	12	48	67	72	43	60	73	59	42	59	62	61	39	53	65	44	58	67
BCDE	Terral 49R94	57	12	50	74	68	42	63	72	67	41	59	53	59	36	50	62	44	58	69
CDE	Progeny P4613	56	12	41	62	65	46	60	77	69	42	60	58	61	38	44	60	50	58	67
CDE	Beck's 493R4	56	12	48	74	65	38	62	66	61	42	70	51	53	40	55	61	43	58	70
CDEF	Beck's 465R4	56	12	55	76	62	36	55	78	46	43	54	52	60	34	57	66	39	58	73
DEF	Steyer 47014R2	55	12	58	59	65	40	61	62	53	43	54	59	60	35	55	64	44	61	67
EF	Bayer CZ 4959	55	12	45	74	61	36	56	65	65	44	52	58	57	45	52	61	41	55	64
EFG	Croplan R2C 4700S	54	12	51	66	61	41	64	64	53	44	54	49	55	40	57	59	43	53	67
EFGH	Dyna-Gro S48RS53	54	12	50	66	57	39	61	56	57	41	53	56	.	37	58	58	48	56	66
FGHI	Mycogen 5N490R2	53	12	47	74	58	40	58	60	60	45	49	49	53	42	49	53	39	52	69
GHIJ	Warren Seed 4850	51	12	52	57	50	34	61	52	52	40	51	56	57	35	51	55	44	54	69
HIJ	Bayer CZ 4656	51	12	58	58	57	34	50	53	50	43	52	57	52	38	45	52	45	58	62
IJ	USG 74K95	50	12	51	63	44	34	58	47	46	38	51	51	54	34	54	54	49	56	66
J	Bayer CZ 4898	49	12	47	58	45	36	55	56	51	42	46	63	45	35	43	51	40	52	65
Average (bu/a)		56	12	50	68	63	40	60	67	59	42	57	59	57	39	52	61	46	57	68

† Yields have been adjusted to 13% moisture.

‡ Moisture at harvest.

§ Planting date.

Each variety was evaluated in a large strip-plot at each location, thus each county test was considered as one replication of the test in calculating the average yield and in conducting the statistical analysis to determine significant differences (MS).

Varieties denoted with an asterisks (*) or (**) etc. were in the top performing group for consecutive years.

MS= Varieties with any MS letter in common are not statistically different at the 5% level of probability.

Data provided by Ryan Blair, Ext. Area Specialist, Grain and Cotton Variety Testing, and the extension agents in the counties shown above.

Table 25. Overall average yields and moistures of 17 Late Maturity Group IV (4.6 - 4.9) Roundup Ready soybean varieties evaluated in County Standard Tests (n=17) and REC Tests (n=6) in Tennessee during 2016.

Variety [†]	Averages of CST & REC Tests		County Standard Tests		REC Tests	
	Avg. Yield [†]	Moisture	Avg. Yield [†]	Moisture	Avg. Yield [†]	Moisture
	bu/a	%	bu/a	%	bu/a	%
Progeny 4757RY	60	12.7	61	11.8	60	13.7
Armor 47-R70 (RR2)	60	13.0	61	11.7	60	14.2
Warren Seed DS 4633 R2Y	59	12.7	60	11.6	58	13.7
Terral-REV Brand REV 48A26 (RR)	59	12.8	58	11.6	59	14.0
Terral-REV Brand REV 48A76 (RR)	58	12.3	60	11.4	57	13.2
Asgrow AG4632 (RR2)	58	12.8	58	11.9	58	13.7
Progeny 4613RYS	57	13.1	56	12.0	58	14.2
Terral-REV Brand REV 47R34 (RR)	57	12.7	57	11.9	56	13.5
Terral-REV Brand REV 49R94 (RR)	56	12.4	57	11.5	56	13.3
Dyna-Gro S48RS53 (RR2,STS)	55	12.6	54	11.7	56	13.5
Beck's Hybrids 465R4* (RR)	55	12.7	56	11.8	54	13.7
Croplan 4700 (RR)	55	12.7	54	11.7	55	13.7
USG 74K95RS (RR2,STS)	54	12.8	50	11.7	57	13.9
Warren Seed DS 4850 R2Y/STS	54	12.7	51	11.7	56	13.8
Credenz CZ 4959 RY	52	12.9	55	12.1	49	13.8
Credenz CZ 4656 RY	51	12.7	51	11.7	52	13.7
Credenz CZ 4898 RY	49	12.5	49	11.6	49	13.5
Average (bu/a)	55.8	12.7	55.7	11.7	55.9	13.7

[†] If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

[‡] All yields are adjusted to 13% moisture.

Table 26. Yields and disease ratings of 21 Late Maturity Group IV (4.6 - 4.9) Roundup Ready soybean varieties in 18 County Standard Tests and in small plot trials at two Research and Education Centers and one on-farm location in Tennessee during 2016.

Summary from 18 County Tests			Summary from Small Plot Research																	
MS	Brand/Variety	AvgYld bu/a	RECM - Moderate Disease Presssure						JAX - Severe Disease Pressure						WTREC - After Wheat (Low-Mod Disease Pressure)					
			RECM - YLD		Frogeye	Brown	Target	Other	JAX - YLD		Frogeye	Brown	Target	Other	WTREC - YLD		Frogeye	Brown	Target	Other
			*Treated	Non-treated	leaf spot	spot	spot	Disease	*Treated	Non-treated	leaf spot	spot	spot	Disease	*Treated	Non-treated	leaf spot	spot	spot	Disease
A	Progeny P4757RY	60.7	53.3	50.1	LOW	HIGH	LOW		54.2	52.1	LOW	HIGH	LOW		58.6	54.7	LOW	MOD	LOW	
A	Armor 47-R70	60.6	54.6	48.0	LOW	MOD	LOW		54.9	49.7	LOW	HIGH	LOW		61.9	59.3	LOW	MOD	LOW	
AB	Terral 48A76	59.8	57.9	53.1	LOW	MOD	LOW		55.9	46.5	LOW	HIGH	LOW		63.3	62.4	LOW	MOD	LOW	SDS
AB	***Warren Seed DS4633	59.8	53.3	46.4	LOW	HIGH	MOD	CLB	49.8	45.0	LOW	HIGH	HIGH		57.5	56.5	LOW	HIGH	MOD	
ABC	NK S47-K5	58.9	50.5	45.0	LOW	MOD	LOW		57.2	51.6	LOW	HIGH	LOW		59.7	56.2	LOW	MOD	LOW	
ABCD	***Asgrow AG4632	58.1	54.3	47.0	LOW	MOD	MOD		49.1	41.9	LOW	HIGH	MOD		62.9	60.5	LOW	MOD	MOD	
ABCD	Terral 48A26	58.0	49.1	44.4	LOW	HIGH	LOW		53.8	50.6	LOW	HIGH	LOW		63.5	56.8	LOW	MOD	LOW	
BCDE	Terral 47R34	57.1	55.3	50.8	LOW	MOD	LOW	CLB	53.4	48.3	LOW	HIGH	LOW		57.7	58.4	LOW	MOD	LOW	
BCDE	Terral 49R94	56.8	53.3	50.7	LOW	HIGH	LOW		49.7	41.1	LOW	HIGH	LOW	CLB	62.4	54.1	LOW	MOD	LOW	
CDE	Progeny P4613	56.4	52.9	49.9	LOW	LOW	LOW		52.0	46.9	HIGH	HIGH	LOW		60.9	55.6	MOD	HIGH	LOW	
CDE	Beck's 493R4	56.2	51.4	45.4	LOW	MOD	LOW		50.1	45.6	LOW	HIGH	LOW		57.6	58.6	HIGH	MOD	HIGH	
CDEF	Beck's 465R4	55.7	53.3	46.0	LOW	MOD	LOW		53.5	47.7	LOW	HIGH	LOW		60.9	55.1	MOD	MOD	HIGH	CLB
DEF	Steyer 47014R2	55.3	53.2	47.1	MOD	HIGH	HIGH	CLB	42.3	34.7	†	†	HIGH		64.1	57.8	LOW	HIGH	HIGH	CLB
EF	Bayer CZ 4959	54.6	47.7	41.3	MOD	MOD	LOW		46.4	43.5	HIGH	HIGH	LOW		51.2	50.1	HIGH	MOD	MOD	
EFG	Croplan R2C 4700S	54.1	53.1	40.8	HIGH	MOD	HIGH		45.9	36.8	HIGH	HIGH	LOW		64.3	52.3	HIGH	MOD	HIGH	
EFGH	Dyna-Gro S48RS53	53.8	49.8	41.4	LOW	MOD	HIGH	CLB	38.9	32.5	MOD	HIGH	LOW		60.7	52.7	MOD	MOD	LOW	
FGHI	Mycogen 5N490R2	52.8	53.7	44.7	HIGH	MOD	LOW		45.1	37.3	HIGH	HIGH	LOW		61.2	54.6	HIGH	LOW	LOW	
GHIJ	Warren Seed 4850	51.1	50.0	41.1	MOD	HIGH	HIGH	CLB	-	-	-	-	-	-	-	-	-	-	-	-
HIJ	Bayer CZ 4656	50.8	45.8	39.3	MOD	MOD	MOD		34.1	24.3	HIGH	LOW	HIGH		51.9	50.1	LOW	MOD	LOW	
IJ	USG 74K95	50.1	48.1	37.9	LOW	HIGH	HIGH		40.5	33.8	LOW	HIGH	MOD		57.1	49.0	LOW	MOD	HIGH	
J	Bayer CZ 4898	48.7	46.5	37.8	MOD	MOD	HIGH		34.2	27.2	HIGH	†	HIGH		53.8	49.1	LOW	MOD	LOW	
Average (bu/a)			55.7	51.8	45.2				48.1	41.9					59.6	55.2				

YLD= Avg. Yield @ 13% moisture

MS= Varieties that have any MS letter in common are not statistically different in yield at the 5% level of probability.

Varieties denoted with an asterisks (*) or (**) etc. were in the top performing group for consecutive years.

County locations include: Benton, Crockett, Decatur, Dyer, Fayette, Franklin, Gibson, Giles, Haywood, Henry, Loudon, Madison, Marion, Montgomery, Obion, Tipton, Weakley, McCracken (KY)

*Treated plots sprayed with Quadris TOP @ 8 oz./Acre + 1% Induce @ R3-R4 growth stage. RECM varieties planted June 1, JAX planted May 23, and WTREC planted June 13 after wheat.

LOW, MOD, and HIGH is a relative ranking of disease severity at each location. Other diseases noted: SC=Stem Canker, CLB=Cercospora Leaf Blight, SDS=Sudden Death Syndrome; ' - ' indicate variety was not tested at that location † indicates ratings not able to be taken

Disease ratings at RECM: Frogeye leaf spot ranged from 38 - 53% with an average of 45%; Brown spot ranged from 20 - 40% with an average of 26%; and Target spot ranged from 0 - 14% with an average of 4%.

Disease ratings at JAX: Frogeye leaf spot ranged from 0 - 59% with an average of 14%; Brown spot ranged from 20 - 63% with an average of 49%; and Target spot ranged from 0 - 15% with an average of 3%.

Disease ratings at WTREC: Frogeye leaf spot ranged from 0 - 15% with an average of 3%; Brown spot ranged from 14 - 31% with an average of 23%; and Target spot ranged from 0 - 18% with an average of 3%.

Disease ratings & yield data compiled by Dr. Heather Kelly from replicated plots at the Research and Education Center at Milan (RECM, which is irrigated and had moderate disease pressure), on-farm location in Jackson (JAX, which is dry land and had severe disease pressure), and the West Tennessee Research and Education Center (WTREC, which was planted after wheat, is dry land and had low to moderated disease pressure due to regular crop rotation). County data provided by Ryan Blair, Ext. Area Specialist, and the extension agents.

Table 27. Yields and disease ratings of 18 Late Maturity Group IV (4.6 - 4.9) Roundup Ready soybean varieties in small plot trials at two Research and Education Centers and one on-farm location in Tennessee during 2016.

MG Brand/Variety		Summary from Small Plot Research																
		RECM - Moderate Disease Presssure						JAX - Severe Disease Pressure					WTREC - After Wheat (Low-Mod Disease Pressure)					
		RECM - YLD		Frogeye	Brown	Target	Other	JAX - YLD		Frogeye	Brown	Target	WTREC - YLD		Frogeye	Brown	Target	Other
*Treated Non-treated		leaf spot	spot	spot	Disease	*Treated Non-treated		leaf spot	spot	spot	*Treated Non-treated		leaf spot	spot	spot	Disease		
3	Armor 39-D90 RR2/Xtend	45.1	42.4	MOD	present	present		38.4	35.8	LOW	present		-	-	-	-	-	-
3	Asgrow AG38X6 xtend	48.6	51.7	MOD	present	present		48.6	44.9	MOD	present		-	-	-	-	-	-
4E	Armor 43-D34 RR2 Xtend	56.9	52.1	MOD	present	present	SC,	58.9	47.7	HIGH	present		61.0	52.3	MOD	MOD	LOW	
4E	Asgrow AG42X6 RR2X	47.5	42.2	LOW	present	present	SDS	42.9	37.4	MOD	present		56.1	51.9	MOD	MOD	HIGH	
4E	Asgrow AG45X6 RR2X	41.8	36.3	MOD	present	present	SDS	46.2	38.6	HIGH	present		52.4	52.7	MOD	MOD	MOD	
4E	USG 7426 XTS RR2/X/STS	59.2	48.8	HIGH	present	present	SDS	52.2	38.9	HIGH	present		51.8	45.5	HIGH	MOD	MOD	
4L	Armor 48-D24 RR2Xtend	63.1	56.8	MOD	LOW	LOW		57.2	50.4	HIGH	HIGH	LOW	56.0	53.2	MOD	MOD	LOW	SDS
4L	Asgrow AG46X6 RR2/X	57.7	53.9	MOD	MOD	MOD	SDS	51.7	47.6	MOD	HIGH	LOW	58.7	50.3	MOD	MOD	LOW	
4L	Asgrow AG47X6 RR2/X	51.4	56.6	LOW	MOD	HIGH		54.7	50.6	LOW	HIGH	LOW	56.4	55.7	LOW	MOD	MOD	
4L	Asgrow AG49X6 RR2/X	52.4	40.4	LOW	MOD	HIGH	SC	47.9	35.1	LOW	HIGH	HIGH	60.4	57.4	LOW	MOD	HIGH	
4L	Croplan RX 4825 RR2X	65.1	57.9	MOD	MOD	LOW	SDS	60.0	53.0	MOD	HIGH	LOW	61.2	57.3	MOD	MOD	LOW	
4L	Croplan RX 4555S RR2,X,STS	51.6	52.1	MOD	MOD	MOD	SDS	49.1	44.4	LOW	HIGH	LOW	55.1	51.8	LOW	MOD	MOD	SDS
4L	LG Seeds C4615X Xtend	46.0	42.6	MOD	LOW	HIGH	SC	38.7	31.5	MOD	HIGH	MOD	61.2	55.8	MOD	MOD	HIGH	
4L	LG Seeds C4845X Xtend	64.0	57.5	MOD	LOW	LOW		55.1	47.5	MOD	HIGH	LOW	57.8	55.2	MOD	MOD	MOD	
5	Armor 53-D31 RR2 Xtend	50.0	49.9	LOW	MOD	LOW	SDS	56.2	49.4	LOW	HIGH	LOW	-	-	-	-	-	-
5	Asgrow AG53X6 RR2X	50.4	49.0	LOW	HIGH	LOW	SDS	54.2	49.3	LOW	HIGH	LOW	-	-	-	-	-	-
5	Asgrow AG54X6 RR2X	55.8	51.4	LOW	LOW	LOW	SDS	51.1	47.6	LOW	HIGH	LOW	-	-	-	-	-	-
5	USG 7506 XTS Xtend/STS	60.6	53.8	HIGH	MOD	LOW	SDS	57.4	47.4	HIGH	HIGH	LOW	-	-	-	-	-	-
Average (bula)		53.7	49.7					51.1	44.3				57.3	53.3				

YLD= Avg. Yield @ 13% moisture

Varieties not tested in County Standard Tests in 2016

*Treated plots sprayed with Quadris TOP @ 8 oz./Acre + 1% Induce @ R2-R3 growth stage. RECM varieties planted June 1, JAX planted May 23, and WTREC planted June 13 after wheat
LOW, MOD, and HIGH is a relative ranking of disease severity of nontreated plots at each location. Other diseases noted: SC=Stem Canker, CLB=Cercospora Leaf Blight, SDS=Sudden Death Syndrome; ' - ' indicate variety was not tested at that location.

Disease ratings at RECM:

MGLI-EIV Frogeye leaf spot ranged from 1 - 41% with an average of 11%; Brown spot and Target spot were only rated as present or absent (all varieties had both diseases present)

MGLIV-V Frogeye leaf spot ranged from 0 - 14% with and average of 3%; Brown spot ranged from 11 - 28% with and average of 19%; and Target spot ranged from 0 - 36% with and average of 6%, varieties noted for SDS had moderate to high levels

Disease ratings at JAX:

MGLI-EIV Frogeye leaf spot ranged from 6 - 74% with an average of 28%; Brown spot and Target spot were only rated as present or absent

MGLIV-V Frogeye leaf spot ranged from % with and average of %; Brown spot ranged from % with and average of %; and Target spot ranged from % with and average of %, varieties noted for SDS had moderate to high levels

Disease ratings at WTREC: Frogeye leaf spot ranged from 1 - 27% with an average of 5%; Brown spot ranged from 15 - 24% with an average of 20%; and Target spot ranged from 0 - 20% with an average of 6%.

Disease ratings & yield data compiled by Dr. Heather Kelly from replicated plots at the Research and Education Center at Milan (RECM, which is irrigated and had moderate disease pressure), on-farm location in Jackson (JAX, which is dry land and had severe disease pressure), and the West Tennessee Research and Education Center (WTREC, which was planted after wheat, is dry land and had low to moderated disease pressure due to regular crop rotation).

Table 28. Mean yields of 24 Early Maturity Group V (5.0 - 5.5) Roundup Ready soybean varieties evaluated in six REC tests in Tennessee during 2016.

	Avg. Yield [‡]						
	± Std Err.	<u>Knoxville</u>	<u>Springfield</u>		<u>Milan</u>	<u>Ames</u>	
Variety [†]	(n=6)	Irr.	Irr.	Non-Irr.	Irr.	Non-Irr.	Non-Irr.
		-----bu/a-----					
USG 7506XTS (R2X,STS)	61 ± 1	68	45	41	78	74	58
Progeny 5016RXS (R2X,STS)	59 ± 1	66	46	37	76	71	62
Steyer 5003XR (R2X,STS)	58 ± 1	62	45	38	79	70	55
Mycogen 5N523R2	57 ± 1	60	42	37	75	68	59
Dyna-Gro S52RY75 (RR2)	57 ± 1	66	43	39	73	68	52
Progeny 5226RYS	57 ± 1	65	40	31	73	72	59
Dyna-Gro S52RS86 (R2X,STS)	56 ± 1	61	40	36	71	69	62
Terral-REV Brand REV 51A56 (RR)	55 ± 1	65	48	51	61	58	48
Progeny 5555RY	54 ± 1	69	36	30	73	67	48
TN Exp TN12-5507R2	52 ± 1	60	42	39	65	61	47
Credenz HBK RY 5221 (RR2)	52 ± 1	59	45	35	67	57	50
Asgrow AG55X7 (R2X)	51 ± 1	60	45	30	71	58	41
USG 7547XT (R2X)	51 ± 1	61	40	34	67	58	44
Progeny 5417RX (R2X)	51 ± 1	63	37	34	66	59	45
AR R11-89RY	50 ± 1	66	40	30	63	55	49
USG 7536XT (R2X)	49 ± 1	64	37	27	64	61	43
Asgrow AG54X6 (R2X)	49 ± 1	61	32	26	67	61	49
Credenz CZ 5375 RY	49 ± 1	64	29	25	70	59	48
TN Exp TN11-4510R2	49 ± 1	66	34	33	64	49	48
TN Exp TN13-5531RR1	49 ± 1	62	40	37	59	62	32
Progeny 5289RYS (R2X, STS)	49 ± 1	64	37	31	61	46	53
Asgrow AG53X6 (R2X)	47 ± 1	54	34	28	69	57	43
AR UA 5414RR	47 ± 1	56	36	32	62	50	47
USG 7557XT (R2X)	46 ± 1	59	37	30	61	45	46
Average (bu/a)	52	63	40	34	68	61	50
L.S.D..05 (bu/a)	3	9	5	5	8	10	8
C.V. (%)	8.8	8.6	7.1	9.0	6.7	9.7	10.4

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

Table 29. Mean yields and agronomic characteristics of 24 Early Maturity Group V (5.0 - 5.5) Roundup Ready soybean varieties evaluated in six REC tests in Tennessee during 2016.

Variety [†]	Avg. Yield [‡]	Moisture §	Lodging	Height	Maturity	Leaf	Protein	Oil
	± Std Err. (n=6) bu/a					Holding (n=1) Score		
		(n=6) %	(n=3) Score	(n=5) in.	(n=5) DAP	(n=1) Score	(n=1) %	(n=1) %
USG 7506XTS (R2X,STS)	61 ± 1	12.9	1.3	44	130	1.0	40.1	22.3
Progeny 5016RXS (R2X,STS)	59 ± 1	13.1	1.2	44	129	1.5	39.4	22.6
Steyer 5003XR (R2X,STS)	58 ± 1	13.0	1.4	45	130	1.0	38.5	22.7
Mycogen 5N523R2	57 ± 1	13.4	1.9	47	131	1.0	39.4	23.0
Dyna-Gro S52RY75 (RR2)	57 ± 1	13.0	2.3	41	130	1.0	39.0	22.7
Progeny 5226RYS	57 ± 1	13.1	1.6	46	131	1.2	40.1	22.9
Dyna-Gro S52RS86 (R2X,STS)	56 ± 1	13.5	1.7	46	131	1.2	39.6	23.1
Terral-REV Brand REV 51A56 (RR)	55 ± 1	13.0	1.9	44	128	1.5	39.0	23.5
Progeny 5555RY	54 ± 1	14.5	2.1	42	132	1.2	38.1	22.3
TN Exp TN12-5507R2	52 ± 1	13.0	1.6	44	128	1.0	38.0	22.5
Credenz HBK RY 5221 (RR2)	52 ± 1	13.6	2.4	47	128	2.0	39.0	22.3
Asgrow AG55X7 (R2X)	51 ± 1	11.9	1.0	33	129	1.0	39.1	22.4
USG 7547XT (R2X)	51 ± 1	12.1	2.1	39	130	1.0	39.9	23.4
Progeny 5417RX (R2X)	51 ± 1	12.4	2.1	39	130	1.0	39.4	23.6
AR R11-89RY	50 ± 1	13.0	1.5	36	128	1.0	41.6	22.4
USG 7536XT (R2X)	49 ± 1	13.1	1.7	38	128	1.0	40.0	22.0
Asgrow AG54X6 (R2X)	49 ± 1	14.9	1.7	48	131	1.8	39.4	22.6
Credenz CZ 5375 RY	49 ± 1	12.9	1.3	37	131	1.0	39.8	23.1
TN Exp TN11-4510R2	49 ± 1	12.3	2.0	35	129	1.0	39.1	22.5
TN Exp TN13-5531RR1	49 ± 1	13.0	1.8	37	128	1.0	37.7	23.2
Progeny 5289RYS (R2X, STS)	49 ± 1	12.6	1.9	49	129	1.0	40.8	22.6
Asgrow AG53X6 (R2X)	47 ± 1	13.2	1.7	39	128	1.0	37.6	22.5
AR UA 5414RR	47 ± 1	12.9	2.3	39	129	1.0	38.5	21.9
USG 7557XT (R2X)	46 ± 1	13.3	1.3	46	129	1.0	41.0	22.0
Average	52	13.1	1.7	42	129	1.1	39.3	22.7

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

§ Average moisture at harvest.

Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

Maturity = days after planting (DAP).

Leaf Holding = 1 to 5 scale; where 1 = no leaves remaining on stems at maturity; 5 = 90+% of leaves remaining on stems at maturity.

Protein & Oil on dry weight basis.

Table 30. Mean yields of nine Early Maturity Group V (5.0 - 5.5) Roundup Ready soybean varieties evaluated in six REC tests in Tennessee for two years, 2015 - 2016 (n=12).

	Avg. Yield [‡]						
	± Std Err.	<u>Knoxville</u>	<u>Springfield</u>		<u>Milan</u>	<u>Ames</u>	
Variety [†]	(n=12)	Irr.	Irr.	Non-Irr.	Irr.	Non-Irr.	Non-Irr.
		-----bu/a-----					
Dyna-Gro S52RY75 (RR2)	61 ± 1	70	58	35	72	69	60
Terral-REV Brand REV 51A56 (RR)	60 ± 1	72	64	42	62	62	58
TN Exp TN12-5507R2	60 ± 1	74	61	36	67	63	59
Progeny 5555RY	59 ± 1	76	53	31	75	68	51
Progeny 5226RYS	57 ± 1	59	57	28	72	68	60
Credenz HBK RY 5221 (RR2)	56 ± 1	64	58	29	68	58	57
AR R11-89RY	56 ± 1	69	53	30	67	61	53
TN Exp TN13-5531RR1	55 ± 1	69	56	31	62	63	46
AR UA 5414RR	51 ± 1	57	51	29	62	57	53
Average (bu/a)	57	68	57	32	67	63	55
L.S.D. _{.05} (bu/a)	2.6	8	5	4	7	5	9
C.V. (%)	9.8	10.4	7.2	10.5	8.7	7.0	13.7

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

Table 31. Mean yields and agronomic characteristics of 9 Early Maturity Group V (5.0 - 5.5) Roundup Ready soybean varieties evaluated in six REC tests in Tennessee for two years, 2015 - 2016 (n=12).

Variety [†]	Avg. Yield [‡]		Moisture §	Lodging	Height	Maturity	Leaf		Oil	SDS			Frogeye
	± Std Err.						Holding	Protein		DI	DS	DX	
	(n=12)	(n=12)	(n=7)	(n=10)	(n=10)	(n=1)	(n=2)	(n=2)	(n=2)	(n=1)	(n=1)	(n=1)	(n=1)
	bu/a	%	Score	in.	DAP	Score	%	%	%	0 - 9	index	Score	
Dyna-Gro S52RY75 (RR2)	61 ± 1	12.5	2.3	38	135	1.0	38.8	22.3	5.0	1.7	1.3	1.0	
Terral-REV Brand REV 51A56 (RR)	60 ± 1	12.7	2.3	43	132	1.5	38.9	23.1	25.0	5.7	16.5	1.0	
TN Exp TN12-5507R2	60 ± 1	13.5	1.7	42	134	1.0	38.1	22.4	6.7	1.7	1.7	2.0	
Progeny 5555RY	59 ± 1	13.7	2.0	41	138	1.2	37.6	22.3	10.0	1.0	1.5	2.0	
Progeny 5226RYS	57 ± 1	12.6	2.0	43	135	1.2	40.1	22.3	11.7	4.0	7.6	6.3	
Credenz HBK RY 5221 (RR2)	56 ± 1	13.4	2.5	45	133	2.0	39.7	22.1	5.0	1.3	1.3	1.7	
AR R11-89RY	56 ± 1	12.6	1.4	34	134	1.0	41.6	22.1	35.0	4.7	27.2	1.7	
TN Exp TN13-5531RR1	55 ± 1	12.8	1.5	35	135	1.0	37.0	23.1	0.0	0.0	0.0	1.0	
AR UA 5414RR	51 ± 1	12.5	2.4	36	136	1.0	38.4	21.5	10.0	3.0	4.8	3.7	
Average	57	12.9	2.0	40	135	1.2	38.9	22.4	12.0	2.6	6.9	2.3	

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

§ Average moisture at harvest.

Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

Maturity = days after planting (DAP).

Leaf Holding = 1 to 5 scale; where 1 = no leaves remaining on stems at maturity; 5 = 90+% of leaves remaining on stems at maturity.

Protein & Oil on dry weight basis.

Disease ratings for Frogeye Leaf Spot are from 1-9, where 0=no disease & 10=maximum amount of plant disease or plant death. Ratings were taken at the East Tennessee Research and Education Center on 9/7/2015

SDS disease ratings were taken at the East Tennessee Research and Education Center on 9/7/2015

DI = disease incidence = percentage of plants with symptoms

DS = disease severity = score of leaf chlorosis and necrosis; 0 = no symptoms; 9 = plant death before normal defoliation due to senescence.

DX = disease index = (DI x DS / 9)

Table 32. Mean yields of four Early Maturity Group V (5.0 - 5.5) Roundup Ready soybean varieties evaluated in six REC tests in Tennessee for three years, 2014 - 2016 (n=18).

	Avg. Yield [‡]						
	± Std Err.	<u>Knoxville</u>	<u>Springfield</u>		<u>Milan</u>	<u>Ames</u>	
Variety [†]	(n=18)	Irr.	Irr.	Non-Irr.	Irr.	Non-Irr.	Non-Irr.
		-----bu/a-----					
Dyna-Gro S52RY75 (RR2)	58 ± 1	67	59	38	65	64	56
Progeny 5555RY	57 ± 1	73	56	32	70	63	50
Credenz HBK RY 5221 (RR2)	54 ± 1	64	55	32	64	53	53
AR UA 5414RR	51 ± 1	60	52	32	60	52	50
Average (bu/a)	55	66	56	34	65	58	52
L.S.D. _{.05} (bu/a)	2	6	4	4	7	5	5
C.V. (%)	9.6	8.9	7.8	11.1	11.4	8.3	9.2

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

Table 33. Mean yields and agronomic characteristics of four Early Maturity Group V (5.0 - 5.5) Roundup Ready soybean varieties evaluated in six REC tests in Tennessee for three years, 2014 - 2016 (n=18).

Variety [†]	Avg. Yield [‡] ± Std Err. (n=18)	Moisture § (n=18)	Lodging (n=11)	Height (n=15)	Maturity (n=15)	Leaf Holding (n=2)	Protein (n=3)	Oil (n=3)	SDS			Frogeye (n=2)
									DI (n=1)	DS (n=1)	DX (n=1)	
	bu/a	%	Score	in.	DAP	Score	%	%	%	0 - 9	index	Score
Dyna-Gro S52RY75 (RR2)	58 ± 1	12.8	2.4	37	137	2.0	39.1	22.0	5.0	1.7	1.3	1.2
Progeny 5555RY	57 ± 1	13.8	2.0	40	140	1.9	37.9	22.1	10.0	1.0	1.5	1.8
Credenz HBK RY 5221 (RR2)	54 ± 1	14.0	2.5	43	135	2.6	40.1	22.0	5.0	1.3	1.3	1.3
AR UA 5414RR	51 ± 1	13.3	2.5	35	138	1.8	38.9	21.3	10.0	3.0	4.8	3.3
Average	55	13.5	2.4	39	138	2.1	39.0	21.9	7.5	1.8	2.2	1.9

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

§ Average moisture at harvest.

Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

Maturity = days after planting (DAP).

Leaf Holding = 1 to 5 scale; where 1 = no leaves remaining on stems at maturity; 5 = 90+% of leaves remaining on stems at maturity.

Protein & Oil on dry weight basis.

SDS disease ratings were taken at the East Tennessee Research and Education Center on 9/7/2015

DI = disease incidence = percentage of plants with symptoms

DS = disease severity = score of leaf chlorosis and necrosis; 0 = no symptoms; 9 = plant death before normal defoliation due to senescence.

DX = disease index = (DI x DS / 9)

Disease ratings for Frogeye Leaf Spot are from 1-9, where 0=no disease & 10=maximum amount of plant disease or plant death. Ratings were taken at the East Tennessee Research and Education Center on 8/28/2014 and 9/7/2015

Table 34. Yields of 9 Early Maturity Group V (5.0 - 5.5) Roundup Ready soybean varieties in 8 County Standard Tests in Tennessee and Kentucky during 2016.

MS	Variety	Avg. Yield [†]	Moist. ‡	Carlisle	Coffee	Dyer	Franklin	Gibson	Madison	Tipton	Wayne
		bu/a	%	6/23 §	6/22	5/10	6/10	5/6	5/11	6/12	5/6
A	Armor 55-R68	57	12	60	48	73	64	65	63	36	49
AB	Asgrow AG5533	54	12	57	46	60	63	62	58	39	45
B	Dyna-Gro 32RY55	52	13	53	46	56	59	63	62	33	49
B	Terral 51A56	52	12	58	39	58	66	68	61	31	36
BC	Progeny P5226RYS	51	12	54	45	60	70	58	46	35	38
BCD	Bayer CZ 5375	50	13	60	33	63	65	60	56	27	33
CD	NK S52-Y2	47	12	51	40	55	65	55	43	32	35
CD	Asgrow AG5335	47	12	51	38	55	57	57	46	32	40
D	USG 75J23R	46	12	46	37	49	63	60	45	29	37
	Average (bu/a)	51	12	54	41	59	63	61	53	33	40

† Yields have been adjusted to 13% moisture.

‡ Moisture at harvest.

§ Planting date.

Each variety was evaluated in a large strip-plot at each location, thus each county test was considered as one replication of the test in calculating the average yield and in conducting the statistical analysis to determine significant differences (MS).

Varieties denoted with an asterisks (*) or (**) etc. were in the top performing group for consecutive years.

MS= Varieties with any MS letter in common are not statistically different at the 5% level of probability.

Data provided by Ryan Blair, Ext. Area Specialist, Grain and Cotton Variety Testing, and the extension agents in the counties shown above.

Table 35. Overall average yields and moistures of 3 Early Maturity Group V (5.0 - 5.5) Roundup Ready soybean varieties evaluated in County Standard Tests (n=8) and REC Tests (n=6) in Tennessee in 2016.

Variety[†]	Averages of CST & REC Tests		County Standard Tests		REC Tests	
	Avg. Yield[‡]	Moisture	Avg. Yield[‡]	Moisture	Avg. Yield[‡]	Moisture
	bu/a	%	bu/a	%	bu/a	%
Progeny 5226RYS	54	12.5	51	11.8	57	13.1
Terral-REV Brand REV 51A56 (RR)	54	12.7	52	12.5	55	13.0
Credenz CZ 5375 RY	49	12.9	50	12.9	49	12.9
Average (bu/a)	52	12.7	51	12.4	54	13.0

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

Table 36. Yields and disease ratings of 9 Early Maturity Group V (5.0 - 5.5) Roundup Ready soybean varieties in 8 County Standard Tests and in small plot trials at one Research and Education Center and one on-farm location in Tennessee during 2016.

Summary from 8 County Tests			Summary from Small Plot Research											
MS	Brand/Variety	AvgYld bu/a	RECM - Moderate Disease Presssure						JAX - Severe Disease Pressure					
			RECM - YLD		Frogeye	Brown	Target	Other	JAX - YLD		Frogeye	Brown	Target	Other
			*Treated	Non-treated	leaf spot	spot	spot	Diseases	*Treated	Non-treated	leaf spot	spot	spot	Disease
A	Armor 55-R68	57.3	54.4	46.5	LOW	MOD	LOW	CLB	38.6	52.5	LOW	HIGH	LOW	CLB
AB	Asgrow AG5533	53.7	49.1	45.2	LOW	HIGH	LOW	CLB	46.5	43.6	LOW	HIGH	LOW	CLB
B	Dyna-Gro 32RY55	52.4	46.2	41.3	LOW	MOD	LOW	CLB	51.0	55.1	LOW	MOD	LOW	CLB
B	Terral 51A56	52.1	51.2	45.0	†	†	LOW		40.4	47.1	LOW	MOD	MOD	
BC	Progeny P5226RYS	50.7	52.7	42.2	HIGH	MOD	MOD		40.6	38.1	HIGH	HIGH	LOW	
BCD	Bayer CZ 5375	49.5	48.9	43.5	LOW	MOD	LOW	CLB	36.5	41.9	LOW	HIGH	LOW	CLB
CD	NK S52-Y2	47.0	50.0	40.8	HIGH	MOD	HIGH		49.7	45.4	MOD	MOD	MOD	
CD	Asgrow AG5335	46.8	50.2	41.5	HIGH	MOD	LOW		50.9	47.2	MOD	MOD	LOW	
D	USG 75J23R	45.5	48.0	43.0	HIGH	MOD	HIGH		63.5	33.2	HIGH	HIGH	MOD	
Average (bu/a)			50.6	50.1	43.2				46.4	44.9				

YLD= Avg. Yield @ 13% moisture

MS= Varieties that have any MS letter in common are not statistically different in yield at the 5% level of probability.

Varieties denoted with an asterisks (*) or (**) etc. were in the top performing group for consecutive years.

County locations include: Coffee, Dyer, Franklin, Gibson, Madison, Tipton, Wayne, Carlisle (KY)

*Treated plots sprayed with Quadris TOP @ 8 oz./Acre + 1% Induce @ R3 growth stage. RECM varieties planted June 1 and JAX planted May 23

LOW, MOD, and HIGH is a relative ranking of disease severity at each location. Other diseases noted: SC=Stem Canker, CLB=Cercospora Leaf Blight, SDS=Sudden Death Syndrome; ' - ' indicate variety was not tested at that location, † indicates ratings not able to be taken

Disease ratings at RECM: Frogeye leaf spot ranged from 0 - 20% with an average of 9%; Brown spot ranged from 19 - 31% with an average of 25%; and Target spot ranged from 0 - 14% with an average of 3%.

Disease ratings at JAX: Frogeye leaf spot ranged from 0 - 66% with an average of 16%; Brown spot ranged from 20 - 64% with an average of %; and Target spot ranged from 0 - 3% with an average of 1%.

Disease ratings & yield data compiled by Dr. Heather Kelly from replicated plots at the Research and Education Center at Milan (RECM, which is irrigated and had moderate disease pressure), and on-farm location in Jackson (JAX, which is dry land and had severe disease pressure). County data provided by Ryan Blair, Ext. Area Specialist, and the extension agents.

Table 37. Mean yields of 9 Late Maturity Group V (5.6 - 5.9) Roundup Ready soybean varieties evaluated in six REC tests in Tennessee during 2016.

Variety [†]	Avg. Yield [‡]	Knoxville		Springfield		Milan		Ames
	± Std Err. (n=6)	Irr.	Irr.	Non-Irr.	Irr.	Non-Irr.	Non-Irr.	Non-Irr.
				-bu/a-				
VA V12-0045R2	54 ± 1	59	43	43	72	70	39	
AR R10-197RY	51 ± 1	58	34	36	77	59	44	
TN Exp TN13-5513R2	51 ± 1	65	40	33	70	50	46	
Progeny 5752RY	51 ± 1	59	38	35	71	57	44	
USG 75B75R (RR2)	50 ± 1	63	39	32	61	59	44	
Progeny 5768RX (R2X)	48 ± 1	66	34	27	69	55	35	
TN Exp TN13-5745RR1	47 ± 1	54	36	32	68	52	43	
USG 7576XT (R2X)	45 ± 1	57	34	22	67	57	36	
AR R07-6614RR	45 ± 1	51	34	27	67	56	35	
Average (bu/a)	50	59	37	32	69	57	41	
L.S.D._{.05} (bu/a)	3	10	4	7	11	12	6	
C.V. (%)	10.0	9.1	6.8	11.7	8.9	11.7	8.7	

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

Table 38. Mean yields and agronomic characteristics of 9 Late Maturity Group V (5.6 - 5.9) Roundup Ready soybean varieties evaluated in six REC tests in Tennessee during 2016.

Variety [†]	Avg. Yield [‡]	Moisture §	Lodging	Height	Maturity	Leaf	Protein	Oil
	± Std Err.					Holding		
	(n=6)	(n=6)	(n=3)	(n=5)	(n=5)	(n=1)	(n=1)	(n=1)
	bu/a	%	Score	in.	DAP	Score	%	%
VA V12-0045R2	54 ± 1	12.6	1.4	35	131	1.0	39.0	21.7
AR R10-197RY	51 ± 1	12.8	1.4	41	130	1.0	38.8	22.2
TN Exp TN13-5513R2	51 ± 1	12.3	2.3	53	137	1.7	39.7	22.7
Progeny 5752RY	51 ± 1	12.2	1.2	41	132	1.0	40.1	22.1
USG 75B75R (RR2)	50 ± 1	12.3	1.6	40	134	1.0	41.5	21.8
Progeny 5768RX (R2X)	48 ± 1	12.9	1.2	37	135	1.8	41.9	20.8
TN Exp TN13-5745RR1	47 ± 1	12.5	2.2	41	137	1.3	40.8	21.9
USG 7576XT (R2X)	45 ± 1	12.7	1.4	38	136	1.7	41.6	21.1
AR R07-6614RR	45 ± 1	12.3	1.7	40	136	1.5	37.9	22.9
Average	50	12.5	1.6	41	134	1.3	40.1	21.9

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

§ Average moisture at harvest.

Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

Maturity = days after planting (DAP).

Protein & Oil on dry weight basis.

Table 39. Mean yields of five Late Maturity Group V (5.6 - 5.9) Roundup Ready soybean varieties evaluated in six REC tests in Tennessee for two years, 2015 - 2016 (n=12).

Variety [†]	Avg. Yield [‡] ± Std Err. (n=12)	Knoxville	Springfield		Milan		Ames
		Irr.	Irr.	Non-Irr.	Irr.	Non-Irr.	Non-Irr.
			-----bu/a-----				
Progeny 5752RY	59 ± 1	74	55	31	72	61	59
USG 75B75R (RR2)	58 ± 1	73	56	31	69	57	60
AR R10-197RY	57 ± 1	70	55	30	73	59	57
TN Exp TN13-5513R2	55 ± 1	67	56	31	66	55	58
TN Exp TN13-5745RR1	53 ± 1	60	50	31	69	52	56
Average (bu/a)	56	69	54	31	70	57	58
L.S.D._{.05} (bu/a)	3	10	4	5	8	9	5
C.V. (%)	9.9	10.6	6.6	13.3	9.4	12.6	6.9

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

Table 40. Mean yields and agronomic characteristics of five Late Maturity Group V (5.6 - 5.9) Roundup Ready soybean varieties evaluated in six REC tests in Tennessee for two years, 2015 - 2016 (n=12).

Variety [†]	Avg. Yield [‡] ± Std Err. (n=12)	Moisture § (n=12)	Lodging (n=8)	Height (n=10)	Maturity (n=10)	Leaf Holding (n=1)	Protein (n=2)	Oil (n=2)	SDS			Frogeye (n=1)
									DI (n=1)	DS (n=1)	DX (n=1)	
	bu/a	%	Score	in.	DAP	Score	%	%	%	0 - 9	index	%
Progeny 5752RY	59 ± 1	11.9	1.2	38	140	1.0	40.3	22.0	0.0	0.0	0.0	1.0
USG 75B75R (RR2)	58 ± 1	11.9	1.3	38	142	1.0	41.2	21.8	0.0	0.0	0.0	1.0
AR R10-197RY	57 ± 1	12.4	1.5	38	139	1.0	39.2	22.1	10.7	6.0	7.2	1.3
TN Exp TN13-5513R2	55 ± 1	12.2	2.3	54	146	1.7	40.1	22.5	11.7	1.3	5.2	2.7
TN Exp TN13-5745RR1	53 ± 1	12.4	1.9	39	146	1.3	40.7	21.7	8.3	1.3	1.9	1.0
Average	56	12.2	1.6	41	143	1.2	40.3	22.0	6.1	1.7	2.9	1.4

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

§ Average moisture at harvest.

Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

Maturity = days after planting (DAP).

Leaf Holding = 1 to 5 scale; where 1 = no leaves remaining on stems at maturity; 5 = 90+% of leaves remaining on stems at maturity.

Seed Quality = 1 to 5 scale; where 1 = < 5% of seeds showing disease or split seed coats; 5=95+% of seed are diseased or have split seed coats.

Protein & Oil on dry weight basis.

SDS disease ratings were taken at the East Tennessee Research and Education Center on 9/7/2015

DI = disease incidence = percentage of plants with symptoms

DS = disease severity = score of leaf chlorosis and necrosis; 0 = no symptoms; 9 = plant death before normal defoliation due to senescence.

DX = disease index = (DI x DS / 9)

Disease ratings for Frogeye Leaf Spot are from 1-9, where 0=no disease & 9=maximum amount of plant disease or plant death. Ratings were taken at the East Tennessee Research and Education Center on 9/7/2015

Table 41. Mean yields of 23 Maturity Group IV Liberty Link soybean varieties evaluated in four REC tests in Tennessee during 2016.

Variety [†]	Avg. Yield [‡]	<u>Springfield</u>		<u>Milan</u>	
	± Std Err. (n=4)	Irr.	Non-Irr.	Irr.	Non-Irr.
		-----bu/a-----			
GoSoy 42L16 (LL)	65 ± 2	62	66	62	69
Terral-REV Brand REV 48L63 (LL)	64 ± 2	60	50	70	75
GoSoy 4714LL	62 ± 2	58	56	67	68
Beck's Hybrids 494L4 (LL)	62 ± 2	56	57	64	70
Credenz CZ 4105 LL	61 ± 2	58	58	62	68
Credenz CZ 4748 LL	61 ± 2	58	50	65	69
Progeny 4247LL	60 ± 2	58	58	62	63
Beck's Hybrids 474L4 (LL)	59 ± 2	57	56	63	62
Caverndale Farms CF 479 LLn	59 ± 2	54	57	63	61
GoSoy 43L16 (LL)	58 ± 2	48	55	62	68
Credenz CZ 4222 LL	58 ± 2	48	53	64	66
Credenz HBK LL4953	57 ± 2	44	48	71	67
Credenz CZ 4818 LL	57 ± 2	52	52	58	65
Dyna-Gro S45LL97 (LL)	56 ± 2	52	53	59	61
GoSoy 4913LL	55 ± 2	59	47	54	58
Credenz CZ 4044 LL	55 ± 2	47	59	53	60
Dyna-Gro S49LL34 (LL)	54 ± 2	47	48	52	67
Progeny 4930LL	53 ± 2	41	46	61	67
USG 74G99L (LL)	53 ± 2	50	49	50	64
GoSoy 4912 LL	52 ± 2	47	42	60	59
Terral-REV Brand REV 49L49 (LL)	52 ± 2	51	49	51	57
Credenz CZ 4540 LL	51 ± 2	50	48	52	56
Progeny 4814LLS	51 ± 2	51	48	47	59
Average (bu/a)	57	53	52	60	64
L.S.D._{.05} (bu/a)	4	9	9	10	7
C.V. (%)	9.4	10.1	10.5	10.3	6.6

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

Table 42. Mean yields and agronomic characteristics of 23 Maturity Group IV Liberty Link soybean varieties evaluated in four REC tests in Tennessee during 2016.

Variety [†]	Avg. Yield [‡]	Moisture §	Lodging	Height	Maturity	SDS		
	± Std Err.					DI	DS	DX
	(n=4)	(n=4)	(n=2)	(n=4)	(n=4)	(n=2)	(n=2)	(n=2)
	bu/a	%	Score	in.	DAP	%	0 - 9	index
GoSoy 42L16 (LL)	65 ± 2	13.3	2.2	43	118	0.0	1.0	0.0
Terral-REV Brand REV 48L63 (LL)	64 ± 2	13.3	1.8	49	123	0.0	1.0	0.0
GoSoy 4714LL	62 ± 2	13.1	1.7	43	119	0.0	1.0	0.0
Beck's Hybrids 494L4 (LL)	62 ± 2	13.1	1.5	42	120	0.0	1.0	0.0
Credenz CZ 4105 LL	61 ± 2	13.0	1.2	39	115	0.0	1.0	0.0
Credenz CZ 4748 LL	61 ± 2	13.2	1.5	43	122	5.0	1.2	1.1
Progeny 4247LL	60 ± 2	13.1	1.3	41	114	0.0	1.0	0.0
Beck's Hybrids 474L4 (LL)	59 ± 2	13.2	1.3	43	120	0.0	1.0	0.0
Caverndale Farms CF 479 LLn	59 ± 2	13.2	1.7	43	121	10.0	1.3	2.2
GoSoy 43L16 (LL)	58 ± 2	13.1	1.2	41	114	0.0	1.0	0.0
Credenz CZ 4222 LL	58 ± 2	13.1	1.7	40	117	0.0	1.0	0.0
Credenz HBK LL4953	57 ± 2	16.1	1.3	45	123	33.0	2.0	8.5
Credenz CZ 4818 LL	57 ± 2	13.4	2.2	48	123	0.0	1.0	0.0
Dyna-Gro S45LL97 (LL)	56 ± 2	13.7	1.5	44	121	0.0	1.0	0.0
GoSoy 4913LL	55 ± 2	13.5	1.3	44	123	58.0	4.0	29.0
Credenz CZ 4044 LL	55 ± 2	14.9	2.0	40	115	0.0	1.0	0.0
Dyna-Gro S49LL34 (LL)	54 ± 2	14.2	1.3	44	124	62.0	3.3	24.0
Progeny 4930LL	53 ± 2	14.1	1.5	44	123	52.0	2.8	17.0
USG 74G99L (LL)	53 ± 2	15.0	1.8	44	122	40.0	3.2	21.0
GoSoy 4912 LL	52 ± 2	16.7	1.5	48	123	65.0	3.7	29.0
Terral-REV Brand REV 49L49 (LL)	52 ± 2	14.9	1.5	45	124	42.0	2.8	17.0
Credenz CZ 4540 LL	51 ± 2	13.8	1.8	47	124	3.3	1.2	0.7
Progeny 4814LLS	51 ± 2	13.8	2.5	48	123	18.0	2.2	7.2
Average	57	13.9	1.6	44	120	16.9	1.7	6.8

*Six locations were planted; however, Knoxville was lost to weed pressure and Memphis was lost to herbivore damage

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

§ Average moisture at harvest.

Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

Maturity = days after planting (DAP).

SDS disease ratings were taken at the Milan Experiment Station, in both irrigated and non-irrigated tests, on 9/13/2016

DI = disease incidence = percentage of plants with symptoms

DS = disease severity = score of leaf chlorosis and necrosis; 0 = no symptoms; 9 = plant death before normal defoliation due to senescence.

DX = disease index = (DI x DS / 9)

Table 43. Mean yields of 10 Maturity Group IV Liberty Link soybean varieties evaluated in four REC tests in Tennessee for two years, 2015 - 2016 (n=8).

Variety [†]	Avg. Yield [‡]	<u>Springfield</u>		<u>Milan</u>	
	± Std Err. (n=8)	Irr.	Non-Irr.	Irr.	Non-Irr.
		-----bu/a-----			
Credenz CZ 4748 LL	65 ± 1	67	49	70	74
GoSoy 4714LL	64 ± 1	65	49	71	72
Beck's Hybrids 474L4 (LL)	62 ± 1	64	48	66	71
Caverndale Farms CF 479 LLn	60 ± 1	63	52	59	66
Credenz CZ 4818 LL	57 ± 1	58	42	63	65
Progeny 4814LLS	57 ± 1	62	41	57	66
Dyna-Gro S49LL34 (LL)	56 ± 1	59	40	58	65
USG 74G99L (LL)	56 ± 1	59	47	54	62
Credenz CZ 4540 LL	55 ± 1	59	46	55	62
Progeny 4930LL	55 ± 1	53	39	60	67
Average (bu/a)	59	61	45	61	67
L.S.D._{.05} (bu/a)	3	6	7	8	5.5
C.V. (%)	9.7	8.3	12.6	11.5	7.0

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

Table 44. Mean yields and agronomic characteristics of 10 Maturity Group IV Liberty Link soybean varieties evaluated in four REC tests in Tennessee for two years, 2015 - 2016 (n=8).

Variety [†]	Avg. Yield [‡]		Moisture §	Lodging	Height	Maturity	SDS		
	± Std Err.						DI	DS	DX
	(n=8)	(n=8)					(n=2)	(n=2)	(n=2)
	bu/a	%		Score	in.	DAP	%	0 - 9	index
Credenz CZ 4748 LL	65 ± 1	12.9		1.9	42	128	5.0	1.2	1.1
GoSoy 4714LL	64 ± 1	12.6		1.9	42	126	0.0	1.0	0.0
Beck's Hybrids 474L4 (LL)	62 ± 1	12.8		1.7	42	126	0.0	1.0	0.0
Caverndale Farms CF 479 LLn	60 ± 1	12.9		2.0	41	126	10.0	1.3	2.2
Credenz CZ 4818 LL	57 ± 1	12.9		2.2	47	129	0.0	1.0	0.0
Progeny 4814LLS	57 ± 1	14.3		2.1	43	133	17.5	2.2	7.2
Dyna-Gro S49LL34 (LL)	56 ± 1	13.4		1.6	43	133	61.7	3.3	23.7
USG 74G99L (LL)	56 ± 1	13.8		2.3	44	128	40.0	3.2	21.5
Credenz CZ 4540 LL	55 ± 1	13.3		2.1	45	129	3.3	1.2	0.7
Progeny 4930LL	55 ± 1	13.2		1.8	43	132	51.7	2.8	17.4
Average	59	13.2		2.0	43	129	18.9	1.8	7.4

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

§ Average moisture at harvest.

Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

Maturity = days after planting (DAP).

Protein & Oil on dry weight basis.

SDS disease ratings were taken at the Milan Experiment Station, in both irrigated and non-irrigated tests, on 9/13/2016

DI = disease incidence = percentage of plants with symptoms

DS = disease severity = score of leaf chlorosis and necrosis; 0 = no symptoms; 9 = plant death before normal defoliation due to senescence.

DX = disease index = (DI x DS / 9)

Table 45. Mean yields of three Maturity Group IV Liberty Link soybean varieties evaluated in three REC tests in Tennessee for three years, 2014 - 2016 (n=12).

Variety [†]	Avg. Yield [‡] ± Std Err. (n=9)	Springfield		Milan
		Irr.	Non-Irr.	Non-Irr.
-----bu/a-----				
USG 74G99L (LL)	58 ± 1	61	51	61
Dyna-Gro S49LL34 (LL)	55 ± 1	57	45	63
Progeny 4930LL	54 ± 1	54	43	66
Average (bu/a)	56	57	46	63
L.S.D._{.05} (bu/a)	3	5	7	6
C.V. (%)	10.3	7.6	13.9	9.8

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

Table 46. Mean yields and agronomic characteristics of three Maturity Group IV Liberty Link soybean varieties evaluated in four REC tests in Tennessee for three years, 2014 - 2016 (n=12).

Variety [†]	Avg. Yield [‡] ± Std Err. (n=9)	Moisture § (n=9)	Lodging (n=4) Score	Height (n=9) in.	Maturity (n=9) DAP	SDS		
	bu/a					DI (n=2) %	DS (n=2) 0 - 9	DX (n=2) index
USG 74G99L (LL)	58 ± 1	13.6	1.9	41	130	13.3	1.3	3.0
Dyna-Gro S49LL34 (LL)	55 ± 1	13.3	1.4	40	134	56.7	2.3	15.2
Progeny 4930LL	54 ± 1	13.0	1.3	39	133	36.7	2.0	8.1
Average	56	13.3	1.5	40	132	35.6	1.9	8.8

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

§ Average moisture at harvest.

Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

Maturity = days after planting (DAP).

Leaf Holding = 1 to 5 scale; where 1 = no leaves remaining on stems at maturity; 5 = 90+% of leaves remaining on stems at maturity.

Seed Quality = 1 to 5 scale; where 1 = < 5% of seeds showing disease or split seed coats; 5=95+% of seed are diseased or have split seed coats.

Protein & Oil on dry weight basis.

SDS disease ratings were taken at the Milan Experiment Station, in both irrigated and non-irrigated tests, on 9/13/2016

DI = disease incidence = percentage of plants with symptoms

DS = disease severity = score of leaf chlorosis and necrosis; 0 = no symptoms; 9 = plant death before normal defoliation due to senescence.

DX = disease index = (DI x DS / 9)

Table 47. Yields of 22 Group IV and Group V (4.2 - 5.2) Liberty-Link (LL) soybean varieties in nine County Standard Tests in Tennessee and Kentucky during 2016.

MS	Variety	Avg. Yield [†] bu/a	Moist. ‡ %	Dyer 5/5 §	Fulton 6/7	Henry 6/17	Lake 5/11	Madison 6/7	Obion 6/13	Tipton 5/27	Wayne 5/6	Weakley 6/20
A	Bayer CZ 5147LL	58	12	69	56	63	59	44	79	46	40	68
AB	Progeny P4930LL	56	12	65	48	48	56	51	74	48	54	62
ABC	Bayer HBK LL4950	56	12	61	46	56	58	45	78	52	44	62
ABC	Bayer CZ 5445LL	56	14	59	52	53	57	52	68	50	50	60
ABCD	Dyna-Gro S49LL34	55	12	62	45	54	59	41	77	44	53	63
ABCD	*Warren Seed Micah 4910LL	55	13	63	47	57	56	50	67	49	47	59
ABCDE	*Bayer HBK LL4953	55	12	64	47	51	59	44	73	40	51	63
ABCDEF	Bayer CZ 5242LL	54	13	66	43	62	50	45	73	43	46	61
BCDEF	Beck's 522L4	54	12	55	47	48	55	48	71	44	56	60
BCDEF	Warren Seed Micah 4400LL	53	12	57	47	63	44	50	70	45	42	60
BCDEF	Bayer CZ 5150LL	53	12	63	46	52	56	34	77	45	47	60
BCDEF	Terral 48L63	53	12	67	48	55	51	29	72	48	46	61
BCDEF	Bayer CZ 4748LL	53	12	61	51	55	53	38	70	45	39	60
BCDEFG	Bayer CZ 4818LL	52	12	54	51	59	48	39	70	48	35	63
BCDEFG	Bayer CZ 5225LL	52	13	58	45	54	51	50	72	40	37	60
BCDEFG	Beck's 474L4	52	12	60	50	62	53	37	70	43	32	59
CDEFG	Warren Seed Micah 4810LL	52	12	58	47	48	53	40	67	48	43	61
DEFG	Bayer CZ 4540LL	51	12	61	45	52	45	41	62	50	42	58
EFG	Progeny P4814LLS	50	12	52	41	55	45	47	61	47	42	64
FG	Terral 49L49	50	12	53	42	51	48	41	69	43	42	60
GH	Croplan LL4713	48	12	53	37	61	48	38	57	47	31	57
H	Beck's 424L4	45	11	51	45	56	38	31	60	39	37	53
Average (bu/a)		53	12	60	47	55	52	43	70	46	43	61

† Yields have been adjusted to 13% moisture.

‡ Moisture at harvest.

§ Planting date.

Each variety was evaluated in a large strip-plot at each location, thus each county test was considered as one replication of the test in calculating the average yield and in conducting the statistical analysis to determine significant differences (MS).

Varieties denoted with an asterisks (*) or (**) etc. were in the top performing group for consecutive years.

MS= Varieties with any MS letter in common are not statistically different at the 5% level of probability.

Data provided by Ryan Blair, Ext. Area Specialist, Grain and Cotton Variety Testing, and the extension agents in the counties shown above.

Table 48. Overall average yields and moistures of 15 Maturity Group IV and V Liberty Link soybean varieties evaluated in County Standard Tests (n=9) and AgResearch and Education Centers (n=4) in Tennessee in 2016.

Variety [†]	Averages of CST & REC Tests		County Standard Tests		REC Tests	
	Avg.	Moisture	Avg.	Moisture	Avg.	Moisture
	Yield [‡]		Yield [‡]		Yield [‡]	
	bu/a	%	bu/a	%	bu/a	%
Credenz CZ 5147 LL	60	12.4	58	12.4	62	12.4
Terral-REV Brand REV 48L63 (LL)	59	12.7	53	12.1	64	13.3
Credenz CZ 4748 LL	57	12.4	53	11.5	61	13.2
Credenz CZ 5445 LL	56	13.0	56	13.6	56	12.4
Credenz HBK LL4953	56	14.2	55	12.3	57	16.1
Beck's Hybrids 474L4 (LL)	56	12.4	52	11.6	59	13.2
Credenz CZ 5242 LL	55	12.9	54	13.4	56	12.4
Progeny 4930LL	55	13.1	56	12.2	53	14.1
Dyna-Gro S49LL34 (LL)	55	13.1	55	12.1	54	14.2
Credenz CZ 4818 LL	55	12.5	52	11.7	57	13.4
Credenz CZ 5150 LL	54	12.2	53	12.1	55	12.3
Credenz CZ 5225 LL (STS)	53	12.9	52	13.4	54	12.4
Terral-REV Brand REV 49L49 (LL)	51	13.6	50	12.3	52	14.9
Credenz CZ 4540 LL	51	13.1	51	12.4	51	13.8
Progeny 4814LLS	51	13.1	50	12.4	51	13.8
Average (bu/a)	55	12.9	53	12.4	56	13.5

[†] If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

[‡] All yields are adjusted to 13% moisture.

Table 49. Yields and disease ratings of 22 Late Maturity Group IV (4.5 - 4.9) Liberty Link soybean varieties in eight County Standard Tests and in small plot trials at one Research and Education Center and one on-farm location in Tennessee during 2016.

Summary from 8 County Tests			Summary from Small Plot Research											
MS	Brand/Variety	AvgYld bu/a	RECM - Moderate Disease Presssure						JAX - Severe Disease Pressure					
			RECM - YLD		Frogeye	Brown	Target	Other	JAX - YLD		Frogeye	Brown	Target	Other
			*Treated	Non-treated	leaf spot	spot	spot	Diseases	*Treated	Non-treated	leaf spot	spot	spot	Diseases
A	Bayer CZ 5147LL	58.2	46.8	40.7	LOW	LOW	LOW		58.4	50.6	LOW	HIGH	LOW	
AB	Progeny P4930LL	56.3	46.8	41.0	LOW	MOD	LOW	SDS	-	-	-	-	-	-
ABC	Bayer HBK LL4950	55.9	43.7	39.9	LOW	MOD	LOW	SDS	49.0	42.4	LOW	HIGH	LOW	SDS
ABC	Bayer CZ 5445LL	55.7	44.8	41.8	LOW	MOD	LOW	CLB	51.1	44.9	LOW	HIGH	LOW	
ABCD	Dyna-Gro S49LL34	55.2	45.4	40.2	LOW	MOD	LOW		50.2	44.7	LOW	HIGH	LOW	SDS
ABCD	*Warren Seed Micah 4910LL	55.2	46.9	41.9	LOW	MOD	MOD	SDS, CLB	56.0	49.2	LOW	HIGH	LOW	SDS, CLB
ABCDE	*Bayer HBK LL4953	54.7	45.8	39.9	LOW	MOD	LOW		52.5	46.1	LOW	HIGH	LOW	SDS
ABCDEF	Bayer CZ 5242LL	54.3	43.0	40.8	LOW	MOD	LOW	CLB	53.7	48.3	LOW	HIGH	LOW	SDS, CLB
BCDEF	Beck's 522L4	53.7	44.7	36.5	LOW	MOD	LOW		52.6	45.5	LOW	HIGH	LOW	SDS
BCDEF	Bayer CZ 5150LL	53.2	37.4	32.8	LOW	MOD	LOW		53.3	48.3	LOW	HIGH	LOW	SDS
BCDEF	Warren Seed Micah 4400LL	53.2	48.7	43.1	-	-	-		51.0	46.0	†	†	†	
BCDEF	Terral 48L63	53.1	44.7	37.4	LOW	HIGH	LOW		43.9	39.8	LOW	HIGH	MOD	
BCDEF	Bayer CZ 4748LL	52.5	43.7	40.5	LOW	MOD	LOW		50.8	41.3	LOW	HIGH	LOW	
BCDEFG	Beck's 474L4	52.0	44.1	36.8	LOW	HIGH	MOD		45.0	37.8	LOW	HIGH	HIGH	
BCDEFG	Bayer CZ 4818LL	52.0	48.7	40.6	LOW	HIGH	HIGH		45.9	39.7	†	†	HIGH	
BCDEFG	Bayer CZ 5225LL	52.0	38.8	42.5	LOW	LOW	LOW	SDS, CLB	46.9	45.6	LOW	HIGH	LOW	
CDEFG	Warren Seed Micah 4810LL	51.6	46.0	40.9	LOW	MOD	LOW	SDS	52.2	46.3	LOW	HIGH	LOW	SDS
DEFG	Bayer CZ 4540LL	50.5	40.5	34.9	LOW	MOD	LOW	SDS	44.0	36.6	MOD	HIGH	LOW	
EFG	Progeny P4814LLS	50.4	40.7	35.9	LOW	HIGH	LOW		41.9	39.4	LOW	HIGH	LOW	
FG	Terral 49L49	50.0	37.1	33.4	LOW	MOD	LOW	SDS, CLB	44.0	39.8	LOW	HIGH	LOW	SDS, CLB
GH	Croplan LL4713	47.7	39.0	32.7	MOD	MOD	LOW	SDS	36.9	33.4	HIGH	HIGH	LOW	SDS
H	Beck's 424L4	45.2	38.3	35.7	-	-	-		42.9	40.0	†	†	†	
Average (bu/a)		52.8	43.4	38.6					48.7	43.1				

YLD= Avg. Yield @ 13% moisture

MS= Varieties that have any MS letter in common are not statistically different in yield at the 5% level of probability.

Varieties denoted with an asterisks (*) or (**) etc. were in the top performing group for consecutive years.

County locations include: Coffee Dyer, Henry, Lake, Madison, Obion, Tipton, Wayne

*Treated plots sprayed with Quadris TOP @ 8 oz./Acre + 1% Induce @ R3-R4 growth stage. RECM varieties planted June 1 and JAX planted May 23

LOW, MOD, and HIGH is a relative ranking of disease severity at each location. Other diseases noted: SC=Stem Canker, CLB=Cercospora Leaf Blight, SDS=Sudden Death Syndrome; ' - ' indicate variety was not tested at that location, † indicates ratings not able to be taken.

Disease ratings at RECM: Frogeye leaf spot ranged from 0 - 9% with an average of 1%; Brown spot ranged from 15 - 35% with an average of 27%; and Target spot ranged from 0 - 23% with an average of 2%.

Disease ratings at JAX: Frogeye leaf spot ranged from 0 - 24% with an average of 2%; Brown spot ranged from 39 - 60% with an average of 52%; and Target spot ranged from 0 - 13% with an average of 1%.

Disease ratings & yield data compiled by Dr. Heather Kelly from replicated plots at the Research and Education Center at Milan (RECM, which is irrigated and had moderate disease pressure), and on-farm location in Jackson (JAX, which is dry land and had severe disease pressure). County data provided by Ryan Blair, Ext. Area Specialist, and the extension agents.

Table 50. Mean yields of 9 Maturity Group V Liberty Link soybean varieties evaluated in five REC tests in Tennessee during 2016.

	Avg. Yield [‡]	Knoxville		Springfield		Milan	
Variety [†]	± Std Err. (n=5)	Irr.	Irr.	Non-Irr.	Irr.	Non-Irr.	
	-----bu/a-----						
Credenz CZ 5147 LL	62 ± 1	61	51	46	77	74	
Progeny 5414LLS	58 ± 1	56	58	44	60	71	
GoSoy 5115LL	57 ± 1	56	50	43	73	65	
Credenz CZ 5242 LL	57 ± 1	61	57	42	67	59	
Dyna-Gro S55LS75 (LL,STS)	57 ± 1	52	62	40	62	68	
Dyna-Gro S52LL66 (LL)	57 ± 1	60	58	41	64	61	
Credenz CZ 5445 LL	56 ± 1	55	49	41	71	64	
Credenz CZ 5150 LL	55 ± 1	55	54	42	64	59	
Credenz CZ 5225 LL (STS)	55 ± 1	57	47	39	66	66	
Average (bu/a)	57	57	54	42	67	65	
L.S.D _{.05} (bu/a)	4	7	8	8	12	7	
C.V. (%)	8.6	7.1	8.3	10.8	10.3	6.2	

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

Table 51. Mean yields and agronomic characteristics of 9 Maturity Group V Liberty Link soybean varieties evaluated in five REC tests in Tennessee during 2016.

Variety [†]	Avg. Yield [‡]	Moisture §	Lodging	Height	Maturity	Leaf	Protein	Oil	SDS		
	± Std Err.					Holding			DI	DS	DX
	(n=5)	(n=5)	(n=3)	(n=5)	(n=5)	(n=1)	(n=1)	(n=1)	(n=2)	(n=2)	(n=2)
	bu/a	%	Score	in.	DAP	Score	%	%	%	0 - 9	index
Credenz CZ 5147 LL	62 ± 1	12.4	1.5	35	132	1	40.7	21.4	8.3	1.2	1.9
Progeny 5414LLS	58 ± 1	13.2	2.2	42	134	2	41.9	21.8	0.0	1.0	0.0
GoSoy 5115LL	57 ± 1	12.2	1.4	44	129	1	38.2	23.9	45.0	3.0	16.0
Credenz CZ 5242 LL	57 ± 1	12.3	1.6	44	131	1	39.5	23.4	10.0	1.3	2.2
Dyna-Gro S55LS75 (LL,STS)	57 ± 1	13.9	2.6	43	134	2	41.8	22.0	0.0	1.0	0.0
Dyna-Gro S52LL66 (LL)	57 ± 1	12.2	1.8	45	130	1	39.7	23.4	13.0	2.2	4.1
Credenz CZ 5445 LL	56 ± 1	12.3	2.1	37	132	1	39.3	22.9	0.0	1.0	0.0
Credenz CZ 5150 LL	55 ± 1	12.2	1.1	45	130	1	38.6	23.5	20.0	1.7	5.0
Credenz CZ 5225 LL (STS)	55 ± 1	12.3	1.9	36	132	1	39.2	23.0	0.0	1.0	0.0
Average	57	12.6	1.8	41	132	1	39.9	22.8	10.7	1.5	3.2

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

§ Average moisture at harvest.

Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

Maturity = days after planting (DAP).

Leaf Holding = 1 to 5 scale; where 1 = no leaves remaining on stems at maturity; 5 = 90+% of leaves remaining on stems at maturity.

Protein & Oil on dry weight basis.

SDS disease ratings were taken at the Milan Experiment Station, in both irrigated and non-irrigated tests, on 9/13/2016

DI = disease incidence = percentage of plants with symptoms

DS = disease severity = score of leaf chlorosis and necrosis; 0 = no symptoms; 9 = plant death before normal defoliation due to senescence.

DX = disease index = (DI x DS / 9)

Table 52. Mean yields of eight Maturity Group V Liberty Link soybean varieties evaluated in five REC tests in Tennessee for two years, 2015 - 2016 (n=10).

	Avg. Yield [‡] ± Std Err.	<u>Knoxville</u>	<u>Springfield</u>		<u>Milan</u>	
Variety [†]	(n=10)	Irr.	Irr.	Non-Irr.	Irr.	Non-Irr.
			-----bu/a-----			
Credenz CZ 5147 LL	62 ± 1	62	61	41	75	71
Credenz CZ 5242 LL	60 ± 1	61	63	40	71	64
Credenz CZ 5150 LL	58 ± 1	59	63	41	66	61
Dyna-Gro S55LS75 (LL,STS)	58 ± 1	56	64	37	66	65
Credenz CZ 5225 LL (STS)	58 ± 1	56	57	38	71	66
Dyna-Gro S52LL66 (LL)	57 ± 1	61	59	39	65	61
Credenz CZ 5445 LL	57 ± 1	54	57	38	69	64
Progeny 5414LLS	55 ± 1	55	62	39	54	66
Average (bu/a)	58	58	61	39	67	65
L.S.D_{.05} (bu/a)	3	5	8	5	6	7
C.V. (%)	9.2	6.8	11.3	11.3	7.8	8.9

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

Table 53. Mean yields and agronomic characteristics of eight Maturity Group V Liberty Link soybean varieties evaluated in five REC tests in Tennessee for two years, 2015 - 2016 (n=10).

Variety [†]	Avg. Yield [‡] ± Std Err. (n=10)	Moisture § (n=10)	Lodging (n=7)	Height (n=10)	Maturity (n=10)	Leaf Holding (n=1)	Protein (n=2)	Oil (n=2)	SDS		
									DI (n=2)	DS (n=2)	DX (n=2)
	bu/a	%	Score	in.	DAP	Score	%	%	%	0 - 9	index
Credenz CZ 5147 LL	62 ± 1	12.4	1.2	33	139	1.2	40.3	21.3	8.3	1.2	1.9
Credenz CZ 5242 LL	60 ± 1	12.8	2.2	43	138	1.0	40.3	22.6	10.0	1.3	2.2
Credenz CZ 5150 LL	58 ± 1	12.8	1.4	43	137	1.0	38.9	23.1	0.0	1.0	0.0
Dyna-Gro S55LS75 (LL,STS)	58 ± 1	13.5	2.1	40	141	2.0	40.9	22.2	0.0	1.0	0.0
Credenz CZ 5225 LL (STS)	58 ± 1	12.4	1.5	33	139	1.2	39.3	22.8	20.0	1.7	5.0
Dyna-Gro S52LL66 (LL)	57 ± 1	13.0	2.5	44	138	1.0	40.6	22.5	0.0	1.0	0.0
Credenz CZ 5445 LL	57 ± 1	12.4	1.7	34	140	1.0	39.7	22.7	13.3	2.2	4.1
Progeny 5414LLS	55 ± 1	13.1	2.5	43	136	2.0	41.6	22.0	0.0	1.0	0.0
Average	58	12.8	1.9	39	139	1.3	40.2	22.4	6.5	1.3	1.7

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

§ Average moisture at harvest.

Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

Maturity = days after planting (DAP).

Leaf Holding = 1 to 5 scale; where 1 = no leaves remaining on stems at maturity; 5 = 90+% of leaves remaining on stems at maturity.

Protein & Oil on dry weight basis.

SDS disease ratings were taken at the Milan Experiment Station, in both irrigated and non-irrigated tests, on 9/13/2016

DI = disease incidence = percentage of plants with symptoms

DS = disease severity = score of leaf chlorosis and necrosis; 0 = no symptoms; 9 = plant death before normal defoliation due to senescence.

DX = disease index = (DI x DS / 9)

Table 54. Mean yields of two Maturity Group V Liberty Link soybean varieties evaluated in four REC tests in Tennessee for three years, 2014 - 2016 (n=12).

Variety [†]	Avg. Yield [‡] ± Std Err. (n=12)	Knoxville	Springfield		Milan
		Irr.	Irr.	Non-Irr.	Non-Irr.
		-----bu/a-----			
Credenz CZ 5242 LL	59 ± 1	66	60	47	62
Credenz CZ 5150 LL	56 ± 1	61	61	45	57
Average (bu/a)	58	64	61	46	60
L.S.D._{.05} (bu/a)	2	5	5	4	6
C.V. (%)	7.6	7.0	7.5	7.0	8.4

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

Table 55. Mean yields and agronomic characteristics of two Maturity Group V Liberty Link soybean varieties evaluated in four REC tests in Tennessee for three years, 2014 - 2016 (n=12).

Variety [†]	Avg. Yield [‡] ± Std Err. (n=12)	Moisture §	Lodging	Height	Maturity	Leaf Holding	Protein	Oil	SDS		
		(n=12)	(n=7)	(n=12)	(n=12)	(n=2)	(n=3)	(n=3)	DI	DS	DX
	bu/a	%	Score	in.	DAP	Score	%	%	(n=2) %	(n=2) 0 - 9	(n=2) index
Credenz CZ 5242 LL	59 ± 1	12.9	2.2	41	141	1.3	40.5	22.5	0.0	1.0	0.0
Credenz CZ 5150 LL	56 ± 1	13.2	1.2	40	139	1.2	38.8	23.1	23.3	1.3	5.2
Average	58	13.1	1.7	41	140	1.3	39.7	22.8	11.7	1.2	2.6

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

§ Average moisture at harvest.

Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

Maturity = days after planting (DAP).

Leaf Holding = 1 to 5 scale; where 1 = no leaves remaining on stems at maturity; 5 = 90+% of leaves remaining on stems at maturity.

Protein & Oil on dry weight basis.

SDS disease ratings were taken at the Milan Experiment Station, in both irrigated and non-irrigated tests, on 9/13/2016

DI = disease incidence = percentage of plants with symptoms

DS = disease severity = score of leaf chlorosis and necrosis; 0 = no symptoms; 9 = plant death before normal defoliation due to senescence.

DX = disease index = (DI x DS / 9)

Table 56. Mean yields of 16 Maturity Group IV Conventional, Liberty Link, and Roundup Ready soybean varieties evaluated in five REC tests in Tennessee during 2016.

Variety [†]	Avg. Yield [‡]	Knoxville		Springfield		Milan	
	± Std Err. (n=5)	Irr.		Irr.	Non-Irr.	Irr.	Non-Irr.
			-----bu/a-----				
LL Check (Credenz CZ 4748)	58 ± 1	56	55	50	68	62	
MO S12-2418	57 ± 1	51	53	43	69	68	
RR Check (Dyna-Gro S48RS53)	56 ± 1	55	55	47	62	62	
USG Ellis	56 ± 1	64	53	41	65	55	
MO S12-3782	55 ± 1	50	48	46	66	64	
GoSoy Ireane	55 ± 1	61	45	35	65	67	
GoSoy 483.C	54 ± 1	52	47	39	65	65	
GoSoy 39C15	53 ± 1	46	47	49	58	67	
TN Exp TN14-5036	52 ± 1	49	50	49	53	60	
TN Exp TN13-4303	52 ± 1	56	41	42	63	57	
TN Exp TN11-5083	51 ± 1	58	32	36	62	70	
VA V09-0610 (STS)	51 ± 1	56	55	32	55	55	
TN Exp TN14-4425	51 ± 1	60	39	35	61	59	
MO S12-3791	50 ± 1	51	35	39	68	58	
VA V11-2187	49 ± 1	45	47	45	56	52	
TN Exp TN14-4008	40 ± 1	42	33	40	43	44	
Average (bu/a)	53	53	46	42	61	60	
L.S.D._{.05} (bu/a)	4	9	11	6	11	6	
C.V. (%)	10.1	10.4	14.1	8.9	10.3	6.4	

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

Table 57. Mean yields and agronomic characteristics of 16 Maturity Group IV Conventional, Liberty Link, and Roundup Ready soybean varieties evaluated in five REC tests in Tennessee during 2016.

Variety [†]	Avg. Yield [‡]	Moisture §	Lodging	Height	Maturity	Leaf	Protein	Oil
	± Std Err.					Holding		
	(n=5)	(n=5)	(n=3)	(n=5)	(n=5)	(n=1)	(n=1)	(n=1)
	bu/a	%	Score	in.	DAP	Score	%	%
LL Check (Credenz CZ 4748)	58 ± 1	12.6	1.2	40	124	3.0	40.3	22.9
MO S12-2418	57 ± 1	13.5	2.1	39	126	3.7	41.9	21.5
RR Check (Dyna-Gro S48RS53)	56 ± 1	14.2	1.8	45	126	1.0	41.0	21.8
USG Ellis	56 ± 1	12.8	1.4	31	127	1.0	40.3	21.9
MO S12-3782	55 ± 1	12.9	1.9	44	125	2.7	41.8	21.7
GoSoy Ireane	55 ± 1	13.5	1.4	34	127	1.0	39.4	22.4
GoSoy 483.C	54 ± 1	13.0	2.4	40	125	2.2	40.9	21.8
GoSoy 39C15	53 ± 1	12.8	1.7	35	117	2.3	41.5	22.3
TN Exp TN14-5036	52 ± 1	13.0	1.7	31	126	1.7	40.1	22.4
TN Exp TN13-4303	52 ± 1	14.9	1.9	35	128	1.5	42.0	21.3
TN Exp TN11-5083	51 ± 1	13.1	1.7	32	127	2.3	40.5	22.5
VA V09-0610 (STS)	51 ± 1	13.1	2.1	36	126	1.0	41.8	22.6
TN Exp TN14-4425	51 ± 1	13.0	2.0	31	128	3.0	40.1	22.7
MO S12-3791	50 ± 1	13.0	1.4	37	120	2.0	40.5	21.6
VA V11-2187	49 ± 1	12.6	1.3	38	120	1.7	41.9	21.9
TN Exp TN14-4008	40 ± 1	12.7	1.7	34	121	1.3	44.1	22.1
Average	53	13.2	1.7	36	125	2.0	41.1	22.1

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

§ Average moisture at harvest.

Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

Maturity = days after planting (DAP).

Leaf Holding = 1 to 5 scale; where 1 = no leaves remaining on stems at maturity; 5 = 90+% of leaves remaining on stems at maturity.

Protein & Oil on dry weight basis.

Table 58. Mean yields of five Maturity Group IV Conventional and Roundup Ready soybean varieties evaluated in five REC tests in Tennessee for two years, 2015 - 2016 (n=10).

Variety [†]	Avg. Yield [‡] ± Std Err. (n=10)	Knoxville Irr.	Springfield Irr.	Non-Irr.	Milan Irr.	Non-Irr.
	bu/a					
GoSoy Ireane	60 ± 1	62	57	47	71	65
USG Ellis	60 ± 1	64	57	49	72	58
TN Exp TN13-4303	57 ± 1	59	55	48	67	57
TN Exp TN11-5083	56 ± 1	59	48	45	68	63
MO S12-3791	56 ± 1	56	56	50	62	54
Average (bu/a)	58	60	55	48	68	59
L.S.D._{.05} (bu/a)	3	7	9	6	7	4
C.V. (%)	9.6	9.3	13.4	10.2	9.0	5.7

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

Table 59. Mean yields and agronomic characteristics of five Maturity Group IV Conventional and Roundup Ready soybean varieties evaluated in five REC tests in Tennessee for two years, 2015 - 2016 (n=10).

Variety [†]	Avg. Yield [‡] ± Std Err. (n=10)	Moisture § (n=10)	Lodging (n=8)	Height (n=10)	Maturity (n=10)	Leaf Holding (n=1)	Protein (n=2)	Oil (n=2)	SDS		
	bu/a	%	Score	in.	DAP	Score	%	%	DI (n=1)	DS (n=1)	DX (n=1)
GoSoy Ireane	60 ± 1	12.9	1.3	33	133	1.0	39.2	22.0	6.7	1.3	1.5
USG Ellis	60 ± 1	12.6	1.3	31	135	1.0	39.7	21.8	11.7	1.7	3.5
TN Exp TN13-4303	57 ± 1	13.7	1.4	35	136	1.5	41.4	21.4	11.7	1.7	3.5
TN Exp TN11-5083	56 ± 1	13.2	1.6	31	134	2.3	40.4	22.5	2.7	1.0	0.5
MO S12-3791	56 ± 1	13.1	1.8	39	126	2.0	39.3	21.8	3.3	0.7	0.7
Average	58	13.1	1.5	34	133	1.6	40.0	21.9	7.2	1.3	1.9

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

§ Average moisture at harvest.

Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

Maturity = days after planting (DAP).

Leaf Holding = 1 to 5 scale; where 1 = no leaves remaining on stems at maturity; 5 = 90+% of leaves remaining on stems at maturity.

Protein & Oil on dry weight basis.

SDS disease ratings were taken at the Highland Rim Experiment Station on 9/3/2015

DI = disease incidence = percentage of plants with symptoms

DS = disease severity = score of leaf chlorosis and necrosis; 0 = no symptoms; 9 = plant death before normal defoliation due to senescence.

DX = disease index = (DI x DS / 9)

Table 60. Mean yields of 20 Maturity Group V Conventional, Liberty Link, and Roundup Ready soybean varieties evaluated in five REC tests in Tennessee during 2016.

	Avg. Yield [†]					
	± Std Err.	<u>Knoxville</u>	<u>Springfield</u>		<u>Milan</u>	
Variety [†]	(n=5)	Irr.	Irr.	Non-Irr.	Irr.	Non-Irr.
		-----bu/a-----				
RR Check (Progeny 5752)	59 ± 1	55	48	49	76	69
MO S12-4718	59 ± 1	54	58	47	67	69
AR UA 5014C	59 ± 1	57	50	46	73	68
VA V10-0262	58 ± 1	55	53	52	68	63
AR UA 5612	58 ± 1	60	59	47	62	63
GoSoy Leland	56 ± 1	61	50	45	61	64
VA V11-0730	56 ± 1	52	50	47	66	63
AR R09-430	55 ± 1	53	47	49	66	62
MO S11-20124	55 ± 1	44	54	44	71	64
AR UA 5814HP	55 ± 1	50	52	41	65	69
AR Osage	55 ± 1	55	51	43	68	57
TN Exp TN15-5032	55 ± 1	55	48	46	65	60
LL Check (Credenz CZ 5242)	55 ± 1	54	45	41	69	64
GoSoy 56C16	55 ± 1	56	50	42	59	68
AR UA 5213C	55 ± 1	50	52	46	61	65
TN Exp TN14-5014	55 ± 1	54	50	49	64	57
MO S11-17025	54 ± 1	56	50	51	59	57
TN Exp TN14-5017	54 ± 1	53	49	49	63	56
USDA-TN JTN-5110	54 ± 1	52	49	48	62	59
TN Exp TN12-5014	51 ± 1	45	42	37	75	56
Average (bu/a)	56	54	50	46	66	63
L.S.D._{.05} (bu/a)	3	7	7	6	9	9
C.V. (%)	8.3	7.5	8.3	8.4	8.1	8.9

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

Table 61. Mean yields and agronomic characteristics of 20 Maturity Group V Conventional, Liberty Link, and Roundup Ready soybean varieties evaluated in five REC tests in Tennessee during 2016.

Variety [†]	Avg. Yield [‡]	Moisture §	Lodging	Height	Maturity	Leaf	Protein	Oil
	± Std Err.					Holding		
	(n=5)	(n=5)	(n=4)	(n=5)	(n=5)	(n=1)	(n=1)	(n=1)
	bu/a	%	Score	in.	DAP	Score	%	%
RR Check (Progeny 5752)	59 ± 1	12.0	1.3	40	133	1.0	41.7	21.8
MO S12-4718	59 ± 1	12.7	1.6	34	131	1.0	39.1	22.5
AR UA 5014C	59 ± 1	13.1	1.2	35	128	1.2	39.3	22.9
VA V10-0262	58 ± 1	12.6	1.6	36	132	1.0	42.5	21.5
AR UA 5612	58 ± 1	12.5	2.3	40	134	1.0	40.8	21.9
GoSoy Leland	56 ± 1	12.5	2.5	38	129	1.0	40.0	22.8
VA V11-0730	56 ± 1	12.3	1.2	29	128	1.0	40.4	22.9
AR R09-430	55 ± 1	12.7	1.5	34	128	1.0	40.1	23.2
MO S11-20124	55 ± 1	12.3	2.7	44	132	1.0	37.6	23.7
AR UA 5814HP	55 ± 1	14.2	2.1	42	138	1.5	44.6	20.8
AR Osage	55 ± 1	12.1	1.3	34	130	1.3	43.0	21.6
TN Exp TN15-5032	55 ± 1	12.1	2.3	51	132	1.2	40.6	22.3
LL Check (Credenz CZ 5242)	55 ± 1	12.4	1.5	43	131	1.0	39.0	23.6
GoSoy 56C16	55 ± 1	12.6	2.4	39	133	1.3	40.1	22.4
AR UA 5213C	55 ± 1	12.9	2.1	37	130	1.0	42.3	20.8
TN Exp TN14-5014	55 ± 1	12.5	1.4	33	129	1.7	40.8	22.4
MO S11-17025	54 ± 1	12.7	2.3	35	131	1.0	41.1	22.5
TN Exp TN14-5017	54 ± 1	12.6	1.3	31	129	1.5	40.1	22.6
USDA-TN JTN-5110	54 ± 1	12.5	2.1	37	130	1.5	40.9	22.4
TN Exp TN12-5014	51 ± 1	12.4	1.1	29	132	2.3	43.4	20.5
Average	56	12.6	1.8	37	131	1.2	40.9	22.3

[†] If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

[‡] All yields are adjusted to 13% moisture.

§ Average moisture at harvest.

Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

Maturity = days after planting (DAP).

Leaf Holding = 1 to 5 scale; where 1 = no leaves remaining on stems at maturity; 5 = 90+% of leaves remaining on stems at maturity.

Protein & Oil on dry weight basis.

Table 62. Mean yields of 11 Maturity Group V Conventional and Roundup Ready soybean varieties evaluated in five REC tests in Tennessee for two years, 2015 - 2016 (n=10).

Variety [†]	Avg. Yield [‡] ± Std Err. (n=10)	Knoxville	Springfield		Milan	
		Irr.	Irr.	Non-Irr.	Irr.	Irr.
			-----bu/a-----			
AR UA 5014C	62 ± 1	58	60	55	75	63
GoSoy 56C16	61 ± 1	61	61	50	67	67
AR R09-430	60 ± 1	59	57	57	71	59
AR UA 5814HP	60 ± 1	55	57	49	74	67
GoSoy Leland	60 ± 1	61	61	52	61	67
AR UA 5612	60 ± 1	61	56	53	63	66
USDA-TN JTN-5110	59 ± 1	59	53	56	66	62
AR Osage	58 ± 1	56	60	48	69	59
MO S11-17025	58 ± 1	60	55	53	62	61
AR UA 5213C	58 ± 1	54	59	49	69	61
TN Exp TN12-5014	56 ± 1	49	59	44	71	58
Average (bu/a)	59	58	58	51	68	63
L.S.D._{.05} (bu/a)	3	5	9	5	5	6
C.V. (%)	8.8	7.8	12.7	8.4	6.3	8.6

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

Table 63. Mean yields and agronomic characteristics of 11 Maturity Group V Conventional soybean varieties evaluated in five REC tests in Tennessee for two years, 2015 - 2016 (n=10).

Variety [†]	Avg. Yield [‡]	Moisture §	Lodging	Height	Maturity	Leaf			SDS		
	± Std Err.					Holding	Protein	Oil	DI	DS	DX
	(n=10)	(n=10)	(n=9)	(n=10)	(n=10)	(n=1)	(n=2)	(n=2)	(n=1)	(n=1)	(n=1)
	bu/a	%	Score	in.	DAP	Score	%	%	%	0 - 9	index
AR UA 5014C	62 ± 1	13.2	1.2	34	134	1.2	39.4	22.3	1.7	0.7	0.4
GoSoy 56C16	61 ± 1	12.8	2.2	38	141	1.3	40.0	22.1	10.0	1.3	4.4
AR R09-430	60 ± 1	12.6	1.5	33	135	1.0	40.2	22.9	1.0	0.3	0.1
AR UA 5814HP	60 ± 1	15.2	2.1	40	145	1.5	44.4	20.6	6.7	0.7	1.5
GoSoy Leland	60 ± 1	12.6	2.4	36	136	1.0	39.3	22.4	0.0	0.0	0.0
AR UA 5612	60 ± 1	12.6	2.2	38	140	1.0	40.1	21.6	16.7	1.7	9.3
USDA-TN JTN-5110	59 ± 1	12.5	1.9	36	137	1.5	40.7	21.9	0.0	0.0	0.0
AR Osage	58 ± 1	12.2	1.4	32	137	1.3	42.9	21.1	30.0	2.7	26.7
MO S11-17025	58 ± 1	12.7	2.5	34	138	1.0	40.1	22.3	0.0	0.0	0.0
AR UA 5213C	58 ± 1	12.6	2.1	35	137	1.0	41.9	20.5	35.0	3.3	27.8
TN Exp TN12-5014	56 ± 1	12.3	1.1	29	138	2.3	42.7	20.8	3.3	0.7	0.7
Average	59	12.8	1.9	35	138	1.3	41.1	21.7	9.5	1.0	6.4

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

§ Average moisture at harvest.

Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

Maturity = days after planting (DAP).

Leaf Holding = 1 to 5 scale; where 1 = no leaves remaining on stems at maturity; 5 = 90+% of leaves remaining on stems at maturity.

Seed Quality = 1 to 5 scale; where 1 = < 5% of seeds showing disease or split seed coats; 5=95+% of seed are diseased or have split seed coats.

Protein & Oil on dry weight basis.

SDS disease ratings were taken at the Highland Rim Experiment Station on 9/3/2015

DI = disease incidence = percentage of plants with symptoms

DS = disease severity = score of leaf chlorosis and necrosis; 0 = no symptoms; 9 = plant death before normal defoliation due to senescence.

DX = disease index = (DI x DS / 9)

Table 64. Mean yields of seven Maturity Group V Conventional soybean varieties evaluated in five REC tests in Tennessee for three years, 2014 - 2016 (n=15).

Variety [†]	Avg. Yield [‡] ± Std Err. (n=15)	Knoxville	Springfield		Milan	
		Irr.	Irr.	Non-Irr.	Irr.	Non-Irr.
			-----bu/a-----			
AR R09-430	60 ± 1	64	59	48	68	57
AR UA 5014C	60 ± 1	60	61	45	71	61
USDA-TN JTN-5110	58 ± 1	63	54	48	64	61
AR UA 5612	57 ± 1	62	54	45	62	62
AR Osage	55 ± 1	58	55	42	64	57
TN Exp TN12-5014	53 ± 1	52	57	38	66	54
AR UA 5213C	53 ± 1	52	51	43	64	57
Average (bu/a)	57	59	56	44	66	58
L.S.D._{.05} (bu/a)	2	4	9	4	4	5
C.V. (%)	9.9	7.0	15.9	9.5	6.8	9.2

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

Table 65. Mean yields and agronomic characteristics of seven Maturity Group V Conventional soybean varieties evaluated in five REC tests in Tennessee for three years, 2014 - 2016 (n=15).

Variety [†]	Avg. Yield [‡]	Moisture §	Lodging	Height	Maturity	Leaf Holding	Protein	Oil	SDS			
	± Std Err.								DI	DS	DX	Frogeye
	(n=15)	(n=15)	(n=13)	(n=15)	(n=15)	(n=2)	(n=3)	(n=3)	(n=1)	(n=1)	(n=1)	(n=1)
	bu/a	%	Score	in.	DAP	Score	%	%	%	0 - 9	index	Score
AR R09-430	60 ± 1	12.7	1.6	31	137	1.5	40.1	22.9	1.0	0.3	0.1	1.3
AR UA 5014C	60 ± 1	13.4	1.3	33	135	1.1	39.6	22.2	1.7	0.7	0.4	1.0
USDA-TN JTN-5110	58 ± 1	12.7	2.3	35	139	2.7	40.5	21.9	0.0	0.0	0.0	2.3
AR UA 5612	57 ± 1	12.8	2.5	37	141	2.3	40.2	21.7	16.7	1.7	9.3	1.7
AR Osage	55 ± 1	12.4	1.6	32	139	1.8	42.8	21.0	30.0	2.7	26.7	2.7
TN Exp TN12-5014	53 ± 1	12.6	1.3	29	138	1.8	42.7	20.8	3.3	0.7	0.7	1.7
AR UA 5213C	53 ± 1	12.8	2.4	34	138	1.3	41.9	20.5	35.0	3.3	27.8	3.7
Average	57	12.8	1.9	33.0	138.1	1.8	41.1	21.6	12.5	1.3	9.3	2.1

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

‡ All yields are adjusted to 13% moisture.

§ Average moisture at harvest.

Lodging = 1 to 5 scale; where 1 = 95% of plants erect; 2.5 = ~50% of plants leaning at angle ≥ 45°; 5 = 95+% of plants leaning at an angle ≥ 45°.

Maturity = days after planting (DAP).

Leaf Holding = 1 to 5 scale; where 1 = no leaves remaining on stems at maturity; 5 = 90+% of leaves remaining on stems at maturity.

Seed Quality = 1 to 5 scale; where 1 = < 5% of seeds showing disease or split seed coats; 5=95+% of seed are diseased or have split seed coats.

Protein & Oil on dry weight basis.

SDS disease ratings were taken at the Highland Rim Experiment Station on 9/3/2015

DI = disease incidence = percentage of plants with symptoms

DS = disease severity = score of leaf chlorosis and necrosis; 0 = no symptoms; 9 = plant death before normal defoliation due to senescence.

DX = disease index = (DI x DS / 9)

Disease ratings for Frogeye Leaf Spot are from 1-9, where 0=no disease & 10=maximum amount of plant disease or plant death. Ratings taken 8/28/14 in Knoxville, TN

Table 66. Characteristics of soybean varieties evaluated in Tennessee during 2016, as provided by the seed company.

Variety	Relative Maturity	Herbicide Tolerance	SCN Resistance	Stem Canker	SDS	Frogeye	Flower Color	Pubescence Color	Seed Treatment
AR Osage	5.6	CONV		R	R	R	P	G	Apron Maxx
AR R07-6614RR	5.7	RR					W	G	Apron Maxx
AR R09-430	5.1	CONV					P	G	Apron Maxx
AR R10-197RY	5.6	RR2					P	G	Apron Maxx
AR R11-89RY	5.4	RR2					P	G	Apron Maxx
AR UA 5014C	5.0	CONV					P	T	Apron Maxx
AR UA 5213C	5.2	CONV					P	G	Apron Maxx
AR UA 5414RR	5.4	RR					W	G	Apron Maxx
AR UA 5612	5.6	CONV		R			P	G	Apron Maxx
AR UA 5814HP	5.8	CONV					P	T	Apron Maxx
Armor 43-D34 (R2X)	4.3	RR2 Xtend							Defend Extra
Armor 44-D40 (R2X)	4.4	RR2 Xtend							Defend Extra
Armor 46-D08 (R2X)	4.6	RR2 Xtend							Defend Extra
Armor 47-D17 (R2X)	4.7	RR2 Xtend							Defend Extra
Armor 47-R70 (RR2)	4.7	RR2							Defend Extra
Armor 48-D24 (R2X)	4.8	RR2 Xtend							Defend Extra
Armor 48-D70 (R2X)	4.8	RR2 Xtend							Defend Extra
Armor 49-D66 (R2X)	4.9	RR2 Xtend							Defend Extra
Armor 49-D90 (R2X)	4.9	RR2 Xtend							Defend Extra
Armor ARX4906 (R2X)	4.9	RR2 Xtend							Defend Extra
Asgrow AG38X6 (R2X)	3.8	RR2 Xtend	R3	R	MR	MS	P	T	Acceleron I
Asgrow AG42X6 (R2X)	4.2	RR2 Xtend	R3	R	MS	MR	P	G	Acceleron I
Asgrow AG43X7 (R2X,STS)	4.3	RR2 Xtend, STS	R3	R	MS	R	L	T	Acceleron I
Asgrow AG44X6 (R2X)	4.4	RR2 Xtend	R3	R	MR	MR	W	LT	Acceleron I
Asgrow AG45X6 (R2X,STS)	4.5	RR2 Xtend, STS	R3	R	MS	MR	P	G	Acceleron I
Asgrow AG45X7 (R2X,STS)	4.5	RR2 Xtend, STS	R3	S	MS	R		G	Acceleron I
Asgrow AG4632 (RR2)	4.6	RR2	R3	MR	MS	R	P	LT	Acceleron I
Asgrow AG46X6 (R2X)	4.6	RR2 Xtend	R3	MR	MR	MR	P	LT	Acceleron I
Asgrow AG46X7 (R2X,STS)	4.6	RR2 Xtend, STS	R3	R	MS	R		LT	Acceleron I
Asgrow AG47X6 (R2X,STS)	4.7	RR2 Xtend, STS	R3	R	MR	R	W	LT	Acceleron I
Asgrow AG48X7 (R2X,STS)	4.8	RR2 Xtend, STS	R3	R	MS	MR		T	Acceleron I
Asgrow AG49X6 (R2X)	4.9	RR2 Xtend	R3	MR	R	R	P	LT	Acceleron I
Asgrow AG53X6 (R2X)	5.3	RR2 Xtend	R1, R3	MR	R	R	W	T	Acceleron I
Asgrow AG54X6 (R2X)	5.4	RR2 Xtend	R3	R	MR	R	P	T	Acceleron I
Asgrow AG55X7 (R2X)	5.5	RR2 Xtend	S	R	MS	MS		T	Acceleron I
Beck's Hybrids 437R4* (RR)	4.3	RR	R3, MR14	R	S	S			Escalate
Beck's Hybrids 4453X2 (R2X)	4.4	RR2 Xtend	R3, MR14	S	R	R			Escalate
Beck's Hybrids 453R4* (RR)	4.5	RR	R3, MR14	R	R	R	P	T	Escalate
Beck's Hybrids 465R4* (RR)	4.6	RR	R3, MR14	R	S	S	W	T	Escalate
Beck's Hybrids 474L4 (LL)	4.7	LL	R3, MR14	R	S	S	W	T	Escalate
Beck's Hybrids 487R4* (RR)	4.8	RR	R3, MR14	R	S	R			Escalate
Beck's Hybrids 494L4 (LL)	4.9	LL	R3, MR14	R	R	R			Escalate
Beck's Hybrids 4991X2 (R2X)	4.9	RR2 Xtend	R3, MR14	R	R	R			Escalate
BiOWiSH BWTSBH1WCL	4.6								
BiOWiSH BWTSBH1WOCL	4.6								

Table 66 (continued)

Variety	Relative Maturity	Herbicide Tolerance	SCN Resistance	Stem Canker	SDS	Frogeye	Flower Color	Pubescence Color	Seed Treatment
Caverndale Farms CF 452 RR2Yn	4.5	RR2	3, 14	R	MR	MR	P	LT	Metaxyl, Fluidoxonil, Thiabendazole, Imidicloprid, Tag Team, N-Hibit
Caverndale Farms CF 478 RR2Y/STSN	4.7	RR2, STS	3, 14	R	MR	MR	P	LT	Metaxyl, Fluidoxonil, Thiabendazole, Imidicloprid, Tag Team, N-Hibit
Caverndale Farms CF 479 LLn	4.7	LL	3, 14	MR	MR	MR	W	LT	Metaxyl, Fluidoxonil, Thiabendazole, Imidicloprid, Tag Team, N-Hibit
Credenz CZ 3383 RY	3.3	RR							Poncho Votivo + ILeVO
Credenz CZ 3560 RY	3.5	RR2		R	MS	MR	P	G	Poncho Votivo + ILeVO
Credenz CZ 3991 RY	3.9	RR							Poncho Votivo + ILeVO
Credenz CZ 4044 LL	4.0	LL							Poncho Votivo + ILeVO
Credenz CZ 4105 LL	4.1	LL		R	MR	MR	W	T	Poncho Votivo + ILeVO
Credenz CZ 4181 RY	4.1	RR2		R	MS	MR	P	T	Poncho Votivo + ILeVO
Credenz CZ 4222 LL	4.2	LL							Poncho Votivo + ILeVO
Credenz CZ 4540 LL	4.5	LL		S	R	R	W	T	Poncho Votivo + ILeVO
Credenz CZ 4590 RY	4.5	RR2		R	MR	MS	P	T	Poncho Votivo + ILeVO
Credenz CZ 4656 RY	4.6	RR							Poncho Votivo + ILeVO
Credenz CZ 4748 LL	4.7	LL		R	MS	R	W	T	Poncho Votivo + ILeVO
Credenz CZ 4818 LL	4.8	LL		R	R	MR	W	T	Poncho Votivo + ILeVO
Credenz CZ 4898 RY	4.8	RR							Poncho Votivo + ILeVO
Credenz CZ 4959 RY	4.9	RR2		R	MS	MR	P	T	Poncho Votivo + ILeVO
Credenz CZ 5147 LL	5.1	LL		R	R	MR	P	T	Poncho Votivo + ILeVO
Credenz CZ 5150 LL	5.1	LL		R	MS	R	P	G	Poncho Votivo + ILeVO
Credenz CZ 5225 LL (STS)	5.2	LL/STS		R			W	T	Poncho Votivo + ILeVO
Credenz CZ 5242 LL	5.2	LL		R	MS	MR	P	G	Poncho Votivo + ILeVO
Credenz CZ 5375 RY	5.3	RR							Poncho Votivo + ILeVO
Credenz CZ 5445 LL	5.4	LL		R	MR	R	W	T	Poncho Votivo + ILeVO
Credenz HBK LL4953	4.9	LL		R	MS	T	P	G	Poncho Votivo + ILeVO
Credenz HBK RY 5221 (RR2)	5.2	RR2		R	MR	R	P	G	Poncho Votivo + ILeVO
Croplan 4000 (RR)	4.0	RR	R3, MR14	R	R	R	W	T	Warden CX
Croplan 4700 (RR)	4.7	RR	R3, MR14	R	S	S	W	G	Warden CX
Croplan 4775 (RR)	4.7	RR	R3, MR14	R	R	R	W	T	Warden CX
Dyna-Gro 31RY45 (RR2)	4.5	RR2	3,14	R	MS	R	P	LTB	CruiserMaxx Vibrance
Dyna-Gro S38RY87 (RR2)	3.8	RR2	3, 14	MR	MR	MR	W	LTT	CruiserMaxx Vibrance
Dyna-Gro S43RY95 (RR2)	4.3	RR2	3, 14	R	MS	MR	P	TB	CruiserMaxx Vibrance
Dyna-Gro S43XS27 (R2X,STST)	4.3	RR2 Xtend, STS	3, 14	MS	MR	MS	W	LTB	CruiserMaxx Vibrance
Dyna-Gro S45LL97 (LL)	4.5	LL	3	R	MR	MR	W	GB	CruiserMaxx Vibrance
Dyna-Gro S45XS66 (R2X, STS)	4.5	RR2 Xtend, STS	3, 14	R	MS	MR	P	LTB	CruiserMaxx Vibrance
Dyna-Gro S46XS87 (R2X,STS)	4.6	RR2 Xtend, STS	3, 14	R	MS	MS	P	GT	CruiserMaxx Vibrance
Dyna-Gro S48RS53 (RR2,STS)	4.8	RR2/STS	3, 14	R	MS	MR	P	GT	CruiserMaxx Vibrance
Dyna-Gro S48XT56 (R2X)	4.8	RR2 Xtend	3, 14	R	R	MR	P	LTT	CruiserMaxx Vibrance
Dyna-Gro S49LL34 (LL)	4.9	LL	3, 14	MR	MS	MR	P	GT	CruiserMaxx Vibrance
Dyna-Gro S49XS76 (R2X,STS)	4.9	RR2 Xtend, STS	3, 14	R	MR	MS	P	LTT	CruiserMaxx Vibrance

Table 66 (continued)

Variety	Relative Maturity	Herbicide Tolerance	SCN Resistance	Stem Canker	SDS	Frogeye	Flower Color	Pubescence Color	Seed Treatment
Dyna-Gro S52LL66 (LL)	5.2	LL	3, 14	MR	MR	MR	P	GT	CruiserMaxx Vibrance
Dyna-Gro S52RS86 (R2X,STS)	5.2	RR2, STS	3, 14	R	R	S	P	LTT	CruiserMaxx Vibrance
Dyna-Gro S52RY75 (RR2)	5.2	RR2	1	R	MR	R	W	LTT	CruiserMaxx Vibrance
Dyna-Gro S55LS75 (LL,STS)	5.5	LL/STS	S	R	MR	R	W	TT	CruiserMaxx Vibrance
Dyna-Gro SX16848XS (R2X,STS)	4.8	RR2 Xtend, STS	3, 14	R	MR	MS	P	GT	CruiserMaxx Vibrance
GoSoy 39C15	3.9		3, 14		R		W	T	CruiserMaxx Vibrance
GoSoy 42L16 (LL)	4.2	LL	3, 14	MR	MR	MR	W/P	LT	CruiserMaxx Vibrance
GoSoy 43L16 (LL)	4.3	LL	3, 14	R	MR	MR	P	LT	CruiserMaxx Vibrance
GoSoy 4714LL	4.7	LL	2,3,5	MR	MS	MR	W	LT	CruiserMaxx VIB
GoSoy 483.C	4.8			R		R	W	LT	CruiserMaxx Vibrance
GoSoy 4912 LL	4.9	LL	3,14	MR			P/W	T	Cruiser Maxx
GoSoy 4913LL	4.9	LL	3, 14	MR	R	R	P	G	CruiserMaxx Vibrance
GoSoy 49G16 (RR)	4.9	RR	1, 2, 3, 5, 14	R	MR	R	P	T	CruiserMaxx Vibrance
GoSoy 5115LL	5.1	LL	3, 14	MR	MR	MR	P	G	CruiserMaxx Vibrance
GoSoy 56C16	5.6	CONV					W	G	Apron Maxx
AGS GS43R216 (RR)	4.3	RR	3, 14		MR	R	W	LT	CruiserMaxx Vibrance
AGS GS48R216 (RR)	4.8	RR	3, 14	MR	MR	MR	P	T	CruiserMaxx Vibrance
GoSoy Ireane	4.9	CONV		MR		MR	W	G	CruiserMaxx VIB
GoSoy Leland	5.0	CONV	1, 2, 3, 5, 14	MR	R	R	W	T	CruiserMaxx VIB
LG Seeds C3911RX	3.9	RR2 Xtend	R3, MR14	S	MR	MR	P	G	AgriShield
LG Seeds C4145R2 (STS)	4.1	RR2, STS	R3, MR14	R	MR	MR	W	LT	AgriShield
LG Seeds C4458RX (R2X,STS)	4.4	RR2 Xtend, STS	R3, MR14	R	R	MR	P	LT	AgriShield
LG Seeds C4615RX (R2X,STS)	4.6	RR2 Xtend, STS	R3, MR14	R	MR	MR	P	G	AgriShield
LG Seeds C4845RX (R2X,STS)	4.8	RR2 Xtend	R3, MR14	R	R	R	P	LT	AgriShield
LG Seeds C4900RX (R2X,STS)	4.9	RR2 Xtend		R	MR	R	W	G	AgriShield
MO S11-17025	5.2	CONV	1, 2, 3, 5, 14	R	MR	S	W	T	Poncho/Votivo + ILeVO
MO S11-20124	5.3		2, 3, 4, 14	R		R	W	T	Poncho/Votivo + ILeVO
MO S12-2418	4.8		3, 14	R		R	W	LT	Poncho/Votivo + ILeVO
MO S12-3782	4.6		3, 14	R		R	W	LT	Poncho/Votivo + ILeVO
MO S12-3791	4.5	CONV	3, 14	MS		R	W	LT	Poncho/Votivo + ILeVO
MO S12-4718	5.3		3, 14	R		R	W	LT	Poncho/Votivo + ILeVO
Mycogen 5N406R2	4	RR2	3, 14	R	S	S	W	T	Cruiser, Vibrance
Mycogen 5N414R2	4.1	RR2, STS	3, 14	R	R	S	P	T	Cruiser, Vibrance
Mycogen 5N424R2	4.2	RR2, STS	3, 14		R	R	P	T	Cruiser, Vibrance
Mycogen 5N433R2	4.3	RR2	3, 14		R	S	P	T	Cruiser, Vibrance
Mycogen 5N480R2	4.8	RR2, STS	3, 14		R	S	P	T	Cruiser, Vibrance
Mycogen 5N523R2	5.2	RR2, STS	3, 14	R	R	S	P	T	Cruiser, Vibrance
NK Seed S39-C4 (RR2)	3.9	RR2	3, 14		R	MR	P	T	Clariva, Cruiser, Apron, Maxim, Vibrance
NK Seed S42-P6 (RR2)	4.2	RR2	3, 14		MR	R	W	T	Clariva, Cruiser, Apron, Maxim, Vibrance
NK Seed S45-R7 (RR2,STS)	4.5	RR2/STS	R3, MR14		R	MR	W	T	Clariva, Cruiser, Apron, Maxim, Vibrance
NK Seed S48-D9 (RR2)	4.8	RR2	R3, MR14		R	R	W	T	Clariva, Cruiser, Apron, Maxim, Vibrance

Table 66 (continued)

Variety	Relative Maturity	Herbicide Tolerance	SCN Resistance	Stem Canker	SDS	Frogeye	Flower Color	Pubescence Color	Seed Treatment
Pfister 41RS01 (RR2)	4.1	RR2	3, 14	R	R	R	W	T	Clariva Complete
Pfister 43R29 (RR2)	4.3	RR2	3, 14	R	R	R		G	Clariva Complete
Pfister 45R203 (RR2)	4.5	RR2	3, 14	R	R	R		G	Clariva Complete
Pfister 47R22 (RR2,STS)	4.7	RR2, STS	3, 14	R	R	R		G	Clariva Complete
Table 66 (continued)									
Pfister 48RS01 (RR2)	4.8	RR2	3, 14	R	R	R		G	Clariva Complete
Progeny 4211RY	4.2	RR2	R3, MR14		MR	MR	P	G	Poncho 600 +Votivo, Trilex
Progeny 4247LL	4.2	LL		MR	MR	MR	SG	LT	Poncho 600 +Votivo, Trilex
Progeny 4516RXS (R2X,STS)	4.5	RR2 Xtend, STS	R3, MR14	R	MS	MR	P	G	Poncho 600 +Votivo, Trilex
Progeny 4588RY (R2)	4.5	RR2	R3		MR	MR	P	G	Poncho 600 +Votivo, Trilex
Progeny 4613RYS	4.6	RR2/STS	R3, MR14	R	MR	MR	W	LT	Poncho 600 +Votivo, Trilex
Progeny 4620RXS (R2X,STS)	4.6	RR2 Xtend, STS	R3, MR14	R	MR	MR	W	LT	Poncho 600 +Votivo, Trilex
Progeny 4757RY	4.7	RR2	R3, MR14	R	MR	R	W	G	Poncho 600 +Votivo, Trilex
Progeny 4788RY	4.7	RR2	R3, MR14	MR	MS	R	P	LT	Poncho 600 +Votivo, Trilex
Progeny 4799RXS (R2X,STS)	4.7	RR2 Xtend, STS	R3	R	MR	R	W	LT	Poncho 600 +Votivo, Trilex
Progeny 4814LLS	4.8	LL/STS					P	T	Poncho 600 +Votivo, Trilex
Progeny 4816RX (R2X)	4.8	RR2 Xtend	R3	R	MR	MR	P	LT	Poncho 600 +Votivo, Trilex
Progeny 4900RY	4.9	RR2	R3, MR14	MR	MR	MR	P	LT	Poncho 600 +Votivo, Trilex
Progeny 4930LL	4.9	LL	MR3	MR	MR	R	P	G	Poncho 600 +Votivo, Trilex
Progeny 4944RX (R2X)	4.9	RR2 Xtend	R3, MR14		MR	MR	P	BR	Poncho 600 +Votivo, Trilex
Progeny 5016RXS (R2X,STS)	5.0	RR2 Xtend, STS	R3, MR14	R	MR	MR	P	BR	Poncho 600 +Votivo, Trilex
Progeny 5226RYS	5.2	RR2/STS	R3, MR14	R	MR	MS	P	LT	Poncho 600 +Votivo, Trilex
Progeny 5289RYS (R2X, STS)	5.2	RR2, STS		R	MS	R	P	G	Poncho 600 +Votivo, Trilex
Progeny 5414LLS	5.4	LL/STS		MR		MR	W	T	Poncho 600 +Votivo, Trilex
Progeny 5417RX (R2X)	5.4	RR2 Xtend	R3	R	MR	MR	W	G	Poncho 600 +Votivo, Trilex
Progeny 5555RY	5.5	RR2	R3	MR	MR	MR	P	T	Poncho 600 +Votivo, Trilex
Progeny 5752RY	5.7	RR2		R	MR	R	P	T	Poncho 600 +Votivo, Trilex
Progeny 5768RX (R2X)	5.7	RR2 Xtend	R3	R	MR	MR	P	G	Poncho 600 +Votivo, Trilex
Steyer 4402R2	4.4	RR	R3, MR14	R	MR	MS	P	LT	Surestand
Steyer 4403XR (R2X,STS)	4.4	RR2 Xtend, STS	R3, MR14	MR	MR	MS	W	LT	Surestand
Steyer 4704XR (R2X,STS)	4.7	RR2 Xtend, STS	R3, MR14	R	MS	MS	P	G	Surestand
Steyer 4803XR (R2X,STS)	4.8	RR2 Xtend, STS	R3, MR14	R	MR	MR	P	G	Surestand
Steyer 5003XR (R2X,STS)	5.0	RR2 Xtend, STS	R3, MR14	MR	MR	MR	P	LT	Surestand
Terral-REV Brand REV 38R10 (RR)	3.8	RR	MR3, MR14		R	R	P	LT	Apron, Evergol Energy, Gaucho, PPST 20130
Terral-REV Brand REV 45A46 (RR)	4.5	RR	MR3, MR14	R	R	S	P	LT	Apron, Evergol Energy, Gaucho, PPST 20130
Terral-REV Brand REV 47R34 (RR)	4.7	RR	R3, MR14	R	R	R	P	LT	Apron, Evergol Energy, Gaucho, PPST 20130
Terral-REV Brand REV 48A26 (RR)	4.8	RR	R3, R14	R	R	R	P	LT	Apron, Evergol Energy, Gaucho, PPST 20130
Terral-REV Brand REV 48A76 (RR)	4.8	RR	R3, R14	R	R	R	P	LT	Apron, Evergol Energy, Gaucho, PPST 20130
Terral-REV Brand REV 48L63 (LL)	4.8	LL	R3, MR14	R	S	R	P	G	Apron, Evergol Energy, Gaucho, PPST 20130

Table 66 (continued)

Variety	Relative Maturity	Herbicide Tolerance	SCN Resistance	Stem Canker	SDS	Frogeye	Flower Color	Pubescence Color	Seed Treatment
Terral-REV Brand REV 49L49 (LL)	4.9	LL		R	S	R	P	G	Apron, Evergol Energy, Gaucho, PPST 20130
Terral-REV Brand REV 49R94 (RR)	4.9	RR	R3, MR14	R	R	R	P	T	
Terral-REV Brand REV 51A56 (RR)	5.1	RR	MR3, MR14	R	S	R	P	LT	
Terral-REV Brand REV 52A94 (RR,STS)	5.2	RR/STS	R3, MR14	R			P	G	
TN Exp TN11-3519R2	IV-E	RR2					P	T	Apron Maxx
TN Exp TN11-4506R2	IV-E	RR2					P	LT	Apron Maxx
TN Exp TN11-4510R2	V-E	RR2					P	LT	Apron Maxx
TN Exp TN11-5083	IV-L	CONV					W	T	Apron Maxx
TN Exp TN12-5014	V-E	CONV					W	G	Apron Maxx
TN Exp TN12-5507R2	V-E	RR2					P	LT	Apron Maxx
TN Exp TN12-5508R2	IV-L	RR2					P	G	Apron Maxx
TN Exp TN13-4303	IV-L	CONV					W	G	Apron Maxx
TN Exp TN13-4508R2	IV-L	RR2					P	LT	Apron Maxx
TN Exp TN13-5513R2	V-L	RR2					W	G	Apron Maxx
TN Exp TN13-5531RR1	V-E	RR					W	G	Apron Maxx
TN Exp TN13-5741R2	IV-L	RR2					P	LT	Apron Maxx
TN Exp TN13-5745RR1	V-L	RR					W	G	Apron Maxx
TN Exp TN14-4008	IV-L						W	T	Apron Maxx
TN Exp TN14-4425	IV-L						W	T	Apron Maxx
TN Exp TN14-5014	V-E		2, 3, 5, 14				W	G	Apron Maxx
TN Exp TN14-5017	V-E		2, 3, 5, 14				W	G	Apron Maxx
TN Exp TN14-5036	IV-L		2, 3, 5, 14				W	G	Apron Maxx
TN Exp TN15-5032	V-E						W	LT	Apron Maxx
USDA-TN JTN-5110	5.5	CONV	2, 3, 5	R	R	R	P	T	Apron Maxx, Moly (5 oz/100 lb), Gaucho 600 (1.6 oz/100 lb)
USG 7426XTS (R2X,STS)	4.2	RR2 Xtend, STS	R3, MR14	MR	MR	MS	P	LT	Ipconazole, Metalaxyl, Thiabendazole
USG 7487XTS (R2X,STS)	4.8	RR2 Xtend, STS	R3, MR14	R	MR	MS	P	G	Ipconazole, Metalaxyl, Thiabendazole
USG 7496XTS (R2X,STS)	4.9	RR2 Xtend, STS	R3, MR14	R	MR	MS	P	LT	Ipconazole, Metalaxyl, Thiabendazole
USG 74F53RS (RR2,STS)	4.5	RR2, STS		R	R	MS	P	G	Ipconazole, Metalaxyl, Thiabendazole
USG 74G99L (LL)	4.9	LL			MR	R	P	G	Ipconazole, Metalaxyl, Thiabendazole
USG 74K95RS (RR2,STS)	4.9	RR2, STS	R3, MR14	MR	MR	R	P	G	Ipconazole, Metalaxyl, Thiabendazole
USG 7506XTS (R2X,STS)	5.0	RR2 Xtend, STS	R3, MR14	R	MR	MS	P	LT	Ipconazole, Metalaxyl, Thiabendazole

Table 66 (continued)

Variety	Relative Maturity	Herbicide Tolerance	SCN Resistance	Stem Canker	SDS	Frogeye	Flower Color	Pubescence Color	Seed Treatment
USG 7536XT (R2X)	5.3	RR2 Xtend	R3, MR14	R	MR	R	W	T	Ipconazole, Metalaxyl, Thiabendazole
USG 7547XT (R2X)	5.4	RR2 Xtend	R3, MR14	R	MR	MR	W	G	Ipconazole, Metalaxyl, Thiabendazole
USG 7557XT (R2X)	5.5	RR2 Xtend		R		R	P	G	Ipconazole, Metalaxyl, Thiabendazole
USG 7576XT (R2X)	5.7	RR2 Xtend	R3, MR14	R	MS	MR	P	G	Ipconazole, Metalaxyl, Thiabendazole
USG 75B75R (RR2)	5.7	RR2	R3, MR14	R	R	R	P	T	Ipconazole, Metalaxyl, Thiabendazole
USG Ellis	4.9	CONV					W	G	Ipconazole, Metalaxyl, thiabendazole
VA V09-0610 (STS)	4.9		S	R			P	T	Apron Maxx (4 oz/100 lb) + Gaucho 600 (3 oz/100 lb)
VA V10-0262	5.6		S	R		R	W	T	Apron Maxx (4 oz/100 lb) + Gaucho 600 (3 oz/100 lb)
VA V11-0730	5.0		S	S			W	T	Apron Maxx (4 oz/100 lb) + Gaucho 600 (3 oz/100 lb)
VA V11-2187	4.2		S	R			P	G	Apron Maxx (4 oz/100 lb) + Gaucho 600 (3 oz/100 lb)
VA V11-3485 (RR)	4.8		S	R			P	T	Apron Maxx (4 oz/100 lb) + Gaucho 600 (3 oz/100 lb)
VA V12-0045R2	5.6	RR2				R	P	G	Apron Maxx (4 oz/100 lb) + Gaucho 600 (3 oz/100 lb)
Warren Seed DS 3745 R2Y	3.7	RR2	3, 14				P	LT	CruiserMaxx
Warren Seed DS 3838 R2Y	3.8	RR2	3, 14				P	LT	CruiserMaxx
Warren Seed DS 4225 R2Y	4.3	R2Y	3, 14				P	LT	CruiserMaxx
Warren Seed DS 4340 R2Y	4.3	RR2	3, 14				P	G	Cruiser Maxx
Warren Seed DS 4633 R2Y	4.6	RR2	3, 14				P	LT	Cruiser Maxx
Warren Seed DS 47-003 R2Y	4.7	R2Y	3, 14				W	LT	CruiserMaxx
Warren Seed DS 4850 R2Y/STS	4.8	RR2/STS	3, 14				P	LT	Cruiser Maxx

† If a trait appears inside parentheses i.e. (RR), then it is not part of the variety name.

RR / RR2 = Contains a gene for tolerance to glyphosate herbicide; STS = tolerance to sulfonylurea class of herbicides; LL = contains a gene for tolerance to glufosinate herbicide.

R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible, VS = very susceptible.

Flower & Pubescence colors: P = purple, W = white, S = segregating, T = tawny, LT = light tawny, B = Brown, G = gray.

RR3 = Roundup Ready 3

R4E = Roundup Ready Early Group 4

R4L = Roundup Ready Late Group 4

R5E = Roundup Ready Early Group 5

R5L = Roundup Ready Late Group 5

CONV4 = Conventional Group 4

CONV5 = Conventional Group 5

LL4 = Liberty Link Group 4

LL5 = Liberty Link Group 5

Table 67. Contact information for soybean seed companies evaluated in yield tests in Tennessee during 2016.

Company	Contact	Phone	Email	Web site
University of Arkansas	Tina Hart	479-466-2213	tlhard@uark.edu	www.uark.edu
Armor Seed	Lane Dill	901-233-0274	lanedill@armorseed.com	www.armorseed.com
Asgrow (Monsanto)	Larry Ganann	901-326-7140	larry.w.ganann@monsanto.com	www.asgrowanddekalb.com
Beck's Hybrids	Beck's Hybrids	800-937-2325		www.beckshybrids.com
BiOWiSH Technologies	Bill Diederich	402-321-6568		www.biowishtechnologies.com
Caverndale Farms	Ag Central Coop Johnson City Chemical Company	423-745-0443 423-257-5079		www.caverndalefarms.com
Credenz (Bayer)	Lucas Owen	731-793-3530	lucas.owen@bayer.com	www.cropscience.bayer.us/products/seeds/credenz
Croplan (WinField Solutions)	Caleb Robertson	731-614-5234	clrobertson@landolakes.com	http://www.winfield.com/farmer/croplan/
Dyna-Gro (Crop Production Services)	Crop Production Services Jonathan Fant, Agronomist Scott Mitchell, Seed Manager	731-885-1212 731-819-6713 731-446-8506	jonathan.fant@cpsagu.com scott.mitchell@cpsagu.com	www.dynagroseed.com
Go Soy (Stratton Seed Company)	Heath North	800-264-4433	hnorth@strattonseed.com	www.strattonseed.com
LG Seeds	Security Seed and Chemical	931-485-7333		www.lgseeds.com
University of Missouri	Grover Shannon	573-379-5431	shannong@missouri.edu	www.missouri.edu
Mycogen Seed	Tom McDow Jeff Jetton	901-495-5137 901-229-0582	TMMcDow@dow.com Jjetton@dow.com	www.dowagro.com/mycogen
NK Brand (Syngenta)	Mike Saxton	270-792-5885	mike.saxton@syngenta.com	www.nk-us.com
Pfister Seeds LLC	Nicky Dunbar	270-625-3996	ndunbar@pfisterseeds.com	www.pfisterseeds.com
Progeny Ag	Hillary Spain	888-535-7333	hillary@progenyag.com	www.progenyag.com
Steyer Seeds	Kevin Swanks	423-506-1008	kevinswanks@steverseeds.com	www.steverseeds.com
University of Tennessee	Vince Pantalone	865-974-8801	vpantalo@utk.edu	
Terral Seed Inc	Marty Hale	318-231-8800 (office) 318-341-8814 (cell)	mhale@terralseed.com	www.terralseed.com
USDA-ARS TN	Lisa Fritz	731-425-4736	lisa.fritz@ars.usda.gov	

Table 67 (continued)

Company	Contact	Phone	Email	Web site
UniSouth Genetics, Inc. (USG)	Fandrich Supply Co.	931-967-3377	fandrichsupply@aol.com	www.usgseed.com
	Huffstetler & Sons Seed Inc.	731-235-2167	huffy1@crunet.com	
	Hurt Seed Co. Inc.	731-836-7574	treyhurt@bellsouth.com	
	Obion Grain Co. Inc.	731-536-6251	wes@obiongrain.com	
	Sellers Seed	731-538-2990		
Virginia Tech	Bo Zhang	540-231-1731	bozhang@vt.edu	www.cropgenetics.cses.vt.edu
Warren Seed	Lanny Warren	731-234-2921	lanny.warren@charter.net	lanny.warren@charter.net