NORTH CAROLINA
MEASURED CROP PERFORMANCE
SOYBEAN
2014

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North Carolina Measured Crop Performance

Soybean 2014

Official Variety Testing Program

Department of Crop Science

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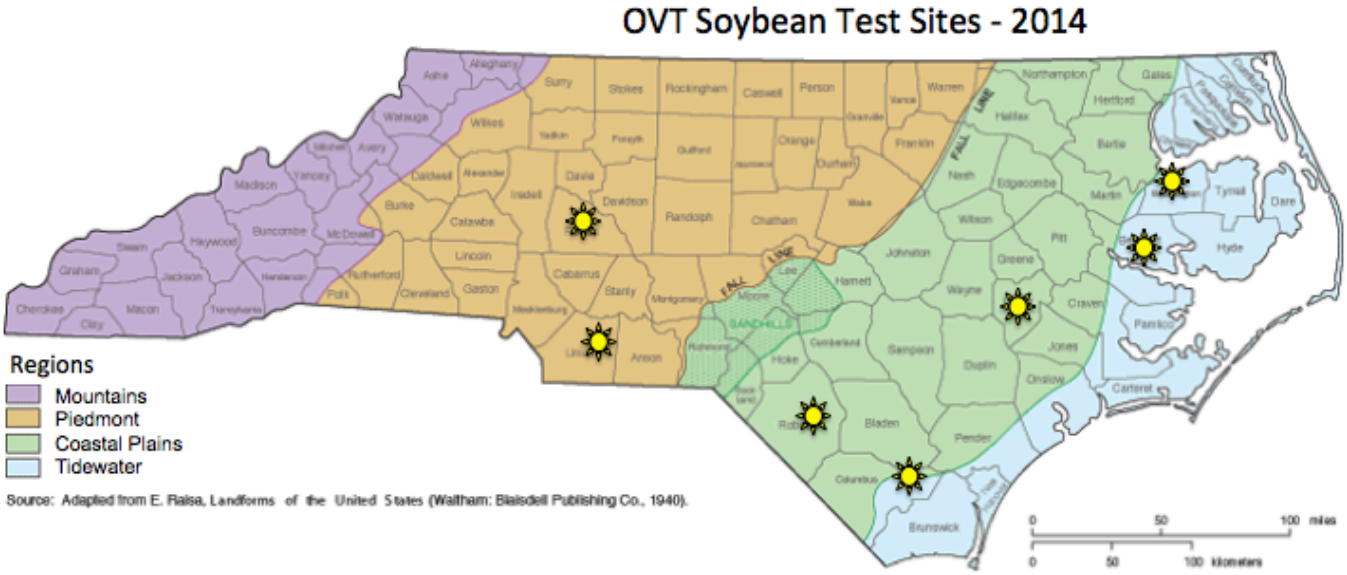

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INTRODUCTION

North Carolina growers planted 1.75 million acres of soybean across the state in 2014. With the large number of commercially available and prospective varieties, it becomes difficult for growers to select a superior variety suited for their particular area of the state. To make this decision, the grower needs up-to-date, unbiased, reliable information. The Official Variety Testing Program at North Carolina State University seeks to provide that information through field trials published in this report.

In 2014, soybean trials were conducted for conventional, Liberty Link and Roundup Ready soybean varieties. These trials were located at 7 environments across North Carolina, across the Tidewater, Coastal Plain and Piedmont regions. Full season and late-planted (mid-June) trials were conducted. The late-planted trials attempt to mimic a double crop of soybean.

Performance information is presented here. Growers are cautioned against selecting varieties based on an individual location in any one year. True performance may have been influenced by the weather or pest conditions experienced at any one location or any one growing season. Therefore, performance results are reported on a statewide basis by maturity group. Multiple year performance data is presented for varieties entered in the previous year or two.

EXPERIMENTAL PROCEDURE

Entries: Any public or private individual or firm is welcome to submit entries to the Official Variety Testing Program. In early February of each year, trial instructions and applications for the upcoming season are distributed to all previous participants and to those who make inquiry; they are also available on our website: www.ncovt.com. Conventional and Liberty Link varieties are planted in the same trials. Roundup Ready varieties are planted in separate trials.

Applicants provided seed to conduct the statewide trials. Entries were requested to have the fungicidal and insecticidal seed treatments of choice. All entries are listed by sponsor in Table 1, along with their traits, seed treatments and seeding rates. An entry fee is charged for all private entries. The OVT program reserves the right to include additional entries for which additional information is desired.

Locations: Soybean trials were planted at seven locations across the state. Full season trials were conducted in Washington, Beaufort, Columbus, Lenoir and Robeson counties. Late-planted trials were conducted in Washington, Beaufort, Lenoir, Rowan and Union counties. The late-planted trials at Beaufort and Lenoir were planted on a stale seedbed. The remaining late-planted trials followed a spring harvest. In Washington and Rowan the previous crop was wheat; Union trials were planted behind rapeseed. Cultural practices employed (Table 2) and soil test result Table 3 are provided.

Two sites were located in the Tidewater region – Washington and Beaufort Counties. Three sites were located in the Coastal Plain – Columbus, Robeson and Lenoir Counties. Two sites were located in the Piedmont – Rowan and Union Counties. Within each region, performance trials were conducted on both North Carolina Department of Agriculture Research Stations, as well as private farms. A list of our cooperators and their locations are listed in the Acknowledgments. The Official Variety Testing Program recognizes and appreciates the cooperative spirit and civic-minded service rendered by the growers who have furnished, cultivated and managed the land for these trials.

Field Plot Design: A unique randomized, complete block design, with four or five replications per entry, was used at each location. Each harvest plot consisted of eight rows, 7.5 inches apart, with 2.5 feet between adjoining plots. Plots were planted as 28 feet long, and end trimmed approximately 4 weeks after emergence, to establish a uniform plot length of 22 feet.

In order to avoid shatter at harvest time, varieties are planted in separate trials based on designated maturity groups. These are Maturity Group 4, 5 early (5.0 – 5.5), 5 late (>5.5), 6 and 7 – 8. Due to the large number of entries, the Roundup Ready varieties are planted as one set of trials, while the conventional and Liberty Link varieties are planted as a second set of trials. Two Roundup Ready varieties per maturity group were selected and planted as check varieties in the conventional and Liberty Link trials.

Crop Management: Cultural practices, such as seedbed preparation, planting date, fertilization and topdressing were in accord with good farming practices and were uniform for all entries in a given trial (Table 2). Prior to planting each trial, soil samples were collected from the field and submitted to NCDA Agronomic Services Division for soil chemical analysis (Table 3). Fertilizer and lime applications were made according to NCDA soil test recommendations. In 2014, seed sponsors were permitted to request seeding rate; this information is listed in Table 1. Variety seeding rate was the same at all locations.

SEASONAL CONDITIONS

The 2014 growing season began with on-time plantings for the OVT program (Table 2). Weather data is provided at the end of the report. Precipitation and temperatures are provided on a weekly basis to provide detail of the 2014 growing season (Figure 1-3a). This data is also presented on a monthly basis to compare this season's weather to the 30-year average weather data (Figures 1-3b and c). All locations experienced normal to slightly lower than normal temperatures throughout the growing season. Rainfall patterns varied across the regions. The Lenoir County trials were very wet through June and July (Figure 1). Rainfall was average to above average in Rowan, however, early fall was a little dry (Figure 2). The Washington County trials received below normal rainfall during May and June, and again in October (Figure 3).

The Maturity Group 4 and 5 trials in Robeson County were omitted from the dataset; all trials in Union County were also omitted from the dataset due to extreme variability. These were excluded due to a lack in confidence of measuring true variety performance.

Weather did not delay harvest at any location (Table 2). Most locations had a split harvest, with the early maturing soybean trials harvested before wheat planting.

DATA AND RESULTS

Plant height: Plant height is measured from ground level to the base of the uppermost node. Height was measured at all trials and reported as statewide averages.

Lodging: Ratings were recorded prior to plot harvest. These values are reported as statewide averages. Lodging data does not necessarily correlate to harvest yield, as harvest equipment can capture most of the lodged crop. Lodging ratings are recorded on a 1 – 5 scale, where:

1 = almost all plants are erect
2 = less than 25% of plants are lodged, or all plants lean > 60° from the ground
3 = 25 – 50% of plants are lodged, or all plants lean approximately 45° from the ground
4 = 50 – 80% of plants are lodged, or all plants lean < 45° from the ground
5 = almost all plants are lodged

Grain Yield: Yield is reported as a mean value. Harvest values were adjusted to 13% moisture, and are reported as bushels per acre, based on 60 pounds per bushel. Additionally, all yield values reflect a 30% yield reduction to account for border effects that have been determined in our field trials. Therefore, reported yields indicate relative performance and may differ from on-farm yields.

Yield is reported as a mean value on both an individual and statewide basis. These data are available for multiple year and current year. In calculating statewide means, the means for each variety were weighted according to trial precision at each location. Statewide yield mean is a weighted average of means from each environment, where the weight for each trial is inversely proportional to the average variance of variety means at that trial. These values are reported as **Trial Weight** in the tables with individual location data. As statewide means are weighted, two and three-year means may not appear to equal the average of the yearly means. Data in the individual location tables are reported in alphabetical order. Data in the statewide and multi-year tables are reported based on yield rank from highest to lowest.

Multi-year data is a better predictor of variety performance than single year or single environment data. Therefore, yield is reported for multiple year performance in addition to current year variety performance. Overall, the data shows it was an average to above-average year for soybean production in North Carolina, depending on location.

COMPARING VARIETIES

Performance of a variety cannot be determined with absolute precision. Even though the tests are conducted in a uniform manner, uncontrollable variability exists among experimental plots due to environmental differences in soil, fertility, moisture, insects, diseases, and other sources of variation. Because this variability exists, statistics are used as a tool to examine differences among varieties. A statistical method of spatial analysis has been used to allow for similarities between neighboring plots based on their location in the field in order to adjust for the unknown environmental variation (Brownie et al., 1993). The particular spatial model allows for correlations that decrease exponentially as distance between plots increases in both row and column directions.

Coefficient of variation (**CV**) is a relative assessment of trial variability. It measures experimental error caused by variation in management practices and immeasurable factors in the environment as a percent of mean yield for the trial. Lower values generally indicate trials with less unexplained variation, hence, more reliable trials (though high mean yields also tend to produce lower CVs).

Standard error of the mean (**SEM**) is listed as a general indicator of precision since it measures how well a true variety mean was estimated. For individual trials, SEM varies across varieties (due to accounting for spatial variation within the site) and is summarized by reporting the average SEM (avg SEM). On average, this indicates how well variety means were measured across all replications within the trial. Where multiple trials were combined for regional and statewide data, **SEM** is reported. For combined datasets, the variety mean is an average over environments and replications within environments, weighted by precision associated with each environment. The SEM for averages over environments is the same for each variety and mainly reflects differences in performance of varieties across environments. Thus, lower values of SEM tend to indicate greater consistency in variety rankings across environments.

All reported trials meet an established criterion for precision by having an average value of the standard error of a difference between variety means (avg SEDiff) below a threshold value. Avg SEDiff is calculated as the square root of the average variance of a difference between two variety means. Threshold SEDiff values are based on OVT data from 1990 - 2013, and are calculated as the value twice as large as that predicted from the historical data following Bowman and Rawlings (1995).

In assessing variety performance, the Variety F-value reflects the magnitude of variation due to differences between varieties. Specifically, the F value for the variety effect indicates the strength of real yield differences. The size of difference between two varieties, which can reasonably be attributed to chance variation, is listed at the bottom of each table as the least significant difference **(LSD)**. LSD accounts for

variation across environments, where multiple trials were combined for statewide and multiple year data. However, for individual trials, this is reported as the average LSD (**avg LSD**), and represents the difference of varieties within a trial. Varieties whose yields differ by less than the average LSD are not statistically different. Those varieties that are not different from the highest observed yield are denoted in the tables with an asterisk (*); the highest yielding variety is denoted by a double asterisk (**). The LSD for comparisons among variety means is applied at the 10% level, which indicates 90% confidence that yield differences are not due to chance variation. The degrees of freedom associated with the LSD (**df LSD**) are also reported in the tables.

Variety performance may appear inconsistent among environments within an area or among years at a particular location. Year-to-year variation in weather and pest pressure is sufficiently large enough to make predictions of varietal performance based on single-year data less reliable than predictions using multiple-year data. Research has shown that multiple-year means across environments provide the best prediction of variety performance. Thus it is important to examine results from more than one location and more than one year to obtain a more accurate picture of relative variety performance. When available, growers should examine 2- and 3-year multiple environment data provided in this report. If these data are not available, growers can use the single year, multiple location data provided in this report.

New varieties are being introduced each year and these varieties are potentially higher yielding or pest resistant than the current varieties. It is suggested that growers plant new varieties on a small number of acres to determine if it is adapted to their farm. Other agronomic characteristics may be as equally important as yield. Yield information presented in this report should be used in junction with other available information and personal experience when selecting varieties.

Table 1. Information on soybean entries in the 2014 North Carolina Official Variety Trials.

Brand and Sponsor	Variety	Maturity	Herbicide Tolerance Traits	Seeding Rate (*seed/ft*)	Seed Treatment
AG South Genetics Jimmy Clements Box 72246 Albany, GA 31708 (229) 881-2700	AGS Woodruff	7	Conventional	5	-
Armor Seed Chris Ouzts 183 Pennsylvania Avenue Waldenburg, AR 72475 (662) 719-3157	Armor 49-C3	4.9	Conventional	3	Allegiance® Maxim® Cruiser®
	+Armor X47C	4.7	Conventional	3	
	+Armor X48C	4.8	Conventional	3	
	+Armor X49C	4.9	Conventional	3	
	+Armor X447C	4.7	Conventional	3	
	HALO 4:40	4.4	LL	3	
	HALO 4:76	4.7	LL	3	
	HALO 4:94	4.9	LL	3	
	HALO 4:95	4.9	LL	3	
	HALO 4:97	4.9	LL/STS	3	
	HALO 5:01	5.0	LL	3	
	HALO 5:25	5.2	LL	3	
	HALO 5:26	5.2	LL	3	
	HALO 5:45	5.4	LL	3	
	+HALO X440	4.0	LL	3	
	+HALO X448	4.8	LL	3	
	+HALO X449	4.9	LL	3	
	+HALO X451	5.1	LL	3	
	+HALO X452	5.2	LL	3	
	Armor 43-R43	4.3	RR2Y	3	
	Armor 44-R08	4.4	RR2Y	3	
	Armor 46-R65	4.6	RR2Y	3	
	Armor 47-R13	4.7	RR2Y	3	
	Armor 48-R66	4.8	RR2Y	3	
	Armor 49-R56	4.9	RR2Y	3	
	Armor 50-R44	5.0	RR2Y	3	
	Armor 53-R16	5.3	RR2Y	3	
	Armor 55-R22	5.5	RR2Y	3	
	Armor 61-R14	6.1	RR2Y	3	
	Armor 67-R90	6.7	RR2Y	3	
	+Armor AX4430	4.3	RR2Y	3	
	+Armor AX4440	4.4	RR2Y	3	
	+Armor AX4450	4.5	RR2Y	3	
	+Armor AX4470	4.7	RR2Y	3	
	+Armor AX4471	4.7	RR2Y	3	
	+Armor AX4480	4.8	RR2Y	3	
	+Armor AX4490	4.9	RR2Y	3	
	+Armor AX4500	5.0	RR2Y	3	
	+Armor AX4520	5.2	RR2Y	3	

+	Experimental	LL	LibertyLink® gene
RR	Roundup Ready® gene	SR	Tolerance to sulfonylurea herbicides
RR2Y	Genuity® Roundup Ready 2 Yield® gene	STS	DuPont™ STS® gene

Table 1(continued). Information on soybean entries in the 2014 North Carolina Official Variety Trials.

Brand and Sponsor	Variety	Maturity	Herbicide Tolerance Traits	Seeding Rate (*seed/ft*)	Seed Treatment
Bayer CropScience Jenny Cahoon 395 Salem Church Road Wendell, NC 27591 (252) 904-5788	HBK 4650 LL	4.6	LL	2	Poncho®/ VOTiVO
	HBK 4653 LL	4.6	LL	2	
	HBK 4850 LL	4.8	LL	2	
	HBK 4950 LL	4.9	LL	2	
	HBK 4953 LL	4.9	LL	2	
	HBK 4620 RY	4.6	RR2Y	2	
	HBK 4721 RY	4.7	RR2Y	2	
	HBK 5221 RY	5.2	RR2Y	2	
	HBK 5421 RY	5.4	RR2Y	2	
	HBK 7523 RY	7.5	RR2Y	2	
	+CZ 4748 LL	4.7	LL	2	
	+CZ 5150 LL	5.1	LL	2	
	+CZ 5242 LL	5.2	LL	2	
	+CZ 4959 RY	4.9	RR2Y	2	
Becks/Getsco Ken Miller 860 Horseshoe Road Elizabeth City, NC 27909 (252) 333-3790					Escalate™
	Beck's 522L4	5.2	LL	3	
	Beck's 444NR	4.4	RR	3	
	Beck's 511R4	5.1	RR	3	
Clemson University Ben Fallen 2200 Pocket Road Florence, SC 29506 (843) 662-3526 ext.206					-
	Dillon	6	Conventional	3	
	+SC03-9090RR	6	RR	3	
	+SC03-9151RR	6	RR	3	
Crop Production Services Rick Strecker 843 Forman Bundy Road Elizabeth City, NC 27909 (252) 339-2615	Dyna-Gro S46RY85	4.6	RR2Y	2	CruiserMaxx® Advanced
	Dyna-Gro 37RY47	4.7	RR2Y/STS	2	
	Dyna-Gro S48RS53	4.8	RR2Y/STS	2	
	Dyna-Gro S49RY25	4.9	RR2Y	2	
	Dyna-Gro S52RY75	5.2	RR2Y	2	
	Dyna-Gro S53RY23	5.3	RR2Y	2	
	Dyna-Gro 32RY55	5.5	RR2Y	2	
	Dyna-Gro S56RY84	5.6	RR2Y	2	
	Dyna-Gro 39RY57	5.7	RR2Y	2	
	Dyna-Gro S61RY93	6.1	RR2Y	2	
	Dyna-Gro S65RY73	6.5	RR2Y	2	
	Dyna-Gro 36RY68	6.8	RR2Y	2	
	Dyna-Gro S69RY34	6.9	RR2Y	2	
	Dyna-Gro S74RY15	7.4	RR2Y	2	
	Dyna-Gro 34RY75	7.5	RR2Y	2	
	Dyna-Gro S77RY85	7.7	RR2Y	2	
	Dyna-Gro S79RY05	7.9	RR2Y	2	
	+Dyna-Gro SX14847RS	4.7	RR2Y/STS	2	
	+Dyna-Gro SX14867R	6.7	RR2Y	2	
Doebler's PA Hybrids, Inc. Doug Messersmith 202 Tiadaghton Avenue Jersey Shore, PA 17740 (570) 753-3210					DPH Boost: Allegiance® Evergol Energy™ Gaucho®
	Doebler's RPM DB4415RR	4.4	RR	3	
	Doebler's RPM DB4715RR	4.7	RR	3	
	Doebler's RPM DB5215RR	5.2	RR	3	
	Doebler's RPM DB5710RR	5.7	RR	3	
	Doebler's RPM DB6012RR	6.0	RR	3	
	Doebler's RPM DB7213RR	7.2	RR	3	

+	Experimental	LL	LibertyLink® gene
RR	Roundup Ready® gene	SR	Tolerance to sulfonylurea herbicides
RR2Y	Genuity® Roundup Ready 2 Yield® gene	STS	DuPont™ STS® gene

Table 1(continued). Information on soybean entries in the 2014 North Carolina Official Variety Trials.

Brand and Sponsor	Variety	Maturity	Herbicide Tolerance Traits	Seeding Rate (*seed/ft*)	Seed Treatment
Dupont Pioneer George Stabler 59 Grief Parkway, Suite 200 Delaware, OH 43015 (803) 308-1003	P46T21R	4.6	RR	3	Apron® Gaucho®
	P48T53R	4.8	RR	3	
	P49T80R	4.9	RR	3	
	P52T50R	5.2	RR	3	
	P52T86R	5.2	RR	3	
	P53T73SR	5.3	RR/STS	3	
	P56T03R2	5.6	RR2Y/STS	3	
	P95M82	5.8	RR	3	
Meherrin Agricultural & Chemical Company Will Tankard 4020 Wake Forest Road, Suite 110 Raleigh, NC 27609 (252) 945-2508					Maximize: ApronMaxx® Senator® 600 Bio-Forge®
	SH 4715 LL	4.7	LL	3	
	SH 4913 LL	4.9	LL	3	
	SH 5215 LL	5.2	LL	3	
	SH 5515 LL	5.5	LL	3	
	SH 5614 LL/STS	5.6	LL/STS	3	
	SH 5912 LL	5.9	LL	3	
Monsanto Michael Baker 800 N Lindbergh Blvd St. Louis, MO 63167 (314) 694-1000	Asgrow AG 4730	4.7	RR2Y/SR	2.5	Acceleron®
	Asgrow AG 4934	4.9	RR2Y/SR	2.5	
	Asgrow AG 5233	5.2	RR2Y/SR	2.5	
	Asgrow AG 5535	5.5	RR2Y	2.5	
	Asgrow AG 5633	5.6	RR2Y	2.5	
	Asgrow AG 5732	5.7	RR2Y/SR	2.5	
	Asgrow AG 5831	5.8	RR2Y	2.5	
	Asgrow AG 5935	5.9	RR2Y/SR	2.5	
	Asgrow AG 6732	6.7	RR2Y	2.5	
	Asgrow AG 6834	6.8	RR2Y	2.5	
	Asgrow AG 6931	6.9	RR2Y	2.5	
	Asgrow AG 7231	7.2	RR2Y	2.5	
	Asgrow AG 7535	7.5	RR2Y	2.5	
	Asgrow AG 7934	7.9	RR2Y	2.5	
Montague Farms, Inc. Bryan Taliaferro 35212 Tidewater Center Cross, VA 22437 (804) 443-3536	MFS-561	5.6	Conventional	3	-
NC State University Department of Crop Science Campus Box 7620 Raleigh, NC 27695 (919) 515-2827	+NCC07-7506	5 early	Conventional	5	-
	+NCC09-200719-1-37	5 early	Conventional	5	
	+NCC06-1090	6	Conventional	5	
	+NCC07-8138	6	Conventional	5	
	+NCC09-135	6	Conventional	5	
	+NCC06-899	7	Conventional	5	
Progeny Ag Products Brian Murray 1529 HWY 193 Wynne, AR 72396 (888) 535-7333	Progeny 5220LLS	5.2	LL/STS	3	Poncho®/ VOTiVO Trilex® 2000
	Progeny 5460LL	5.4	LL	3	
	Progeny 5960LL	5.9	LL	3	
	Progeny 4613RYS	4.6	RR2Y/STS	3	
	Progeny 4747RY	4.7	RR2Y	3	
	Progeny 4788RY	4.7	RR2Y	3	
	Progeny 4850RYS	4.8	RR2Y/STS	3	
	Progeny 4900RY	4.9	RR2Y	3	
	Progeny 5213RY	5.2	RR2Y	3	
	Progeny 5333RY	5.3	RR2Y	3	
	Progeny 5555RY	5.5	RR2Y	3	
	Progeny 5610RY	5.6	RR2Y	3	
	Progeny 6710RY	6.7	RR2Y	3	
	Progeny 7310RY	7.3	RR2Y	3	

+	Experimental	LL	LibertyLink® gene
RR	Roundup Ready® gene	SR	Tolerance to sulfonylurea herbicides
RR2Y	Genuity® Roundup Ready 2 Yield® gene	STS	DuPont™ STS® gene

Table 1(continued). Information on soybean entries in the 2014 North Carolina Official Variety Trials.

Brand and Sponsor	Variety	Maturity	Herbicide Tolerance Traits	Seeding Rate (*seed/ft*)	Seed Treatment
Southern States Coop Jason Hinton 129 Strickland Hinton Road Zebulon, NC 27597 (804) 291-6785	LL 513N	5.1	LL	3	Acceleron® Poncho®/ VOTiVO
	LL 563N STS	5.6	LL/STS	3	
	LL 595N	5.9	LL	3	
	SS 4700 R2-STS	4.7	RR2Y/STS	3	
	SS 4714NS R2	4.7	RR2Y/STS	3	
	SS 4725NS R2	4.7	RR2Y/STS	3	
	SS 4913N R2	4.9	RR2Y	3	
	SS 4917N R2	4.9	RR2Y	3	
	SS 5213N R2	5.2	RR2Y	3	
	SS 5511N R2	5.5	RR2Y	3	
	SS 5513N R2	5.7	RR2Y	3	
	SS 5711 R2	5.7	RR2Y	3	
	SS 5911N R2	5.9	RR2Y	3	
	SS 6713N R2	6.7	RR2Y	3	
	SS 6810N R2	6.8	RR2Y	3	
	SS 7511N R2	7.5	RR2Y	3	
Coastal AgroBusiness, Inc. / Stine Seed Martin Purvis P.O. Box 856 Greenville, NC 27835 (252) 903-8299					
	Stine 49LD02	4.9	LL	3	Avicta®
	Stine 51LE20	5.1	LL	3	
	Stine 54LE23	5.4	LL	3	
	Stine 51RD02	5.1	RR2Y	3	
	Stine 61RF00	6.1	RR2Y	3	
	Stine 6202-4	6.2	RR	3	
Syngenta Seeds, Inc. Ken Teeter 2447 Matthews Road Clayton, NC 27520 (919) 989-8591	S43-K1 Brand	4.3	RR2Y	3	Avicta® Complete
	S47-K5 Brand	4.7	RR2Y	3	
	S48-P4 Brand	4.8	RR2Y/STS	3	
	S52-Y2 Brand	5.2	RR2Y	3	
	S55-Q3 Brand	5.5	RR2Y	2	
	S56-G6 Brand	5.6	RR	3	
	S59-V9 Brand	5.9	RR2Y	2	
	S67-R6 Brand	6.7	RR	3	
	S74-M3 Brand	7.4	RR2Y	3	
	S77-T7 Brand	7.7	RR2Y	3	
	S78-G6 Brand	7.8	RR	3	
	S79-B9 Brand	7.9	RR	3	
Terral Seed, Inc. Marty Hale 111 Ellington Drive Rayville, LA 71276 (318) 231-8800					
	REV® 55R53™	5.5	RR	3	CruiserMaxx®
	REV® 56A54™	5.6	RR2Y	3	
	REV® 56R63™	5.6	RR	3	
	REV® 57R21™	5.7	RR	3	
	REV® 73A74™	7.3	RR	3	

+	Experimental	LL	LibertyLink® gene
RR	Roundup Ready® gene	SR	Tolerance to sulfonylurea herbicides
RR2Y	Genuity® Roundup Ready 2 Yield® gene	STS	DuPont™ STS® gene

Table 1(continued). Information on soybean entries in the 2014 North Carolina Official Variety Trials.

Brand and Sponsor	Variety	Maturity	Herbicide Tolerance Traits	Seeding Rate (*seed/ft*)	Seed Treatment
UniSouth Genetics, Inc. Stacy Burwick 3205-C HWY 46 South Dickson, TN 37055 (931) 996-4164	USG 74G74LS	4.7	LL/STS	3	CruiserMaxx®
	USG 74G99L	4.9	LL	3	
	USG 75G24L	5.2	LL	3	
	USG 76G10L	6.1	LL	3	
	USG 74A79R	4.7	RR2Y/STS	3	
	USG 74B81R	4.8	RR2Y/STS	3	
	USG 74B94RS	4.9	RR2Y/STS	3	
	USG 75J50R	5.5	RR2Y	3	
	USG 75J62R	5.6	RR2Y	3	
	USG 75J90R	5.9	RR2Y	3	
	USG 76S22R	6.2	RR2Y	3	
	USG 76S73R	6.7	RR2Y	3	
	USG 76S90R	6.9	RR2Y	3	
	USG 77S13R	7.1	RR2Y	3	
	USG 77S40R	7.4	RR2Y	3	
	USG 77S63R	7.6	RR2Y	3	
	USG 78S04R	8.0	RR2Y	3	
University of Arkansas Tina Hart PTSC 115 Fayetteville, AR 72701 (479) 466-2213	Ozark	5.2	Conventional	3	ApronMaxx®
	UA 5213C	5.2	Conventional	3	
	Osage	5.6	Conventional	3	
	UA 5612C	5.6	Conventional	3	
	+R05-374	5.1	Conventional	3	
	+R04-1268RR	5.4	RR	3	
	+R04-1250RR	5.5	RR	3	
University of Missouri Michael Clubb 147 State Hwy; P.O. Box 160 Portageville, MO 63873 (573) 379-5431					-
	Jake	5	Conventional	3	
	+S09-6262	4.8	Conventional	3	
	+S11-20356	4.9	Conventional	3	
University of Tennessee Vince Pantalone 2431 Joe Johnson Dr, Rm 252 Knoxville, TN 37996 (865) 974-8801	Ellis	4.9	Conventional	3	CruiserMaxx® Vibrance®
USDA-ARS Lisa Fritz 605 Airways Blvd Jackson, TN 38301 (731) 425-4736					ApronMaxx® RTA Molybdenum
	Fowler - USDA &Tennessee	5	Conventional	3	
	JTN-5203	5.3	Conventional	3	
	JTN-5303	5.4	Conventional	3	
	JTN-5503	5.5	Conventional	3	
	+JTN-5110	5.5	Conventional	3	

+	Experimental	LL	LibertyLink® gene
RR	Roundup Ready® gene	SR	Tolerance to sulfonylurea herbicides
RR2Y	Genuity® Roundup Ready 2 Yield® gene	STS	DuPont™ STS® gene

Table 1(continued). Information on soybean entries in the 2014 North Carolina Official Variety Trials.

Brand and Sponsor	Variety	Maturity	Herbicide Tolerance Traits	Seeding Rate (*seed/ft*)	Seed Treatment
USDA-ARS Tommy Carter 3127 Ligon Street Raleigh, NC 27607 (919) 513-1480	NC Miller - USDA & North Carolina	5	Conventional	5	-
	NC Roy -USDA & North Carolina	6	Conventional	5	
	NC Raleigh - USDA & North Carolina	7	Conventional	5	
	N7003CN - USDA	7	Conventional	5	
	N8001 - USDA & North Carolina	7	Conventional	5	
	+N02-7002	5 early	Conventional	5	
	+N07-14221	5 late	Conventional	5	
	+N09-12854	6	Conventional	5	
	+N11-9298	6	Conventional	5	
	+N08-174	6	Conventional	5	
	+N08-145	6	Conventional	5	
	+N07-187	6	Conventional	5	
	+N05-7462	7	Conventional	5	
	+N09-12455	7	Conventional	5	
	+TCWN05/06-5068	7	Conventional	5	
	+TCWN05/06-5111	7	Conventional	5	
	+TCWN05/06-5231	7	Conventional	5	
	+N05-316	7	Conventional	5	
	+N08-391	7	Conventional	5	
	+N05-7432	8	Conventional	5	
Virginia Tech University Robin Markham 2229 Menokin Road Warsaw, VA 22572 (804) 333-3485	Hutcheson	5	Conventional	5	-

+	Experimental	LL	LibertyLink® gene
RR	Roundup Ready® gene	SR	Tolerance to sulfonylurea herbicides
RR2Y	Genuity® Roundup Ready 2 Yield® gene	STS	DuPont™ STS® gene

Table 2. Cultural practices for North Carolina soybean variety trials, 2014.

County	Fertilizer *Rate / Acre Grade*	Soil Type	Planting Date	Harvest Date
FULL SEASON TESTS				
Beaufort	300 lb 9 - 23 - 30	Arapahoe fine sandy loam	20-May	MG 4 & 5E: 23-Oct MG 5L & 6: 5-Nov
Columbus	200 lb DAP	Grifton fine sandy loam	19-May	31-Oct
Lenoir	800 lb 0 - 0 - 50	Goldsboro loamy sand	22-May	MG 4 & 5: 27-Oct MG 6 - 8: 20-Nov
Robeson	200 lb 0 - 0 - 60	Rains sandy loam	14-May	12-Nov
Washington		Portsmouth fine sandy loam	21-May	MG 4 & 5E: 23-Oct MG 5L - 8: 21-Nov
LATE PLANTED TESTS				
Beaufort	300 lb 9 - 23 - 30	Arapahoe fine sandy loam	24-Jun	5-Nov
Lenoir	190 lb 0-0-41 11%S 1/2 lb Mn	Rains sandy loam	1-Jul	20-Nov
Rowan	250 lb 10 - 20 - 20	Davidson clay loam	3-Jul	13-Nov
Union		Badin channery silty clay loam	2-Jul	19-Nov
Washington		Portsmouth fine sandy loam	25-Jun	22-Nov

Table 3. Soil test results for soybean sites in the North Carolina Official Variety Trials, 2014.

County	HM %	W-V	CEC	BS	Ac	pH	P-I	K-I	Ca %	Mg %	Mn-I	Zn-I	Cu-I
Early Planted													
Beaufort	1.49	0.94	13.1	85	2.0	5.6	89	103	58.0	18.0	51	151	64
Columbus	6.2	0.77	9.0	57	3.9	5.4	54	123	42.0	8.0	34	54	30
Lenoir	1.02	1.28	4.8	69	1.5	5.6	126	104	46.0	12.0	49	59	53
Robeson	1.67	1.13	7.0	79	1.4	6.0	72	77	57.0	17.0	36	122	73
Washington	4.81	0.91	7.9	59	3.3	5.2	53	43	40.0	16.0	17	15	26
Late Planted													
Beaufort	1.49	0.94	13.1	85	2.0	5.6	89	103	58.0	18.0	51	151	64
Lenoir	4.69	1.12	7.2	55	3.2	4.8	102	94	41.0	8.0	71	174	97
Rowan	0.22	1.00	6.8	82	1.2	6.2	14	44	53.0	25.0	1175	67	158
Union	0.41	0.91	11.6	88	1.4	6.1	64	56	69.0	17.0	144	234	382
Washington	4.69	1.01	10.4	67	3.5	5.2	50	63	45.0	19.0	27	40	36

Table 4. North Carolina Official Variety Testing - Soybean Multiple Year Performance
Combined over locations across North Carolina

LIBERTY LINK and CONVENTIONAL - Maturity Group 4 - FULL SEASON

Brand / Variety or Variety	Yield *bu / ac*	Lodging *scale = 1 - 5*	Plant Height *inches*
	TWO YEAR MEAN - 2013, 2014		
Stine 49LD02	75.2 **	1.1	39.0
HBK 4953 LL	71.8 *	1.0	37.5
Asgrow AG 4730 □	68.3	1.3	38.3
HBK 4950 LL	68.1	1.3	40.3
HALO 4:94	67.0	1.0	40.8
HALO 4:97	63.9	1.7	43.5
HBK 4850 LL	61.5	1.4	37.0
HALO 4:95	61.2	1.8	35.5
HBK 4653 LL	55.5	1.3	33.8
HBK 4650 LL	54.1	1.5	33.8
MEAN	**64.7**	**1.3**	**37.9**
SEM	2.0		
LSD (p=0.10)	4.7		
df LSD	27		

□ Roundup Ready check variety

**Highest yielder. *Not significantly different from highest yielder.

SEM - standard error of variety mean across environments

LSD - smallest difference between variety means considered different, across environments

Two year data = 4 enviornments

Table 5. North Carolina Official Variety Testing - Soybean 2014

LIBERTY LINK and CONVENTIONAL - Maturity Group 4 - FULL SEASON

Statewide performance

Brand / Variety or Variety	Yield *bu/ac*		Lodge *scale = 1 - 5*	Plant Ht *inches*
Stine 49LD02	**77.7**	**	1.1	41.0
Ellis	**76.8**	*	1.2	36.0
SH 4913 LL	**74.4**	*	1.3	39.0
HBK 4953 LL	**74.0**	*	1.0	42.0
HALO 4:94	**72.7**	*	1.0	45.5
USG 74G99L	**71.8**	*	1.3	43.0
HBK 4950 LL	**71.7**	*	1.3	43.0
HALO 4:40	**70.9**		1.5	37.0
Asgrow AG 4730 □	70.4		1.5	40.5
HALO 4:76	70.3		1.3	38.5
+HALO X449	69.2		1.9	44.0
+Armor X47C	68.8		1.6	37.0
+Armor X48C	68.7		2.2	43.0
+S11-20356	68.6		1.7	37.0
+Armor X49C	68.3		2.3	43.0
HALO 4:97	68.0		2.0	48.0
HALO 4:95	67.2		2.0	42.5
USG 74G74LS	67.0		2.0	47.0
Armor 49-C3	66.9		2.5	37.5
HBK 4721 RY □	66.2		1.9	38.0
+HALO X448	65.6		1.9	41.0
HBK 4850 LL	63.7		1.4	39.0
SH 4715 LL	62.9		1.4	38.0
HBK 4653 LL	62.5		1.6	37.0
+Armor X447C	61.4		2.9	42.0
+S09-6262	61.1		2.8	45.5
+CZ 4748 LL	60.2		1.1	36.5
HBK 4650 LL	59.0		1.7	35.5
+HALO X440	58.8		2.1	37.0
MEAN	**67.7**		**1.7**	**40.5**
SEM	2.7			
LSD (p=0.10)	6.5			
df LSD	28			

+ Experimental variety

□ Roundup Ready check variety

Highest yielder. *Not significantly different from highest yielder. **BOLD entries comprise the upper quartile.

Yield Mean: weighted average of yield means from each environment, where the weight for each trial is inversely proportional to the average variance of variety yield means at that trial.

SEM: standard error of variety mean across environments

LSD: smallest difference considered different between variety means, where means are averaged across environments

Table 6. North Carolina Official Variety Testing - Soybean 2014

LIBERTY LINK and CONVENTIONAL - Maturity Group 4 - FULL SEASON

Brand / Variety or Variety	Washington	Lenoir
	Yield (bu/ac)	
+Armor X447C	56.5	66.0
+Armor X47C	68.6 *	69.1
+Armor X48C	67.4	70.0
+Armor X49C	69.1 *	67.7
Armor 49-C3	63.8	69.7
Asgrow AG 4730 □	70.2 *	70.7
+CZ 4748 LL	60.4	60.0
Ellis	72.3 *	80.9 *
HALO 4:40	70.0 *	71.7
HALO 4:76	73.4 *	67.6
HALO 4:94	73.6 **	71.9
HALO 4:95	64.9	69.3
HALO 4:97	71.9 *	64.4
+HALO X440	55.2	62.3
+HALO X448	66.0	65.3
+HALO X449	70.7 *	67.9
HBK 4650 LL	61.3	57.0
HBK 4653 LL	64.1	61.1
HBK 4721 RY □	69.7 *	63.1
HBK 4850 LL	59.5	67.6
HBK 4950 LL	68.5 *	74.7
HBK 4953 LL	72.9 *	75.0
+S09-6262	65.1	57.4
+S11-20356	63.3	73.5
SH 4715 LL	63.6	62.3
SH 4913 LL	69.6 *	78.9 *
Stine 49LD02	73.2 *	81.9 **
USG 74G74LS	66.9	67.1
USG 74G99L	71.4 *	72.2
MEAN	**67.0**	**68.5**
CV (%)	7.8	8.1
avg SEM	2.6	2.5
Trial weight	0.48	0.52
Variety F-value	3.9	7.2
Variety Pr>F	<0.001	<0.001
avg LSD (p=0.10)	6.1	5.7
df LSD	85	114

+ Experimental variety

□ Roundup Ready check variety

**Highest yielder. *Not significantly different from highest yielder.

CV: within-trial variability as a percent of mean yield for the trial

avg SEM = [average (variance of variety mean)]$^{1/2}$; based on within-trial variation, referred to as avg SEM

Trial Weight = (1 / avg SEM^2 for trial) (1 / sum over trials of [1/avg SEM^2]); all trials sum to 1

avg LSD: smallest difference considered significant between varieties within the same trial

Table 7. North Carolina Official Variety Testing - Soybean Multiple Year Performance
Combined over locations across North Carolina

LIBERTY LINK and CONVENTIONAL - Maturity Group 5 early (5.0-5.5) - FULL SEASON

Brand / Variety or Variety	Yield *bu / ac*		Lodging *scale = 1 - 5*	Plant Height *inches*
THREE YEAR MEAN - 2012, 2013, 2014				
Osage	70.3	**	1.1	38.2
+NCC07-7506	68.6	*	2.0	36.3
Fowler	68.3	*	1.8	38.5
+N02-7002	68.0	*	1.4	38.5
+JTN-5303	67.6	*	1.4	39.3
Jake	67.5	*	1.3	36.2
Ozark	66.9	*	1.6	37.0
Progeny 5460LL	65.3	*	1.1	41.3
Hutcheson	64.8	*	1.5	40.8
JTN-5503	64.7	*	2.0	37.2
JTN-5203	64.4	*	1.2	35.0
MEAN	**67.0**		**1.5**	**38.0**
SEM	1.7			
LSD (p=0.10)	NA			
df LSD	50			
TWO YEAR MEAN - 2013, 2014				
SS LL513N	72.1	**	1.0	39.3
+N02-7002	71.4	*	1.7	36.3
Osage	71.2	*	1.2	37.0
+NCC07-7506	70.1	*	2.4	33.5
Ozark	69.3	*	1.9	37.3
Fowler	69.0	*	2.0	38.5
HALO 5:26	68.9	*	1.4	41.5
HALO 5:01	67.8	*	1.3	43.3
+JTN-5303	67.3	*	1.4	38.5
Jake	66.8	*	1.4	35.8
HALO 5:45	66.6	*	1.1	38.0
Progeny 5460LL	66.6	*	1.2	41.3
JTN-5503	65.6	*	2.0	36.8
+JTN-5110	65.6	*	1.3	37.0
UA 5213C	65.5	*	2.2	35.5
Stine 54LE23	65.1	*	2.1	43.3
Hutcheson	64.7	*	1.7	40.8
JTN-5203	64.5	*	1.3	34.8
MEAN	**67.7**		**1.6**	**38.2**
SEM	2.3			
LSD (p=0.10)	NA			
df LSD	51			

+Experimental

**Highest yielder. *Not significantly different from highest yielder.

SEM - standard error of variety mean across environments

LSD - smallest difference between variety means considered different, across environments

NA: not appropriate under the Protected LSD at significance level = 0.1

Three year data = 6 environments; Two year data = 4 enviornments

Table 8. North Carolina Official Variety Testing - Soybean 2014

LIBERTY LINK and CONVENTIONAL - Maturity Group 5 early (5.0-5.5)

Statewide performance - FULL SEASON

Brand / Variety *or Variety*	Yield *bu/ac*	Lodge *scale = 1 - 5*	Plant Ht *inches*
Beck's 522L4	**77.2 ****	1.1	41.0
SS LL513N	**76.5 ***	1.0	44.0
+HALO X451	**75.6 ***	1.2	40.5
Ellis	**75.0 ***	1.1	35.5
SH 5215 LL	**75.0 ***	1.2	45.0
NC Miller	**74.7 ***	1.6	38.5
Armor 55-R22 □	**74.1 ***	1.5	39.0
+NCC07-7506	**73.6 ***	2.8	36.0
Progeny 5460LL	**73.6 ***	1.2	45.5
+N02-7002	73.5 *	1.8	37.0
Osage	73.1 *	1.4	38.0
SH 5515 LL	72.4 *	1.2	42.0
JTN-5203	71.3 *	1.4	35.5
Ozark	71.3 *	1.9	37.0
HALO 5:26	71.2 *	1.4	41.5
+R05-374	70.7 *	2.7	37.5
Progeny 5220LLS	70.4 *	1.3	51.5
Stine 51LE20	70.3	1.3	43.5
Fowler	70.2	2.4	38.5
+CZ 5150 LL	70.0	1.1	40.5
+NCC09-200719-1-37	69.8	2.4	38.0
+HALO X452	69.7	1.3	41.5
HALO 5:45	69.3	1.0	38.5
HALO 5:01	69.2	1.4	48.0
+JTN-5303	68.4	1.5	39.0
HALO 5:25	68.4	1.3	38.0
Jake	67.8	1.3	37.5
+CZ 5242 LL	66.9	1.7	41.5
USG 75G24L	66.8	1.3	43.0
Hutcheson	66.4	2.1	44.5
+JTN-5110	65.8	1.4	40.5
UA 5213C	65.6	3.0	35.5
JTN-5503	65.2	2.3	35.5
Stine 54LE23	64.0	2.2	47.0
Stine 51RD02 □	62.1	2.4	42.0
MEAN	**70.4**	**1.6**	**40.5**
SEM	2.9		
LSD (p=0.10)	6.8		
df LSD	34		

+ Experimental variety

□ Roundup Ready check variety

Highest yielder. *Not significantly different from highest yielder. **BOLD entries comprise the upper quartile.

Yield Mean: weighted average of yield means from each environment, where the weight for each trial is inversely proportional to the average variance of variety yield means at that trial.

SEM: standard error of variety mean across environments

LSD: smallest difference considered different between variety means, where means are averaged across environments

Table 9. North Carolina Official Variety Testing - Soybean 2014

LIBERTY LINK and CONVENTIONAL - Maturity Group 5 early (5.0-5.5) - FULL SEASON

Brand / Variety or Variety	Washington	Lenoir
	Yield (bu/ac)	
Armor 55-R22 □	62.4	82.0 *
Beck's 522L4	69.1 *	83.1 **
+CZ 5150 LL	60.6	76.7
+CZ 5242 LL	69.0 *	67.4
Ellis	68.4 *	80.3
Fowler	70.1 *	71.9
HALO 5:01	59.9	75.9
HALO 5:25	61.6	73.6
HALO 5:26	65.1	76.1
HALO 5:45	62.2	74.7
+HALO X451	73.0 **	78.6 *
+HALO X452	71.7 *	70.2
Hutcheson	66.0	68.3
Jake	66.2	70.3
+JTN-5110	65.9	67.5
+JTN-5303	63.7	72.5
JTN-5203	68.6 *	74.4
JTN-5503	57.0	71.3
+N02-7002	64.3	80.1 *
+NCC07-7506	70.2 *	77.1
+NCC09-200719-1-37	70.1 *	71.3
NC Miller	68.3 *	79.8 *
Osage	72.6 *	75.0
Ozark	69.6 *	73.8
Progeny 5220LLS	67.7 *	73.4
Progeny 5460LL	70.6 *	76.8
+R05-374	67.1 *	74.2
SH 5215 LL	72.2 *	78.2
SH 5515 LL	71.8 *	74.4
SS LL513N	69.0 *	82.3 *
Stine 51LE20	69.3 *	72.4
Stine 51RD02 □	64.5	62.4
Stine 54LE23	62.5	66.4
UA 5213C	60.9	69.8
USG 75G24L	70.4 *	66.4
MEAN	**66.9**	**74.0**
CV (%)	9.4	6.3
avg SEM	2.8	2.1
Trial weight	0.40	0.60
Variety F-value	2.6	5.7
Variety Pr>F	<0.001	<0.001
avg LSD (p=0.10)	6.3	4.7
df LSD	138	138

+ Experimental variety

□ Roundup Ready check variety

**Highest yielder. *Not significantly different from highest yielder.

CV: within-trial variability as a percent of mean yield for the trial

avg SEM = [average (variance of variety mean)]$^{1/2}$; based on within-trial variation, referred to as avg SEM

Trial Weight = (1 / avg SEM^2 for trial) (1 / sum over trials of [1/avg SEM^2]); all trials sum to 1

avg LSD: smallest difference considered significant between varieties within the same trial

Table 10. North Carolina Official Variety Testing - Soybean Multiple Year Performance
Combined over locations across North Carolina

LIBERTY LINK and CONVENTIONAL - Maturity Group 5 early (5.0-5.5) - LATE PLANT

Brand / Variety or Variety	Yield *bu / ac*		Lodging *scale = 1 - 5*	Plant Height *inches*
THREE YEAR MEAN - 2012, 2013, 2014				
Ozark	57.7	**	1.2	33.3
Osage	57.1	*	1.1	34.0
+N02-7002	55.8	*	1.2	36.3
Jake	55.3	*	1.3	34.3
JTN-5203	55.3	*	1.0	34.8
+NCC07-7506	55.1	*	1.6	34.0
Progeny 5460LL	53.0	*	1.0	32.5
+JTN-5303	52.3	*	1.9	35.5
Fowler	51.4		1.6	35.5
JTN-5503	49.6		2.2	36.5
Hutcheson	46.0		1.4	33.3
MEAN	**53.5**		**1.4**	**34.5**
SEM	2.5			
LSD (p=0.10)	5.8			
df LSD	30			
TWO YEAR MEAN - 2013, 2014				
Stine 54LE23	56.3	**	1.0	37.0
+JTN-5110	55.6	*	1.4	35.3
Ozark	55.3	*	1.2	31.3
SS LL513N	55.3	*	1.0	29.0
HALO 5:45	55.0	*	1.0	32.3
UA 5213C	54.7	*	1.5	31.0
Progeny 5460LL	54.4	*	1.0	32.0
+N02-7002	54.4	*	1.2	34.0
HALO 5:01	54.3	*	1.0	34.3
Osage	53.9	*	1.1	33.0
HALO 5:26	53.9	*	1.2	33.7
+NCC07-7506	53.8	*	1.7	33.3
+JTN-5303	53.1	*	1.8	34.3
Jake	53.0	*	1.2	33.0
Fowler	51.2	*	1.8	33.0
JTN-5203	50.8	*	1.0	32.3
JTN-5503	50.6	*	2.1	35.0
Hutcheson	42.6	*	1.4	31.3
MEAN	**53.2**		**1.3**	**33.1**
SEM	**2.9**			
LSD (p=0.10)	NA			
df LSD	34			

+Experimental

**Highest yielder. *Not significantly different from highest yielder.

SEM - standard error of variety mean across environments

LSD - smallest difference between variety means considered different, across environments

NA: not appropriate under the Protected LSD at significance level = 0.1

Three year data = 4 environments; Two year data = 3 enviornments

Table 11. North Carolina Official Variety Testing - Soybean Multiple Year Performance
Combined over locations across North Carolina

LIBERTY LINK and CONVENTIONAL - Maturity Group 5 late (>5.5) - FULL SEASON

Brand / Variety or Variety	Yield *bu / ac*		Lodging *scale = 1 - 5*	Plant Height *inches*
THREE YEAR MEAN - 2012, 2013, 2014				
Osage	69.0	**	1.4	38.0
NC Miller	67.9	*	1.4	38.8
UA 5612C	67.8	*	2.4	37.6
Jake	66.5	*	1.7	39.0
Fowler	65.3	*	2.0	39.6
SS LL595N	64.1	*	1.1	39.0
SH 5912LL	63.2		1.2	42.6
Hutcheson	61.5		2.2	40.4
Progeny 5960LL	61.0		1.2	41.0
MEAN	65.1		1.6	39.6
SEM	2.1			
LSD (p=0.10)	4.9			
df LSD	32			
TWO YEAR MEAN - 2013, 2014				
NC Miller	70.6	**	1.5	37.8
UA 5612C	69.6	*	2.3	35.8
Osage	68.7	*	1.5	37.3
Jake	66.5	*	1.7	38.0
Fowler	66.3	*	2.0	38.0
SS LL595N	64.9	*	1.1	37.5
SS LL563N STS	64.8	*	1.7	48.0
SH 5614LL/STS	64.4	*	1.7	50.8
SH 5912LL	63.5	*	1.0	40.8
Progeny 5960LL	62.2	*	1.2	39.5
Hutcheson	61.6	*	2.2	39.0
MEAN	**65.7**		**1.6**	**40.2**
SEM	2.3			
LSD (p=0.10)	NA			
df LSD	30			

**Highest yielder. *Not significantly different from highest yielder.
SEM - standard error of variety mean across environments
LSD - smallest difference between variety means considered different, across environments
NA: not appropriate under the Protected LSD at significance level = 0.1
Three year data = 5 environments; Two year data = 4 enviornments

Table 12. North Carolina Official Variety Testing - Soybean 2014

LIBERTY LINK and CONVENTIONAL - Maturity Group 5 late (>5.5)

Statewide performance - FULL SEASON

Brand / Variety or Variety	Yield *bu/ac*	Lodge *scale = 1 - 5*	Plant Ht *inches*
+N07-14221	**76.1 ****	2.5	38.5
SS 5911N R2 □	**73.1 ***	1.2	41.5
NC Miller	**72.4 ***	2.0	40.5
Osage	**72.3 ***	1.7	40.0
Progeny 5610RY □	**70.9 ***	1.1	36.0
UA 5612C	68.4 *	2.8	38.0
Ellis	68.3 *	1.1	35.0
SS LL563N STS	66.2	1.9	55.5
MFS-561	65.8	1.0	38.0
Jake	65.3	1.9	40.5
SS LL595N	64.6	1.0	40.0
Fowler	64.0	2.4	40.0
SH 5614LL/STS	63.4	1.8	56.5
JTN-5503	62.3	2.7	36.0
SH 5912LL	62.2	1.0	44.5
Progeny 5960LL	61.5	1.4	39.0
Hutcheson	60.1	2.9	40.5
JTN-5203	60.0	2.2	36.5
MEAN	**66.5**	**1.8**	**40.9**
SEM	3.2		
LSD (p=0.10)	7.9		
df LSD	17		

+ Experimental variety

□ Roundup Ready check variety

Highest yielder. *Not significantly different from highest yielder. **BOLD entries comprise the upper quartile.

Yield Mean: weighted average of yield means from each environment, where the weight for each trial is inversely proportional to the average variance of variety yield means at that trial.

SEM: standard error of variety mean across environments

LSD: smallest difference considered different between variety means, where means are averaged across environments

Table 13. North Carolina Official Variety Testing - Soybean 2014

LIBERTY LINK and CONVENTIONAL - Maturity Group 5 late (>5.5) - FULL SEASON

Brand / Variety or Variety	Washington		Lenoir	
	---------- *Yield (bu/ac)*		----------	
Ellis	63.8		72.2	
Fowler	60.0		67.7	
Hutcheson	48.7		67.4	
Jake	64.2		67.6	
JTN-5503	59.5		65.4	
JTN-5203	51.1		66.0	
MFS-561	62.7		68.9	
NC Miller	66.7		76.9	
+N07-14221	68.4		81.5	**
Osage	78.3	**	71.1	
Progeny 5610RY □	74.6	*	70.8	
Progeny 5960LL	60.0		63.9	
SS 5911N R2 □	73.4	*	74.6	
SS LL563N STS	68.7		66.7	
SH 5614LL/STS	62.6		65.6	
SS LL595N	57.2		69.9	
SH 5912LL	55.3		67.3	
UA 5612C	61.9		73.2	
MEAN	**63.2**		**69.8**	
CV (%)	10.9		6.8	
avg SEM	3.1		2.1	
Trial weight	0.33		0.67	
Variety F-value	7.7		4.5	
Variety Pr>F	<0.001		<0.001	
avg LSD (p=0.10)	7.2		5.1	
df LSD	70		70	

+ Experimental variety

□ Roundup Ready check variety

**Highest yielder. *Not significantly different from highest yielder.

CV: within-trial variability as a percent of mean yield for the trial

avg SEM = [average (variance of variety mean)]$^{1/2}$; based on within-trial variation, referred to as avg SEM

Trial Weight = (1 / avg SEM^2 for trial) (1 / sum over trials of [1/avg SEM^2]); all trials sum to 1

avg LSD: smallest difference considered significant between varieties within the same trial

Table 14. North Carolina Official Variety Testing - Soybean Multiple Year Performance
Combined over locations across North Carolina

LIBERTY LINK and CONVENTIONAL - Maturity Group 6 - FULL SEASON

Brand / Variety or Variety	Yield *bu / ac*		Lodging *scale = 1 - 5*	Plant Height *inches*
	TWO YEAR MEAN - 2013, 2014			
+N08-145	74.0	**	2.1	36.0
+NCC07-8138	72.0	*	1.3	37.3
+N07-187	71.5	*	2.4	41.0
NC Roy	68.3	*	2.4	36.8
+NCC06-1090	64.5	*	1.6	36.5
USG 76G10L	62.0	*	1.6	39.8
MEAN	**68.7**		**1.9**	**37.9**
SEM	4.5			
LSD (p=0.10)	NA			
df LSD	15			

+Experimental

**Highest yielder. *Not significantly different from highest yielder.

SEM - standard error of variety mean across environments

LSD - smallest difference between variety means considered different, across environments

NA: not appropriate under the Protected LSD at significance level = 0.1

Two year data = 4 enviornments

Table 15. North Carolina Official Variety Testing - Soybean 2014

LIBERTY LINK and CONVENTIONAL - Maturity Group 6

Statewide performance - FULL SEASON

Brand / Variety or Variety	Yield *bu/ac*		Lodge *scale = 1 - 5*	Plant Ht *inches*
+NCC06-1090	**80.2**	**	1.9	39.0
+NCC09-135	**77.7**	*	2.2	40.5
+N08-145	**75.4**	*	2.4	37.5
+NCC07-8138	74.4	*	1.1	41.5
+N07-187	73.1	*	2.8	43.5
+N08-174	73.1	*	1.9	37.0
USG 76S22R □	72.6	*	1.6	44.5
Dillon	72.4	*	1.7	40.5
+N11-9298	67.5		1.9	42.5
NC Roy	66.2		2.7	39.0
Dyna-Gro S61RY93 □	65.9		1.7	43.5
USG 76G10L	65.4		1.9	40.5
+N09-12854	61.0		2.6	40.0
MEAN	**71.1**		**2.0**	**40.7**
SEM	3.3			
LSD (p=0.10)	8.1			
df LSD	12			

+ Experimental variety

□ Roundup Ready check variety

Highest yielder. *Not significantly different from highest yielder. **BOLD entries comprise the upper quartile.

Yield Mean: weighted average of yield means from each environment, where the weight for each trial is inversely proportional to the average variance of variety yield means at that trial.

SEM: standard error of variety mean across environments

LSD: smallest difference considered different between variety means, where means are averaged across environments

Table 16. North Carolina Official Variety Testing - Soybean 2014

LIBERTY LINK and CONVENTIONAL - Maturity Group 6 - FULL SEASON

Brand / Variety or Variety	Washington	Lenoir
	---------- *Yield (bu/ac)* ----------	
Dyna-Gro S61RY93 □	68.4 *	67.2
Dillon	60.4 *	79.7
NC Roy	67.3 *	68.2
+NCC09-135	73.6 **	81.9 *
+N08-174	73.1 *	75.5
+N07-187	71.2 *	76.3
+NCC06-1090	69.8 *	86.8 **
+NCC07-8138	69.5 *	78.8
+N08-145	63.4 *	82.8 *
+N09-12854	60.1 *	63.8
+N11-9298	59.9 *	73.1
USG 76S22R □	69.2 *	76.3
USG 76G10L	66.0 *	67.5
MEAN	**67.1**	**75.2**
CV (%)	11.9	7.6
avg SEM	4.0	2.6
Trial weight	0.29	0.71
Variety F-value	NS	7.4
Variety Pr>F	NS	<0.001
avg LSD (p=0.10)	NA	6.1
df LSD	36	48

+ Experimental variety

□ Roundup Ready check variety

**Highest yielder. *Not significantly different from highest yielder.

CV: within-trial variability as a percent of mean yield for the trial

avg SEM = [average (variance of variety mean)]$^{1/2}$; based on within-trial variation, referred to as avg SEM

Trial Weight = (1 / avg SEM^2 for trial) (1 / sum over trials of [1/avg SEM^2]); all trials sum to 1

avg LSD: smallest difference considered significant between varieties within the same trial

NS: not statistically significant at p=0.1

NA: not appropriate under the Protected LSD at significance level = 0.1

Table 17. North Carolina Official Variety Testing - Soybean Multiple Year Performance
Combined over locations across North Carolina

LIBERTY LINK and CONVENTIONAL - Maturity Group 7 - FULL SEASON

Brand / Variety or Variety	Yield *bu / ac*		Lodging *scale = 1 - 5*	Plant Height *inches*
THREE YEAR MEAN - 2012, 2013, 2014				
N 7003CN	68.2	**	1.9	39.3
+N05-7462	64.3	*	2.4	41.3
AGS Woodruff	63.5	*	1.8	42.5
+NCC06-899	62.3	*	2.4	40.8
+N05-7432	62.2	*	2.3	42.7
N8001	62.0	*	2.1	41.2
MEAN	**63.7**		**2.1**	**41.3**
SEM	2.2			
LSD (p=0.10)	NA			
df LSD	25			
TWO YEAR MEAN - 2013, 2014				
N 7003CN	69.6	**	1.8	36.5
+N08-391	69.6	*	1.7	36.3
AGS Woodruff	65.4	*	1.7	40.5
+N05-7462	64.0	*	2.3	39.0
N8001	62.2		1.9	38.8
+N05-7432	61.7		2.3	41.5
NC Raleigh	61.4		2.3	39.3
+NCC06-899	57.5		2.3	39.0
MEAN	**63.9**		**2.0**	**38.8**
SEM	2.5			
LSD (p=0.10)	6.1			
df LSD	21			

+Experimental
**Highest yielder. *Not significantly different from highest yielder.
SEM - standard error of variety mean across environments
LSD - smallest difference between variety means considered different, across environments
NA: not appropriate under the Protected LSD at significance level = 0.1
Three year data = 6 environments; Two year data = 4 enviornments

Table 18. North Carolina Official Variety Testing - Soybean 2014

LIBERTY LINK and CONVENTIONAL - Maturity Group 7-8

Statewide performance - FULL SEASON

Brand / Variety or Variety	Yield *bu/ac*		Lodge *scale = 1 - 5*	Plant Ht *inches*
Asgrow AG 7231 □	**75.0**	**	1.2	41.5
+N08-391	**73.3**	*	2.1	37.5
S74-M3 Brand □	**72.4**	*	1.0	42.0
+N05-316	**71.5**	*	1.8	41.5
+N05-7432	69.4		2.7	42.5
N 7003CN	69.2		2.0	39.0
+TCWN05/06-5068	68.7		1.5	43.0
N8001	68.6		2.1	41.5
+TCWN05/06-5111	68.5		2.0	48.5
+N05-7462	64.5		2.7	43.0
+NCC06-899	63.8		2.5	40.5
AGS Woodruff	63.2		1.8	40.5
NC Raleigh	63.2		2.4	41.5
+N09-12455	62.3		1.9	39.5
+TCWN05/06-5231	60.7		2.1	43.0
MEAN	**67.6**		**2.0**	**41.7**
SEM	1.8			
LSD (p=0.10)	4.4			
df LSD	14			

+ Experimental variety

□ Roundup Ready check variety

Highest yielder. *Not significantly different from highest yielder. **BOLD entries comprise the upper quartile.

Yield Mean: weighted average of yield means from each environment, where the weight for each trial is inversely proportional to the average variance of variety yield means at that trial.

SEM: standard error of variety mean across environments

LSD: smallest difference considered different between variety means, where means are averaged across environments

Table 19. North Carolina Official Variety Testing - Soybean 2014

LIBERTY LINK and CONVENTIONAL - Maturity Groups 7-8 - FULL SEASON

Brand / Variety or Variety	Washington	Lenoir
	---------- *Yield (bu/ac)* ----------	
Asgrow AG 7231 □	65.2 *	82.5 **
AGS Woodruff	56.0 *	69.9
N 7003CN	59.6 *	76.6
N8001	57.2 *	76.6
+N05-316	69.3 **	76.8
+N05-7432	61.6 *	76.3
+N05-7462	58.4 *	70.9
+N08-391	66.3 *	80.0 *
+N09-12455	58.5 *	68.0
+NCC06-899	64.6 *	68.1
NC Raleigh	58.8 *	69.1
S74-M3 Brand □	68.3 *	78.3 *
+TCWN05/06-5068	60.6 *	75.7
+TCWN05/06-5111	59.5 *	75.7
+TCWN05/06-5231	52.5 *	67.7
MEAN	**61.1**	**74.2**
CV (%)	14.7	6.6
avg SEM	4.0	2.2
Trial weight	0.23	0.77
Variety F-value	NS	4.8
Variety Pr>F	NS	<0.001
avg LSD (p=0.10)	NA	5.1
df LSD	58	56

+ Experimental variety

□ Roundup Ready check variety

**Highest yielder. *Not significantly different from highest yielder.

CV: within-trial variability as a percent of mean yield for the trial

avg SEM = [average (variance of variety mean)]$^{1/2}$; based on within-trial variation, referred to as avg SEM

Trial Weight = (1 / avg SEM^2 for trial) (1 / sum over trials of [1/avg SEM^2]); all trials sum to 1

avg LSD: smallest difference considered significant between varieties within the same trial

NS: not statistically significant at p=0.1

NA: not appropriate under the Protected LSD at significance level = 0.1

Table 20. North Carolina Official Variety Testing - Soybean Multiple Year Performance
Combined over locations across North Carolina
ROUNDUP READY - Maturity Group 4 - FULL SEASON

Brand / Variety or Variety	Yield *bu / ac*		Lodging *scale = 1 - 5*	Plant Height *inches*
THREE YEAR MEAN - 2012, 2013, 2014				
Progeny 4850 RYS	67.2	**	1.3	41.1
HBK 4721 RY	64.6	*	1.4	42.2
Dyna-Gro S48RS53	64.2		1.2	40.8
Progeny 4900 RY	63.5		1.1	37.3
SS 4917N R2	62.5		1.2	39.0
S48-P4 Brand	62.2		1.4	44.8
Asgrow AG 4730	62.2		1.2	40.0
Dyna-Gro 37RY47	61.0		1.1	38.3
Progeny 4747 RY	59.0		1.2	38.5
HBK 4620 RY	58.5		1.2	37.5
MEAN	**62.5**		**1.2**	**40.0**
SEM	1.2			
LSD (p=0.10)	2.9			
df LSD	108			
TWO YEAR MEAN - 2013, 2014				
Pioneer P49T80R	68.9	**	1.6	35.9
Pioneer P48T53R	66.7	*	1.3	34.0
Progeny 4850 RYS	65.0	*	1.5	41.1
SS 4725NS R2	64.7		1.5	40.9
SS 4917N R2	61.6		1.4	38.3
Progeny 4900 RY	61.6		1.1	36.1
Dyna-Gro S48RS53	61.3		1.4	39.9
HBK 4721 RY	61.1		1.6	40.6
Asgrow AG 4934	60.9		1.3	42.3
SS 4913N R2	60.6		1.5	38.4
S48-P4 Brand	60.5		1.6	45.0
SS 4700 R2-STS	59.7		1.3	38.8
Asgrow AG 4730	59.2		1.4	40.0
Progeny P4613 RYS	58.5		1.8	39.5
S43-K1 Brand	57.7		1.3	35.5
Progeny 4747 RY	55.4		1.4	37.6
Dyna-Gro 37RY47	54.0		1.2	37.3
Armor 48-R66	52.4		1.3	37.3
HBK 4620 RY	49.9		1.3	36.0
MEAN	**60.0**		**1.4**	**38.6**
SEM	1.7			
LSD (p=0.10)	4.1			
df LSD	126			

**Highest yielder. *Not significantly different from highest yielder.
SEM - standard error of variety mean across environments
LSD - smallest difference between variety means considered different, across environments
Three year data = 13 environments; Two year data = 8 enviornments

Table 21. North Carolina Official Variety Testing - Soybean 2014

ROUNDUP READY - Maturity Group 4 - FULL SEASON

Statewide performance

Brand / Variety *or Variety*	Yield *bu/ac*	Lodge *scale = 1 - 5*	Plant Ht *inches*
Pioneer P48T53R	**71.1 ****	1.6	39.3
Pioneer P49T80R	**70.6 ***	2.1	40.3
Pioneer P46T21R	**68.8 ***	1.3	41.3
Doebler's RPM DB4715RR	**67.4 ***	1.8	40.0
Armor 49-R56	**66.7 ***	1.3	40.8
+Armor AX4470	**65.8 ***	1.7	43.5
Armor 46-R65	**65.3**	2.1	46.3
SS 4917N R2	**64.6**	1.7	43.0
SS 4725NS R2	**64.0**	1.8	44.5
Progeny 4900 RY	**63.9**	1.2	38.0
SS 4714NS R2	**63.5**	2.0	42.0
+Armor AX4450	63.5	2.0	44.3
Progeny 4850 RYS	63.4	1.8	43.5
+Armor AX4440	63.2	2.2	40.3
Asgrow AG 4934	63.1	1.5	45.8
Progeny 4788 RY	63.1	1.7	45.8
HBK 4721 RY	63.0	2.0	43.8
Armor 47-R13	62.7	2.1	47.5
+Armor AX4471	62.5	1.7	42.8
USG 74B81R	62.1	2.1	47.3
SS 4700 R2-STS	62.0	1.7	43.0
Dyna-Gro S48RS53	61.8	1.7	44.8
SS 4913N R2	61.7	2.0	43.8
Armor 44-R08	61.6	1.7	39.8
+CZ 4959 RY	61.4	1.3	37.3
S48-P4 Brand	60.3	1.9	50.3
S47-K5 Brand	59.9	1.3	39.0
+Armor AX4430	59.9	1.8	42.0
Armor 43-R43	59.8	1.5	38.5
Dyna-Gro S49RY25	59.8	1.6	46.0
Progeny P4613 RYS	59.6	2.2	42.0
S43-K1 Brand	59.1	1.5	37.8
+Dyna-Gro SX14847RS	59.1	1.6	39.8
Doebler's RPM DB4415RR	58.5	1.3	39.0
Progeny 4747 RY	58.3	1.7	40.5
USG 74B94RS	58.2	1.8	44.0
Asgrow AG 4730	57.6	1.7	43.0
+Armor AX4490	57.6	2.0	42.3
Dyna-Gro S46RY85	57.0	1.8	40.3
USG 74A79R	55.8	1.9	41.3
Armor 48-R66	54.1	1.7	41.0
Dyna-Gro 37RY47	53.6	1.3	40.0
Beck's 444NR	52.5	1.5	37.5
+Armor AX4480	52.0	1.7	41.0
HBK 4620 RY	50.8	1.6	39.5
MEAN	**61.1**	**1.7**	**42.1**
SEM	2.4		
LSD (p=0.10)	5.7		
df LSD	132		

\+ Experimental variety

Highest yielder. *Not significantly different from highest yielder. **BOLD entries comprise the upper quartile.

Yield Mean: weighted average of yield means from each environment, where the weight for each trial is inversely proportional to the average variance of variety yield means at that trial.

SEM: standard error of variety mean across environments

LSD: smallest difference considered different between variety means, where means are averaged across environments

Table 22. North Carolina Official Variety Testing - Soybean 2014 - ROUNDUP READY - Maturity Group 4

	FULL SEASON				LATE PLANT
Brand / Variety or Variety	Washington	Beaufort	Columbus	Lenoir	Beaufort
	----------	*Yield (bu/ac)*	----------		*Yield (bu/ac)*
+Armor AX4430	73.3	40.4	61.2	64.2	41.1
+Armor AX4440	76.6	48.5	60.8	65.9	42.1
+Armor AX4450	76.3	36.6	73.6 *	67.8	35.6
+Armor AX4470	75.8	42.4	74.0 *	71.7	39.6
+Armor AX4471	73.9	44.3	61.3	71.0	43.8
+Armor AX4480	62.2	26.6	62.2	57.8	34.6
+Armor AX4490	65.2	36.5	65.4	64.2	37.4
Armor 43-R43	71.5	43.5	65.7	57.6	35.3
Armor 44-R08	75.0	38.0	64.2	69.5	33.2
Armor 46-R65	78.6	47.9	64.4	70.1	49.2
Armor 47-R13	73.4	47.7	64.8	64.3	51.7
Armor 48-R66	59.8	29.4	66.7	62.4	33.0
Armor 49-R56	79.4 *	49.1	66.9	71.2	42.1
Asgrow AG 4730	69.2	32.8	63.4	65.7	44.0
Asgrow AG 4934	73.2	42.9	67.9	69.2	34.9
Beck's 444NR	68.9	38.9	46.5	54.4	46.6
+CZ 4959 RY	74.7	46.1	51.0	73.9	39.6
Doebler's RPM DB4415RR	75.0	42.5	51.9	63.8	40.9
Doebler's RPM DB4715RR	81.0 *	45.1	70.5 *	73.0	55.8 *
Dyna-Gro 37RY47	63.3	32.6	58.9	60.6	29.9
Dyna-Gro S46RY85	68.8	36.0	57.7	66.3	34.2
Dyna-Gro S48RS53	69.9	48.9	62.2	66.3	45.8
Dyna-Gro S49RY25	73.4	41.7	60.7	62.7	43.1
+Dyna-Gro SX14847RS	76.6	35.0	63.2	60.6	31.2
HBK 4620 RY	57.1	31.5	57.8	57.8	34.9
HBK 4721 RY	79.2 *	52.5	53.5	65.0	44.3
Pioneer P46T21R	79.2 *	49.0	70.1	77.9 *	50.5
Pioneer P48T53R	84.6 **	61.8 **	64.4	72.0	57.4 **
Pioneer P49T80R	80.2 *	52.3	69.0	81.9 **	52.4 *
Progeny 4747 RY	72.7	37.8	57.6	65.1	43.6
Progeny 4788 RY	81.5 *	48.0	57.7	63.4	48.1
Progeny 4850 RYS	76.7	45.5	61.6	69.7	47.5
Progeny 4900 RY	78.6	50.8	58.8	66.4	42.3
Progeny P4613 RYS	71.4	39.8	60.9	66.4	44.2
S43-K1 Brand	71.0	44.9	57.4	62.8	38.3
S47-K5 Brand	78.8 *	44.0	51.6	63.5	46.1
S48-P4 Brand	73.4	41.1	60.8	65.5	39.0
SS 4700 R2-STS	74.7	38.7	67.9	66.8	45.4
SS 4714NS R2	75.4	37.2	76.3 **	65.6	39.1
SS 4725NS R2	72.6	47.2	68.8	67.6	50.4
SS 4913N R2	74.3	35.6	71.7 *	65.5	41.5
SS 4917N R2	78.3	44.3	66.3	69.6	41.4
USG 74A79R	66.0	28.2	66.5	64.0	34.1
USG 74B81R	71.8	47.6	64.1	64.8	35.7
USG 74B94RS	69.5	34.8	62.4	67.2	33.1
MEAN	**73.4**	**41.9**	**62.9**	**66.3**	**41.6**
CV (%)	7.8	14.1	9.8	9.8	12.3
avg SEM	2.6	2.6	2.8	2.9	2.3
Trial weight	0.28	0.26	0.24	0.22	1
Variety F-value	5.3	8.1	6.4	3.0	8.5
Variety Pr>F	<0.001	<0.001	<0.001	<0.001	<0.001
avg LSD (p=0.10)	5.9	5.9	6.1	6.8	5.2
df LSD	178	178	178	175	178

\+ Experimental variety
**Highest yielder. *Not significantly different from highest yielder.
CV: within-trial variability as a percent of mean yield for the trial

avg SEM = [average (variance of variety mean)]$^{1/2}$; based on within-trial variation, referred to as avg SEM
Trial Weight = (1 / avg SEM^2 for trial) (1 / sum over trials of [1/avg SEM^2]); all trials sum to 1
avg LSD: smallest difference considered significant between varieties within the same trial

Table 23. North Carolina Official Variety Testing - Soybean Multiple Year Performance
Combined over locations across North Carolina

ROUNDUP READY - Maturity Group 5 early (5.0-5.5) - FULL SEASON

Brand / Variety or Variety	**Yield** *bu / ac*		**Lodging** *scale = 1 - 5*	**Plant Height** *inches*
THREE YEAR MEAN - 2012, 2013, 2014				
Dyna-Gro 32RY55	65.4	**	1.4	39.1
SS 5511N R2	65.3	*	1.4	40.5
Armor 55-R22	64.3	*	1.3	40.5
Asgrow AG 5233	60.4		1.2	38.5
HBK 5421 RY	59.9		1.5	37.2
USG 75J50R	57.6		1.3	43.9
HBK 5221 RY	56.9		2.0	43.0
*R04-1268RR	55.7		1.9	37.3
MEAN	**60.7**		**1.5**	**40.0**
SEM	1.3			
LSD (p=0.10)	3.0			
df LSD	98			
TWO YEAR MEAN - 2013, 2014				
Dyna-Gro 32RY55	65.9	**	1.3	39.4
SS 5511N R2	65.6	*	1.3	42.0
Armor 55-R22	64.6	*	1.3	39.8
Progeny P5555RY	63.6	*	1.7	41.4
SS 5513N R2	63.4	*	1.7	43.0
Progeny P5333RY	63.0	*	1.6	41.0
Armor 53-R16	61.3		1.4	39.9
S52-Y2 Brand	61.0		1.3	40.2
*R04-1250RR	59.8		1.7	40.7
USG 75J50R	58.4		1.3	44.3
Dyna-Gro S53RY23	58.2		1.4	41.2
HBK 5421 RY	58.0		1.5	37.3
Armor 50-R44	58.0		1.5	46.2
SS 5213N R2	57.5		1.5	42.4
Progeny P5213RY	56.9		1.3	43.4
HBK 5221 RY	56.3		1.9	41.3
Asgrow AG 5233	56.2		1.3	39.1
*R04-1268RR	56.2		1.9	38.0
MEAN	**60.2**		**1.5**	**41.2**
SEM	1.8			
LSD (p=0.10)	4.1			
df LSD	136			

+Experimental

**Highest yielder. *Not significantly different from highest yielder.

SEM - standard error of variety mean across environments

LSD - smallest difference between variety means considered different, across environments

Three year data = 15 environments; Two year data = 9 enviornments

Table 24. North Carolina Official Variety Testing - Soybean 2014

ROUNDUP READY - Maturity Group 5 early (5.0-5.5) - FULL SEASON

Statewide performance

Brand / Variety or Variety	Yield *bu/ac*		Lodge *scale = 1 - 5*	Plant Ht *inches*
REV 55R53	**70.6**	**	1.2	44.5
SS 5513N R2	**68.3**	*	1.6	44.5
SS 5511N R2	**68.2**	*	1.3	43.0
+Armor AX4520	**66.5**	*	2.0	45.0
Pioneer P52T50R	**66.4**	*	1.3	46.3
Progeny P5555RY	**66.2**	*	1.4	43.8
S55-Q3 Brand	**66.1**	*	1.8	41.3
Armor 55-R22	65.5	*	1.2	42.5
Dyna-Gro 32RY55	65.3	*	1.1	39.3
Beck's 511R4	64.9		1.6	43.0
Progeny P5333RY	64.1		1.5	42.3
Dyna-Gro S52RY75	64.0		1.9	40.3
Asgrow AG 5535	62.8		1.1	42.3
S52-Y2 Brand	62.8		1.5	44.3
USG 75J50R	62.1		1.4	48.8
Stine 51RD02	61.6		2.5	43.3
HBK 5421 RY	61.4		1.8	40.0
Armor 53-R16	61.0		1.5	40.5
SS 5213N R2	60.4		1.7	44.8
+R04-1250RR	60.2		1.8	42.8
Pioneer P52T86R	60.1		1.4	44.8
Doebler's RPM DB5215RR	59.6		1.1	40.5
+R04-1268RR	59.5		2.5	41.0
Dyna-Gro S53RY23	59.5		1.3	41.5
Pioneer P53T73SR	59.4		1.1	42.0
Asgrow AG 5233	59.3		1.5	41.3
+Armor AX4500	56.7		1.7	48.8
Armor 50-R44	56.2		1.9	51.8
Progeny P5213RY	55.5		1.3	47.5
HBK 5221 RY	52.3		2.3	45.8
MEAN	**62.2**		**1.6**	**43.6**
SEM	2.4			
LSD (p=0.10)	5.7			
df LSD	87			

+ Experimental variety

Highest yielder. *Not significantly different from highest yielder. **BOLD entries comprise the upper quartile.

Yield Mean: weighted average of yield means from each environment, where the weight for each trial is inversely proportional to the average variance of variety yield means at that trial.

SEM: standard error of variety mean across environments

LSD: smallest difference considered different between variety means, where means are averaged across environments

Table 25. North Carolina Official Variety Testing - Soybean 2014

ROUNDUP READY - Maturity Group 5 early (5.0-5.5) - FULL SEASON

Brand / Variety or Variety	Washington	Beaufort	Columbus	Lenoir
	----------	*Yield (bu/ac)*	----------	
+Armor AX4500	63.8	39.6	61.4	59.0
+Armor AX4520	76.4 *	49.4	66.5	76.5 *
Armor 50-R44	67.2	38.5	60.4	57.9
Armor 53-R16	72.8 *	56.4 *	59.9	66.0
Armor 55-R22	71.1 *	58.2 *	64.4	74.7 *
Asgrow AG 5233	65.8	42.9	66.8	56.3
Asgrow AG 5535	66.7	47.2	66.1	68.4
Beck's 511R4	63.3	46.4	69.5	72.1
Doebler's RPM DB5215RR	67.0	42.1	62.0	66.2
Dyna-Gro 32RY55	71.4 *	55.4 *	63.4	77.3 *
Dyna-Gro S52RY75	67.7	44.9	65.3	75.2 *
Dyna-Gro S53RY23	66.5	52.1	62.8	59.9
HBK 5221 RY	68.5 *	44.1	50.0	59.3
HBK 5421 RY	68.2 *	43.6	65.0	66.2
Pioneer P52T50R	77.1 **	46.5	68.5	73.5 *
Pioneer P52T86R	65.4	45.8	62.8	65.8
Pioneer P53T73SR	61.4	56.3 *	57.0	70.6
Progeny P5213RY	70.3 *	32.7	58.5	60.4
Progeny P5333RY	75.8 *	55.0 *	65.4	66.8
Progeny P5555RY	67.1	54.9 *	68.9	72.1
REV 55R53	65.1	40.2	78.7 **	78.6 **
+R04-1250RR	69.6 *	47.4	59.9	69.1
+R04-1268RR	66.0	40.9	62.1	66.9
S52-Y2 Brand	67.9	42.2	67.6	67.3
S55-Q3 Brand	69.3 *	60.6 *	65.8	73.9 *
SS 5213N R2	66.5	50.8	64.1	61.5
SS 5511N R2	75.0 *	60.4 *	68.4	74.7 *
SS 5513N R2	72.4 *	60.6 **	72.2	68.8
Stine 51RD02	70.8 *	52.3	66.6	58.3
USG 75J50R	53.5	43.7	73.1	60.0
MEAN	**68.3**	**48.4**	**64.8**	**67.5**
CV (%)	12.9	17.4	6.6	8.7
avg SEM	3.9	3.8	1.9	2.6
Trial weight	0.11	0.13	0.50	0.26
Variety F-value	1.5	6.2	8.8	6.8
Variety Pr>F	0.070	<0.001	<0.001	<0.001
avg LSD (p=0.10)	9.1	8.0	4.4	6.1
df LSD	118	114	118	118

\+ Experimental variety

**Highest yielder. *Not significantly different from highest yielder.

CV: within-trial variability as a percent of mean yield for the trial

avg SEM = [average (variance of variety mean)]$^{1/2}$; based on within-trial variation, referred to as avg SEM

Trial Weight = (1 / avg SEM^2 for trial) (1 / sum over trials of [1/avg SEM^2]); all trials sum to 1

avg LSD: smallest difference considered significant between varieties within the same trial

Table 26. North Carolina Official Variety Testing - Soybean Multiple Year Performance
Combined over locations across North Carolina

ROUNDUP READY - Maturity Group 5 early (5.0-5.5) - LATE PLANT

Brand / Variety or Variety	Yield *bu / ac*		Lodging *scale = 1 - 5*	Plant Height *inches*
THREE YEAR MEAN - 2012, 2013, 2014				
Armor 55-R22	56.0	**	1.0	32.3
SS 5511N R2	53.6	*	1.1	33.9
Dyna-Gro 32RY55	52.4		1.0	33.7
HBK 5421 RY	48.1		1.1	29.5
*R04-1268RR	46.9		1.2	30.5
USG 75J50R	45.0		1.0	33.2
HBK 5221 RY	44.9		1.1	57.8
Asgrow AG 5233	43.0		1.0	29.2
MEAN	**48.7**		**1.1**	**35.0**
SEM	1.6			
LSD (p=0.10)	3.6			
df LSD	63			
TWO YEAR MEAN - 2013, 2014				
Armor 55-R22	53.5	**	1.0	32.6
SS 5511N R2	53.1	*	1.1	33.1
SS 5513N R2	51.3	*	1.0	35.1
Armor 53-R16	50.9	*	1.1	33.9
Dyna-Gro 32RY55	50.4	*	1.0	33.0
Progeny P5555RY	50.0	*	1.0	37.9
Progeny P5333RY	49.1	*	1.1	32.7
SS 5213N R2	47.2		1.0	31.9
HBK 5421 RY	46.6		1.1	29.4
Armor 50-R44	45.9		1.0	31.4
*R04-1268RR	45.8		1.1	30.1
*R04-1250RR	44.1		1.1	30.4
USG 75J50R	43.8		1.0	33.6
Dyna-Gro S53RY23	42.7		1.0	33.0
HBK 5221 RY	42.5		1.1	30.0
S52-Y2 Brand	41.3		1.0	28.6
Progeny P5213RY	41.0		1.0	34.0
Asgrow AG 5233	40.3		1.0	29.4
MEAN	**46.6**		**1.0**	**32.2**
SEM	2.0			
LSD (p=0.10)	4.6			
df LSD	102			

+Experimental

**Highest yielder. *Not significantly different from highest yielder.

SEM - standard error of variety mean across environments

LSD - smallest difference between variety means considered different, across environments

Three year data = 10 environments; Two year data = 7 enviornments

Table 27. North Carolina Official Variety Testing - Soybean 2014

ROUNDUP READY - Maturity Group 5 early (5.0-5.5) - LATE PLANT

Statewide performance

Brand / Variety or Variety	Yield *bu/ac*	Lodge *scale = 1 - 5*	Plant Ht *inches*
Armor 55-R22	**62.4 ****	1.0	38.5
SS 5511N R2	**61.4 ***	1.1	37.5
+Armor AX4520	**57.3 ***	1.0	35.0
Armor 53-R16	**57.3 ***	1.1	38.3
S55-Q3 Brand	**56.3**	1.0	36.8
SS 5513N R2	**55.2**	1.0	38.0
Dyna-Gro 32RY55	**54.4**	1.0	37.8
Progeny P5333RY	53.9	1.2	35.8
+R04-1268RR	53.8	1.3	35.0
Progeny P5555RY	53.1	1.0	41.8
HBK 5421 RY	52.8	1.1	32.5
+R04-1250RR	52.5	1.1	35.3
Pioneer P52T50R	52.2	1.0	38.0
Pioneer P53T73SR	51.9	1.0	35.5
Stine 51RD02	51.6	1.2	37.3
Asgrow AG 5535	51.6	1.0	35.3
REV 55R53	50.9	1.0	38.3
USG 75J50R	50.1	1.0	39.8
Dyna-Gro S52RY75	50.0	1.0	34.5
+Armor AX4500	49.8	1.0	34.0
Armor 50-R44	49.4	1.0	35.3
SS 5213N R2	49.4	1.0	36.5
HBK 5221 RY	48.7	1.2	33.5
Pioneer P52T86R	48.1	1.0	35.8
S52-Y2 Brand	46.3	1.0	31.8
Beck's 511R4	45.3	1.0	36.5
Doebler's RPM DB5215RR	43.6	1.0	35.8
Progeny P5213RY	43.3	1.0	37.3
Dyna-Gro S53RY23	43.2	1.0	36.0
Asgrow AG 5233	43.0	1.0	31.3
MEAN	**51.3**	**1.0**	**36.1**
SEM	2.3		
LSD (p=0.10)	5.3		
df LSD	87		

\+ Experimental variety

Highest yielder. *Not significantly different from highest yielder. **BOLD entries comprise the upper quartile.

Yield Mean: weighted average of yield means from each environment, where the weight for each trial is inversely proportional to the average variance of variety yield means at that trial.

SEM: standard error of variety mean across environments

LSD: smallest difference considered different between variety means, where means are averaged across environments

Table 28. North Carolina Official Variety Testing - Soybean 2014

ROUNDUP READY - Maturity Group 5 early (5.0-5.5) - LATE PLANT

Brand / Variety or Variety	Washington	Beaufort	Lenoir	Rowan
	----------	*Yield (bu/ac)*	----------	
+Armor AX4500	58.3	49.7	62.9	27.8
+Armor AX4520	66.3 *	52.9	73.7 *	36.3
Armor 50-R44	54.8	49.2	64.1	29.1
Armor 53-R16	59.0	58.9	70.3	39.3 *
Armor 55-R22	63.7 *	66.3 **	78.0 *	42.1 **
Asgrow AG 5233	53.3	34.7	60.7	23.0
Asgrow AG 5535	53.2	49.8	70.3	33.3
Beck's 511R4	49.8	37.3	74.0 *	24.3
Doebler's RPM DB5215RR	42.8	36.3	62.6	30.6
Dyna-Gro 32RY55	61.5	60.0 *	66.4	30.3
Dyna-Gro S52RY75	52.9	50.0	67.2	30.1
Dyna-Gro S53RY23	52.4	41.1	55.4	22.4
HBK 5221 RY	59.9	46.7	52.7	30.3
HBK 5421 RY	56.5	54.9	76.4 *	27.9
Pioneer P52T50R	56.5	47.9	67.3	35.3
Pioneer P52T86R	49.6	49.5	63.7	29.3
Pioneer P53T73SR	56.4	54.8	61.1	32.9
Progeny P5213RY	52.1	38.6	56.3	24.3
Progeny P5333RY	51.0	53.8	76.9 *	36.0
Progeny P5555RY	50.2	56.3	66.6	37.3
REV 55R53	46.3	42.9	79.1 **	37.0
+R04-1250RR	54.8	54.3	62.5	35.3
+R04-1268RR	56.6	46.2	76.9 *	36.4
S52-Y2 Brand	55.1	42.5	66.5	23.2
S55-Q3 Brand	59.4	55.4	77.5 *	35.2
SS 5213N R2	58.3	49.0	67.4	25.0
SS 5511N R2	67.6 **	63.8 *	71.6 *	40.7 *
SS 5513N R2	56.1	57.9	74.0 *	34.5
Stine 51RD02	54.4	53.5	69.1	30.7
USG 75J50R	55.1	47.4	69.6	29.4
MEAN	**55.5**	**50.1**	**68.0**	**31.6**
CV (%)	10.6	12.5	10.9	14.4
avg SEM	2.6	2.8	3.3	2.3
Trial weight	0.26	0.23	0.16	0.35
Variety F-value	4.3	8.2	4.5	8.5
Variety Pr>F	<0.001	<0.001	<0.001	<0.001
avg LSD (p=0.10)	6.0	6.5	7.7	4.8
df LSD	118	118	118	88

+ Experimental variety

**Highest yielder. *Not significantly different from highest yielder.

CV: within-trial variability as a percent of mean yield for the trial

avg SEM = [average (variance of variety mean)]$^{1/2}$; based on within-trial variation, referred to as avg SEM

Trial Weight = (1 / avg SEM^2 for trial) (1 / sum over trials of [1/avg SEM^2]); all trials sum to 1

avg LSD: smallest difference considered significant between varieties within the same trial

Table 29. North Carolina Official Variety Testing - Soybean Multiple Year Performance
Combined over locations across North Carolina

ROUNDUP READY - Maturity Group 5 late (>5.5) - FULL SEASON

Brand / Variety or Variety	**Yield** *bu / ac*		**Lodging** *scale = 1 - 5*	**Plant Height** *inches*
THREE YEAR MEAN - 2012, 2013, 2014				
Dyna-Gro 39RY57	62.7	**	1.9	39.9
SS 5711 R2	61.5	*	1.9	39.1
SS 5911N R2	60.9	*	1.3	41.9
USG 75J90R	60.3	*	1.5	41.9
NK S56-G6 Brand	60.1	*	1.2	38.9
Progeny 5610RY	59.7	*	1.3	39.8
Pioneer P95M82	59.6	*	1.4	41.0
Asgrow AG 5831	58.5		1.1	37.4
USG 75J62R	53.7		1.5	46.0
MEAN	**59.7**		**1.5**	**40.7**
SEM	1.4			
LSD (p=0.10)	3.2			
df LSD	120			
TWO YEAR MEAN - 2013, 2014				
Dyna-Gro 39RY57	63.0	**	2.0	41.1
SS 5711 R2	62.3	*	2.0	39.8
USG 75J90R	59.3	*	1.3	42.5
Pioneer P95M82	58.5		1.4	40.7
Progeny 5610RY	57.6		1.2	39.5
NK S56-G6 Brand	57.6		1.2	39.6
Asgrow AG 5831	57.0		1.1	38.5
SS 5911N R2	56.6		1.3	43.3
Dyna-Gro S56RY84	56.6		1.8	41.9
USG 75J62R	51.8		1.4	44.5
Asgrow AG 5633	50.5		1.2	39.1
MEAN	**57.4**		**1.5**	**41.0**
SEM	1.9			
LSD (p=0.10)	4.5			
df LSD	90			

**Highest yielder. *Not significantly different from highest yielder.
SEM - standard error of variety mean across environments
LSD - smallest difference between variety means considered different, across environments
Three year data = 16 environments; Two year data = 10 enviornments

Table 30. North Carolina Official Variety Testing - Soybean 2014

ROUNDUP READY - Maturity Group 5 late (>5.5) - FULL SEASON

Statewide performance

Brand / Variety or Variety	Yield *bu/ac*	Lodge *scale = 1 - 5*	Plant Ht *inches*
Dyna-Gro 39RY57	**69.9 ****	2.0	43.3
SS 5711 R2	**68.7 ***	2.0	41.3
USG 75J90R	**65.3 ***	1.5	46.0
Asgrow AG 5935	**64.6 ***	1.2	43.0
Doebler's RPM DB5710RR	**64.5 ***	2.2	42.8
Pioneer P95M82	64.3 *	1.6	44.3
REV 57R21	64.1 *	2.1	43.0
Asgrow AG 5831	63.5	1.2	41.0
Pioneer P56T03R2	63.3	1.2	44.3
Progeny 5610RY	62.5	1.3	42.5
Dyna-Gro S56RY84	61.9	1.6	42.8
NK S56-G6 Brand	61.9	1.2	42.3
USG 75J62R	59.7	1.6	47.8
S59-V9 Brand	59.6	1.5	39.8
REV 56A54	59.2	2.5	46.3
Asgrow AG 5732	59.0	1.3	44.0
Asgrow AG 5633	58.6	1.5	43.3
REV 56R63	58.3	2.5	45.8
SS 5911N R2	57.6	1.5	45.8
MEAN	**62.5**	**1.6**	**43.6**
SEM	2.5		
LSD (p=0.10)	5.9		
df LSD	54		

Highest yielder. *Not significantly different from highest yielder. **BOLD entries comprise the upper quartile.

Yield Mean: weighted average of yield means from each environment, where the weight for each trial is inversely proportional to the average variance of variety yield means at that trial.

SEM: standard error of variety mean across environments

LSD: smallest difference considered different between variety means, where means are averaged across environments

Table 31. North Carolina Official Variety Testing - Soybean 2014

ROUNDUP READY - Maturity Group 5 late (>5.5) - FULL SEASON

Brand / Variety or Variety	Washington	Beaufort	Columbus	Lenoir
		Yield (bu/ac)		
Asgrow AG 5633	67.2	32.2	66.4	63.3
Asgrow AG 5732	65.6	38.1	60.8	69.5
Asgrow AG 5831	66.0	42.6	65.4	75.9 *
Asgrow AG 5935	70.0	43.8	68.0 *	73.4
Doebler's RPM DB5710RR	72.6 *	50.3	68.5 *	66.6
Dyna-Gro 39RY57	78.8 **	48.7	71.1 *	80.5 **
Dyna-Gro S56RY84	61.9	52.4 *	65.6	65.2
NK S56-G6 Brand	71.4 *	50.8 *	62.6	66.2
Pioneer P56T03R2	64.8	56.4 **	67.8	62.7
Pioneer P95M82	73.4 *	53.8 *	64.0	69.8
Progeny 5610RY	67.5	50.6 *	63.3	69.2
REV 56A54	71.5 *	43.3	58.9	66.9
REV 56R63	68.6	50.0	51.0	71.8
REV 57R21	73.8 *	50.8 *	68.3 *	64.9
S59-V9 Brand	67.9	45.0	58.7	69.1
SS 5711 R2	71.0	53.5 *	72.3 **	74.5
SS 5911N R2	72.5 *	25.7	60.3	70.5
USG 75J62R	66.4	44.5	65.5	60.7
USG 75J90R	73.9 *	54.7 *	66.0	69.7
MEAN	**69.7**	**46.7**	**64.4**	**69.0**
CV (%)	11.4	13.8	6.8	7.6
avg SEM	3.5	2.9	2.0	2.3
Trial weight	0.12	0.19	0.41	0.28
Variety F-value	1.6	11.5	7.0	4.8
Variety Pr>F	0.075	<0.001	<0.001	<0.001
avg LSD (p=0.10)	7.6	6.0	4.5	5.4
df LSD	74	74	74	74

**Highest yielder. *Not significantly different from highest yielder.

CV: within-trial variability as a percent of mean yield for the trial

avg SEM = [average (variance of variety mean)]$^{1/2}$; based on within-trial variation, referred to as avg SEM

Trial Weight = (1 / avg SEM^2 for trial) (1 / sum over trials of [1/avg SEM^2]); all trials sum to 1

avg LSD: smallest difference considered significant between varieties within the same trial

Table 32. North Carolina Official Variety Testing - Soybean Multiple Year Performance
Combined over locations across North Carolina
ROUNDUP READY - Maturity Group 5 late (>5.5) - LATE PLANT

Brand / Variety or Variety	Yield *bu / ac*		Lodging *scale = 1 - 5*	Plant Height *inches*
THREE YEAR MEAN - 2012, 2013, 2014				
USG 75J90R	52.4	**	1.1	33.6
SS 5911N R2	50.9	*	1.2	34.2
Progeny 5610RY	50.9	*	1.0	32.3
Dyna-Gro 39RY57	49.8	*	1.2	32.7
Pioneer P95M82	48.8	*	1.0	33.4
SS 5711 R2	48.6		1.1	32.8
NK S56-G6 Brand	47.0		1.1	30.5
Asgrow AG 5831	45.9		1.1	28.7
USG 75J62R	45.0		1.0	37.8
MEAN	**48.8**		**1.1**	**32.9**
SEM	1.6			
LSD (p=0.10)	3.7			
df LSD	72			
TWO YEAR MEAN - 2013, 2014				
USG 75J90R	49.3	**	1.1	33.7
Dyna-Gro 39RY57	48.6	*	1.1	31.9
SS 5911N R2	48.5	*	1.1	32.9
Progeny 5610RY	47.3	*	1.0	31.0
Pioneer P95M82	46.3	*	1.0	31.4
SS 5711 R2	46.2	*	1.1	31.3
Dyna-Gro S56RY84	45.1	*	1.0	35.6
NK S56-G6 Brand	44.4		1.0	29.3
Asgrow AG 5831	43.3		1.0	27.9
Asgrow AG 5633	41.3		1.0	29.6
USG 75J62R	39.9		1.0	35.9
MEAN	**45.5**		**1.0**	**31.8**
SEM	2.0			
LSD (p=0.10)	4.6			
df LSD	60			

**Highest yielder. *Not significantly different from highest yielder.
SEM - standard error of variety mean across environments
LSD - smallest difference between variety means considered different, across environments
Three year data = 10 environments; Two year data = 7 enviornments

Table 33. North Carolina Official Variety Testing - Soybean 2014

ROUNDUP READY - Maturity Group 5 late (>5.5) - LATE PLANT

Statewide performance

Brand / Variety or Variety	Yield *bu/ac*	Lodge *scale = 1 - 5*	Plant Ht *inches*
Asgrow AG 5935	**59.1 ****	1.1	32.8
USG 75J90R	**56.0 ***	1.1	36.8
SS 5911N R2	**55.9 ***	1.3	37.5
S59-V9 Brand	**55.8 ***	1.0	34.3
Dyna-Gro 39RY57	**55.8 ***	1.1	34.0
SS 5711 R2	53.5	1.2	35.3
Progeny 5610RY	53.2	1.0	35.3
REV 56R63	51.2	1.4	37.0
Pioneer P95M82	50.7	1.0	35.3
REV 57R21	49.4	1.5	38.3
Asgrow AG 5831	48.8	1.0	30.8
Doebler's RPM DB5710RR	48.8	1.4	38.3
NK S56-G6 Brand	48.8	1.1	33.3
Asgrow AG 5732	47.7	1.0	39.5
REV 56A54	47.1	1.3	38.3
Dyna-Gro S56RY84	46.4	1.1	38.8
USG 75J62R	43.3	1.0	40.5
Asgrow AG 5633	43.2	1.0	33.5
Pioneer P56T03R2	40.1	1.0	39.0
MEAN	**50.2**	**1.1**	**36.2**
SEM	2.2		
LSD (p=0.10)	5.2		
df LSD	54		

Highest yielder. *Not significantly different from highest yielder. **BOLD entries comprise the upper quartile.

Yield Mean: weighted average of yield means from each environment, where the weight for each trial is inversely proportional to the average variance of variety yield means at that trial.

SEM: standard error of variety mean across environments

LSD: smallest difference considered different between variety means, where means are averaged across environments

Table 34. North Carolina Official Variety Testing - Soybean 2014

ROUNDUP READY - Maturity Group 5 late (>5.5) - LATE PLANT

Brand / Variety or Variety	Washington	Beaufort	Lenoir	Rowan
	----------	*Yield (bu/ac)*	----------	
Asgrow AG 5633	45.5	36.0	62.5	31.5
Asgrow AG 5732	52.1	46.1	61.5	32.2
Asgrow AG 5831	57.8	47.8	56.4	32.5
Asgrow AG 5935	67.2 *	55.7	72.2 *	40.8 *
Doebler's RPM DB5710RR	57.4	47.2	60.2	29.5
Dyna-Gro 39RY57	62.8	48.5	76.2 **	35.6
Dyna-Gro S56RY84	51.8	45.7	57.6	31.0
NK S56-G6 Brand	57.6	43.1	57.5	36.6 *
Pioneer P56T03R2	45.4	33.9	51.1	31.7
Pioneer P95M82	56.3	52.4	62.3	32.1
Progeny 5610RY	56.6	60.2 *	60.8	36.3
REV 56A54	54.5	42.6	57.9	33.4
REV 56R63	57.6	54.8	59.6	32.4
REV 57R21	58.5	50.4	59.3	27.9
S59-V9 Brand	65.4 *	58.5 *	65.2	32.2
SS 5711 R2	58.8	50.7	68.3	37.1 *
SS 5911N R2	69.3 **	46.4	66.8	38.9 *
USG 75J62R	49.7	38.3	56.4	29.7
USG 75J90R	62.8	62.0 **	56.4	42.3 **
MEAN	**57.2**	**48.4**	**61.5**	**33.9**
CV (%)	8.7	12	9.8	18.3
avg SEM	2.2	2.6	2.7	2.8
Trial weight	0.33	0.24	0.22	0.21
Variety F-value	9.3	14.1	6.5	2.7
Variety Pr>F	<0.001	<0.001	<0.001	0.002
avg LSD (p=0.10)	5.2	5.2	5.8	5.9
df LSD	73	74	74	74

**Highest yielder. *Not significantly different from highest yielder.

CV: within-trial variability as a percent of mean yield for the trial

avg SEM = [average (variance of variety mean)]$^{1/2}$; based on within-trial variation, referred to as avg SEM

Trial Weight = (1 / avg SEM^2 for trial) (1 / sum over trials of [1/avg SEM^2]); all trials sum to 1

avg LSD: smallest difference considered significant between varieties within the same trial

Table 35. North Carolina Official Variety Testing - Soybean Multiple Year Performance
Combined over locations across North Carolina
ROUNDUP READY - Maturity Group 6 - FULL SEASON

Brand / Variety or Variety	**Yield** *bu / ac*		**Lodging** *scale = 1 - 5*	**Plant Height** *inches*
THREE YEAR MEAN - 2012, 2013, 2014				
Progeny 6710RY	64.4	**	1.4	40.8
S67-R6 Brand	64.1	*	1.2	40.7
Dyna-Gro 36RY68	63.7	*	1.4	40.4
SS 6810N R2	62.8	*	1.3	41.1
USG 76S90R	60.8		1.4	40.8
Dyna-Gro S61RY93	59.5		1.3	39.8
USG 76S22R	59.5		1.4	40.2
Dyna-Gro S65RY73	58.6		1.2	39.3
Stine 6202-4	57.4		1.9	38.4
Asgrow AG 6732	54.5		1.8	40.9
MEAN	**60.5**		**1.4**	**40.2**
SEM	1.5			
LSD (p=0.10)	3.5			
df LSD	135			
TWO YEAR MEAN - 2013, 2014				
Progeny 6710RY	66.1	**	1.4	40.5
USG 76S73R	66.1	*	1.1	40.6
Dyna-Gro 36RY68	64.9	*	1.4	40.1
S67-R6 Brand	64.3	*	1.2	41.5
SS 6810N R2	63.8	*	1.3	41.5
USG 76S90R	63.6	*	1.4	42.2
SS 6713N R2	63.1	*	1.1	40.7
Asgrow AG 6834	63.0	*	1.1	40.5
USG 76S22R	58.1		1.5	41.0
Doebler's RPM DB6012RR	57.4		1.3	41.5
Dyna-Gro S69RY34	57.4		1.5	45.1
Stine 6202-4	56.6		2.0	36.8
Dyna-Gro S65RY73	56.4		1.2	40.0
Dyna-Gro S61RY93	55.9		1.2	39.5
Asgrow AG 6732	50.3		1.8	39.5
MEAN	**60.5**		**1.4**	**40.7**
SEM	2.1			
LSD (p=0.10)	4.9			
df LSD	140			

**Highest yielder. *Not significantly different from highest yielder.
SEM - standard error of variety mean across environments
LSD - smallest difference between variety means considered different, across environments
Three year data = 16 environments; Two year data = 11 enviornments

Table 36. North Carolina Official Variety Testing - Soybean 2014

ROUNDUP READY - Maturity Group 6 - FULL SEASON

Statewide performance

Brand / Variety or Variety	Yield *bu/ac*		Lodge *scale = 1 - 5*	Plant Ht *inches*
USG 76S73R	**68.0**	**	1.1	41.4
Progeny 6710RY	**67.6**	*	1.1	43.0
Dyna-Gro 36RY68	**67.1**	*	1.1	41.0
Asgrow AG 6834	**66.1**	*	1.2	42.2
Armor 67-R90	**65.7**	*	1.4	42.8
USG 76S90R	**65.7**	*	1.3	45.4
SS 6810N R2	65.1	*	1.3	41.0
Dyna-Gro SX14867R	64.8	*	1.1	37.6
SS 6713N R2	64.8	*	1.0	40.2
S67-R6 Brand	64.7	*	1.1	43.4
Asgrow AG 6931	61.0	*	1.5	44.0
Stine 61RF00	60.4		2.5	50.2
Dyna-Gro S65RY73	59.3		1.4	40.8
Doebler's RPM DB6012RR	58.8		1.4	42.6
Dyna-Gro S69RY34	58.2		1.3	44.6
+SC03-9151RR	57.3		1.7	44.4
USG 76S22R	57.1		1.8	41.0
+SC03-9090RR	56.3		1.7	41.4
Stine 6202-4	55.4		2.4	38.8
Dyna-Gro S61RY93	52.4		1.3	38.6
Armor 61-R14	52.1		1.7	40.2
Asgrow AG 6732	46.4		1.9	40.2
MEAN	**60.7**		**1.5**	**42.0**
SEM	3.2			
LSD (p=0.10)	7.6			
df LSD	84			

+ Experimental variety

Highest yielder. *Not significantly different from highest yielder. **BOLD entries comprise the upper quartile.

Yield Mean: weighted average of yield means from each environment, where the weight for each trial is inversely proportional to the average variance of variety yield means at that trial.

SEM: standard error of variety mean across environments

LSD: smallest difference considered different between variety means, where means are averaged across environments

Table 37. North Carolina Official Variety Testing - Soybean 2014

ROUNDUP READY - Maturity Group 6 - FULL SEASON

Brand / Variety or Variety	Washington	Beaufort	Columbus	Lenoir	Robeson
	----------	----------	*Yield (bu/ac)*	----------	----------
Armor 61-R14	76.9 *	24.7	59.4	62.5	47.1
Armor 67-R90	65.8	54.5	76.6 *	74.2 *	50.1
Asgrow AG 6732	69.6	12.7	54.2	55.6	59.4 *
Asgrow AG 6834	71.8	58.5 *	74.8 *	67.2	56.3 *
Asgrow AG 6931	64.7	44.9	63.7	74.0 *	57.1 *
Doebler's RPM DB6012RR	67.7	59.4 *	53.9	63.5	43.3
Dyna-Gro 36RY68	71.5	55.4	73.9 *	75.2 *	56.1 *
Dyna-Gro S61RY93	74.4 *	26.8	59.6	62.7	47.3
Dyna-Gro S65RY73	72.6 *	39.4	72.8 *	64.9	49.4
Dyna-Gro S69RY34	62.4	49.5	65.6	64.4	43.1
Dyna-Gro SX14867R	73.4 *	55.3	64.2	75.6 *	51.5
Progeny 6710RY	71.7	56.9 *	73.6 *	73.4 *	60.5 **
S67-R6 Brand	75.3 *	61.5 **	66.5	65.5	52.1
+SC03-9090RR	64.0	45.1	63.4	61.3	46.9
+SC03-9151RR	65.4	43.9	65.4	64.4	45.4
SS 6713N R2	75.3 *	54.8	66.9	74.9 *	46.3
SS 6810N R2	69.0	52.4	76.8 *	68.7	57.8 *
Stine 61RF00	52.1	51.2	71.3	68.4	50.2
Stine 6202-4	68.2	48.5	57.7	57.3	45.8
USG 76S22R	79.7 **	26.8	62.8	70.3	58.1 *
USG 76S73R	77.1 *	51.9	75.5 *	77.3 **	57.7 *
USG 76S90R	74.7 *	51.0	78.3 **	69.8	53.9
MEAN	**70.1**	**46.6**	**67.1**	**67.8**	**51.6**
CV (%)	10.7	11.3	8.8	7.1	15.3
avg SEM	3.3	2.4	2.6	2.4	3.5
Trial weight	0.13	0.27	0.22	0.26	0.12
Variety F-value	3.5	35.1	9.4	6.5	5.7
Variety Pr>F	<0.001	<0.001	<0.001	<0.001	<0.001
avg LSD (p=0.10)	7.8	5.1	5.9	5.5	6.2
df LSD	86	85.0	86	64	86

+ Experimental variety

**Highest yielder. *Not significantly different from highest yielder.

CV: within-trial variability as a percent of mean yield for the trial

avg SEM = [average (variance of variety mean)]$^{1/2}$; based on within-trial variation, referred to as avg SEM

Trial Weight = (1 / avg SEM^2 for trial) (1 / sum over trials of [1/avg SEM^2]); all trials sum to 1

avg LSD: smallest difference considered significant between varieties within the same trial

Table 38. North Carolina Official Variety Testing - Soybean Multiple Year Performance
Combined over locations across North Carolina
ROUNDUP READY - Maturity Group 6 - LATE PLANT

Brand / Variety or Variety	Yield *bu / ac*		Lodging *scale = 1 - 5*	Plant Height *inches*
THREE YEAR MEAN - 2012, 2013, 2014				
USG 76S22R	51.3	**	1.2	30.5
Asgrow AG 6732	51.2	*	1.2	31.7
S67-R6 Brand	50.0	*	1.0	33.8
Dyna-Gro S61RY93	49.9	*	1.0	30.3
Stine 6202-4	49.8	*	1.2	32.1
Progeny 6710RY	47.5	*	1.0	31.7
USG 76S90R	46.2		1.0	30.7
Dyna-Gro 36RY68	45.0		1.0	31.6
SS 6810N R2	44.3		1.0	33.1
Dyna-Gro S65RY73	40.6		1.1	31.5
MEAN	**47.6**		**1.1**	**31.7**
SEM	2.2			
LSD (p=0.10)	5.0			
df LSD	81			
TWO YEAR MEAN - 2013, 2014				
USG 76S73R	52.5	**	1.0	29.9
SS 6713N R2	50.1	*	1.0	29.0
Stine 6202-4	49.6	*	1.2	31.7
Asgrow AG 6732	48.0	*	1.2	29.7
Progeny 6710RY	47.5		1.0	30.9
Doebler's RPM DB6012RR	46.9		1.0	32.6
USG 76S90R	46.2		1.0	30.9
S67-R6 Brand	45.7		1.0	32.4
SS 6810N R2	45.6		1.0	32.9
Dyna-Gro 36RY68	45.4		1.0	32.0
Dyna-Gro S61RY93	45.3		1.0	29.9
USG 76S22R	45.2		1.2	30.0
Dyna-Gro S69RY34	44.5		1.0	36.0
Asgrow AG 6834	43.8		1.0	31.0
Dyna-Gro S65RY73	40.0		1.0	30.6
MEAN	**46.4**		**1.0**	**31.3**
SEM	2.1			
LSD (p=0.10)	4.9			
df LSD	84			

**Highest yielder. *Not significantly different from highest yielder.
SEM - standard error of variety mean across environments
LSD - smallest difference between variety means considered different, across environments
Three year data = 10 environments; Two year data = 7 enviornments

Table 39. North Carolina Official Variety Testing - Soybean 2014

ROUNDUP READY - Maturity Group 6 - LATE PLANT

Statewide performance

Brand / Variety or Variety	Yield *bu/ac*	Lodge *scale = 1 - 5*	Plant Ht *inches*
USG 76S73R	**60.3 ****	1.0	33.8
SS 6713N R2	**56.7 ***	1.0	33.0
Stine 6202-4	**55.6 ***	1.3	36.0
Armor 61-R14	**54.8 ***	1.2	35.3
USG 76S22R	**54.4**	1.4	34.8
Armor 67-R90	**53.7**	1.0	36.5
Dyna-Gro SX14867R	53.4	1.0	32.8
Progeny 6710RY	52.9	1.0	34.5
Asgrow AG 6732	51.1	1.4	35.0
Dyna-Gro 36RY68	50.8	1.0	36.0
Dyna-Gro S61RY93	50.7	1.0	34.0
SS 6810N R2	50.4	1.0	37.8
Doebler's RPM DB6012RR	50.1	1.0	37.5
USG 76S90R	50.1	1.0	34.3
Stine 61RF00	47.8	1.3	40.0
S67-R6 Brand	47.3	1.0	34.8
Asgrow AG 6931	46.4	1.0	38.0
+SC03-9151RR	44.8	1.0	37.0
Asgrow AG 6834	44.1	1.0	36.3
Dyna-Gro S65RY73	43.1	1.0	33.5
Dyna-Gro S69RY34	42.4	1.0	41.3
+SC03-9090RR	39.5	1.1	38.3
MEAN	**50.0**	**1.1**	**35.9**
SEM	2.5		
LSD (p=0.10)	5.9		
df LSD	63		

+ Experimental variety

Highest yielder. *Not significantly different from highest yielder. **BOLD entries comprise the upper quartile.

Yield Mean: weighted average of yield means from each environment, where the weight for each trial is inversely proportional to the average variance of variety yield means at that trial.

SEM: standard error of variety mean across environments

LSD: smallest difference considered different between variety means, where means are averaged across environments

Table 40. North Carolina Official Variety Testing - Soybean 2014

ROUNDUP READY - Maturity Group 6 - LATE PLANT

Brand / Variety or Variety	Washington	Beaufort	Lenoir	Rowan
	----------	*Yield (bu/ac)*	----------	
Armor 61-R14	66.6 *	48.6 *	71.1 *	32.5
Armor 67-R90	54.7	42.7	78.4 **	39.1 *
Asgrow AG 6732	58.2	41.4	66.6	35.5
Asgrow AG 6834	51.3	38.2	64.9	23.2
Asgrow AG 6931	47.9	41.2	67.5	31.0
Doebler's RPM DB6012RR	56.2	49.9 *	63.6	32.2
Dyna-Gro 36RY68	54.7	39.5	73.3 *	34.8
Dyna-Gro S61RY93	66.3 *	41.6	67.3	25.7
Dyna-Gro S65RY73	44.3	30.7	70.3	27.5
Dyna-Gro S69RY34	46.3	34.1	61.6	27.2
Dyna-Gro SX14867R	62.4	46.7	66.0	36.3
Progeny 6710RY	56.1	42.7	75.6 *	37.0
S67-R6 Brand	59.9	49.7 *	62.8	20.5
+SC03-9090RR	43.8	36.6	57.8	21.9
+SC03-9151RR	44.3	47.7 *	66.4	27.2
SS 6713N R2	69.5 *	52.5	66.9	36.0
SS 6810N R2	53.4	37.9	71.5 *	36.8
Stine 61RF00	53.0	48.7 *	61.4	30.2
Stine 6202-4	64.2 *	51.5 *	69.2	37.1
USG 76S22R	67.2 *	38.9	72.7 *	34.0
USG 76S73R	70.3 **	56.0 **	69.2	43.4 **
USG 76S90R	53.3	44.9	69.7	33.7
MEAN	**56.5**	**43.7**	**67.9**	**31.9**
CV (%)	10.7	20.2	11.3	19.0
avg SEM	2.7	4.0	3.4	2.7
Trial weight	0.33	0.15	0.20	0.32
Variety F-value	10.1	3.3	2.2	12.1
Variety Pr>F	<0.001	<0.001	0.007	<0.001
avg LSD (p=0.10)	6.3	8.5	8.0	4.7
df LSD	85	84	86	86

+ Experimental variety

**Highest yielder. *Not significantly different from highest yielder.

CV: within-trial variability as a percent of mean yield for the trial

avg SEM = [average (variance of variety mean)]$^{1/2}$; based on within-trial variation, referred to as avg SEM

Trial Weight = (1 / avg SEM^2 for trial) (1 / sum over trials of [1/avg SEM^2]); all trials sum to 1

avg LSD: smallest difference considered significant between varieties within the same trial

Table 41. North Carolina Official Variety Testing - Soybean Multiple Year Performance
Combined over locations across North Carolina
ROUNDUP READY - Maturity Group 7/8 - FULL SEASON

Brand / Variety or Variety	Yield *bu / ac*		Lodging *scale = 1 - 5*	Plant Height *inches*
THREE YEAR MEAN - 2012, 2013, 2014				
Progeny 7310RY	73.6	**	1.2	40.1
S74-M3 Brand	73.3	*	1.1	40.7
USG 77S40RR	73.1	*	1.5	42.9
Asgrow AG 7231	71.9	*	1.2	42.4
SS 7511N R2	69.6		1.3	42.3
Dyna-Gro 34RY75	67.5		1.3	41.3
S77-T7 Brand	67.4		1.4	41.3
S79-B9 Brand	63.5		2.0	45.9
NK S78-G6 Brand	60.7		1.6	41.0
MEAN	**69.0**		**1.4**	**42.0**
SEM	1.7			
LSD (p=0.10)	3.9			
df LSD	48			
TWO YEAR MEAN - 2013, 2014				
Progeny 7310RY	71.5	**	1.2	40.0
S74-M3 Brand	71.1	*	1.1	40.4
USG 77S40RR	70.2	*	1.3	43.6
Asgrow AG 7231	68.6	*	1.1	44.0
Asgrow AG 7934	68.5	*	1.0	44.6
S79-B9 Brand	65.1		1.9	44.2
SS 7511N R2	64.3		1.3	42.0
USG 77S63R	64.2		1.2	43.4
Dyna-Gro S74RY15	63.5		1.0	45.0
Dyna-Gro 34RY75	62.5		1.3	40.6
Doebler's RPM DB7213RR	61.5		2.5	36.8
USG 77S13R	61.4		1.4	43.8
HBK 7523 RY	60.7		1.0	41.2
S77-T7 Brand	60.4		1.5	41.4
NK S78-G6 Brand	58.2		1.5	39.8
MEAN	**64.8**		**1.3**	**42.1**
SEM	1.6			
LSD (p=0.10)	3.8			
df LSD	56			

**Highest yielder. *Not significantly different from highest yielder.
SEM - standard error of variety mean across environments
LSD - smallest difference between variety means considered different, across environments
Three year data = 7 environments; Two year data = 5 enviornments

Table 42. North Carolina Official Variety Testing - Soybean 2014

ROUNDUP READY - Maturity Group 7-8 - FULL SEASON

Statewide performance

Brand / Variety or Variety	Yield *bu/ac*	Lodge *scale = 1 - 5*	Plant Ht *inches*
Asgrow AG 7535	**73.7 ****	1.6	42.7
S74-M3 Brand	**69.7 ***	1.0	40.0
Progeny 7310RY	**68.9**	1.1	40.7
USG 77S40RR	**68.6**	1.5	44.7
Dyna-Gro S77RY85	**66.8**	1.0	40.0
Asgrow AG 7934	66.1	1.0	45.3
Asgrow AG 7231	65.9	1.2	44.0
SS 7511N R2	62.6	1.3	39.3
USG 77S63R	62.5	1.3	43.7
S79-B9 Brand	61.8	1.6	45.7
Dyna-Gro S74RY15	60.5	1.0	42.0
USG 77S13R	60.5	1.5	41.0
Doebler's RPM DB7213RR	60.4	2.4	35.3
REV 73A74	59.7	2.3	42.0
HBK 7523 RY	59.4	1.0	39.7
Dyna-Gro 34RY75	59.0	1.4	40.3
S77-T7 Brand	57.4	1.6	43.0
Dyna-Gro S79RY05	56.9	1.0	44.0
USG 78S04R	56.7	1.0	46.0
NK S78-G6 Brand	55.9	1.5	41.0
MEAN	**62.7**	**1.4**	**42.0**
SEM	1.9		
LSD (p=0.10)	4.6		
df LSD	38		

Highest yielder. *Not significantly different from highest yielder. **BOLD entries comprise the upper quartile.

Yield Mean: weighted average of yield means from each environment, where the weight for each trial is inversely proportional to the average variance of variety yield means at that trial.

SEM: standard error of variety mean across environments

LSD: smallest difference considered different between variety means, where means are averaged across environments

Table 43. North Carolina Official Variety Testing - Soybean 2014

ROUNDUP READY - Maturity Groups 7-8

	FULL SEASON			LATE PLANT
Variety	Columbus	Lenoir	Robeson	Lenoir
	----------	*Yield (bu/ac)*	----------	*Yield (bu/ac)*
Asgrow AG 7231	68.0	72.8 *	57.0 *	66.7
Asgrow AG 7535	82.7 **	76.8 **	57.3 *	78.9 **
Asgrow AG 7934	67.1	74.4 *	55.7 *	73.2 *
Doebler's RPM DB7213RR	65.8	65.6	47.9	60.4
Dyna-Gro 34RY75	59.4	65.1	57.0 *	73.1 *
Dyna-Gro S74RY15	62.7	67.9	49.8	63.8
Dyna-Gro S77RY85	65.8	75.9 *	59.7 **	64.2
Dyna-Gro S79RY05	59.1	61.8	53.9 *	54.4
HBK 7523 RY	63.7	65.1	48.5	60.9
NK S78-G6 Brand	58.4	61.3	50.7	65.2
Progeny 7310RY	72.3	75.2 *	58.4 *	68.6
REV 73A74	62.4	66.7	48.6	57.9
S74-M3 Brand	75.7	76.0 *	51.8 *	70.1
S77-T7 Brand	62.2	59.4	56.1 *	66.8
S79-B9 Brand	63.6	67.1	58.2 *	67.1
SS 7511N R2	66.2	68.3	52.9 *	58.8
USG 77S13R	64.0	67.8	46.3	52.7
USG 77S40RR	76.9	71.8 *	54.1 *	74.6 *
USG 77S63R	63.7	70.4	52.8 *	70.0
USG 78S04R	58.7	61.9	53.1 *	51.3
MEAN	**65.9**	**68.6**	**53.5**	**64.9**
CV (%)	8.1	7.3	14.8	10.5
avg SEM	2.4	2.2	4.0	3.0
Trial weight	0.40	0.45	0.15	1
Variety F-value	8.6	5.9	1.6	7.7
Variety Pr>F	<0.001	<0.001	0.099	<0.001
avg LSD (p=0.10)	5.5	5.3	8.0	6.7
df LSD	78	78	58	78

**Highest yielder. *Not significantly different from highest yielder.

CV: within-trial variability as a percent of mean yield for the trial

avg SEM = [average (variance of variety mean)]$^{1/2}$; based on within-trial variation, referred to as avg SEM

Trial Weight = (1 / avg SEM^2 for trial) (1 / sum over trials of [1/avg SEM^2]); all trials sum to 1

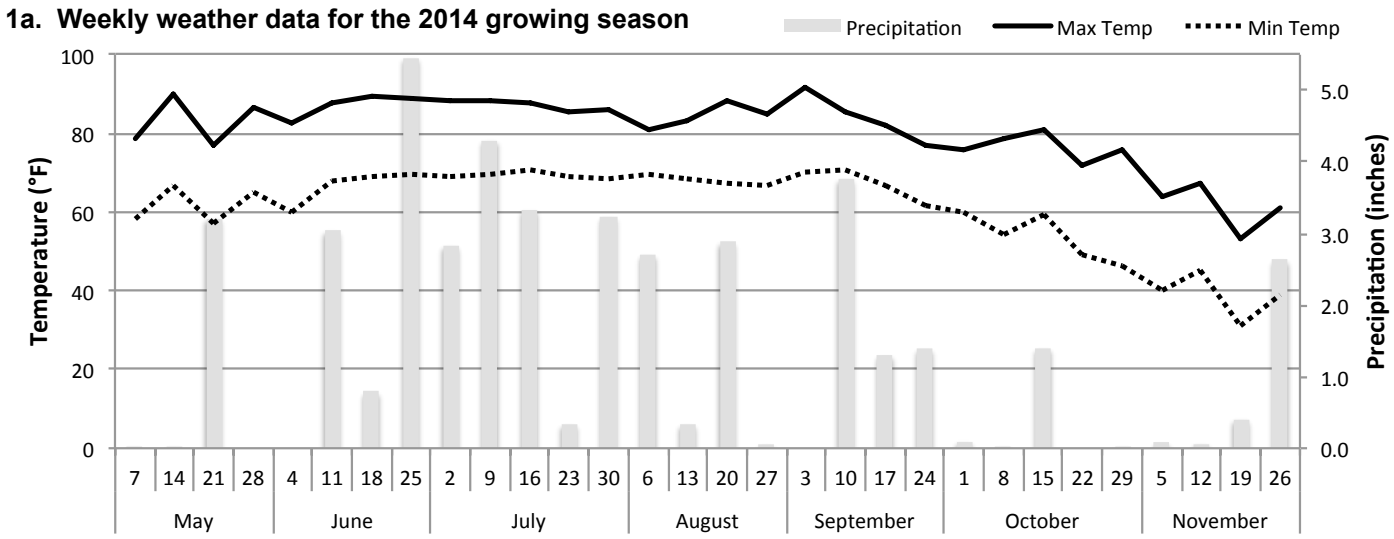
avg LSD: smallest difference considered significant between varieties within the same trial

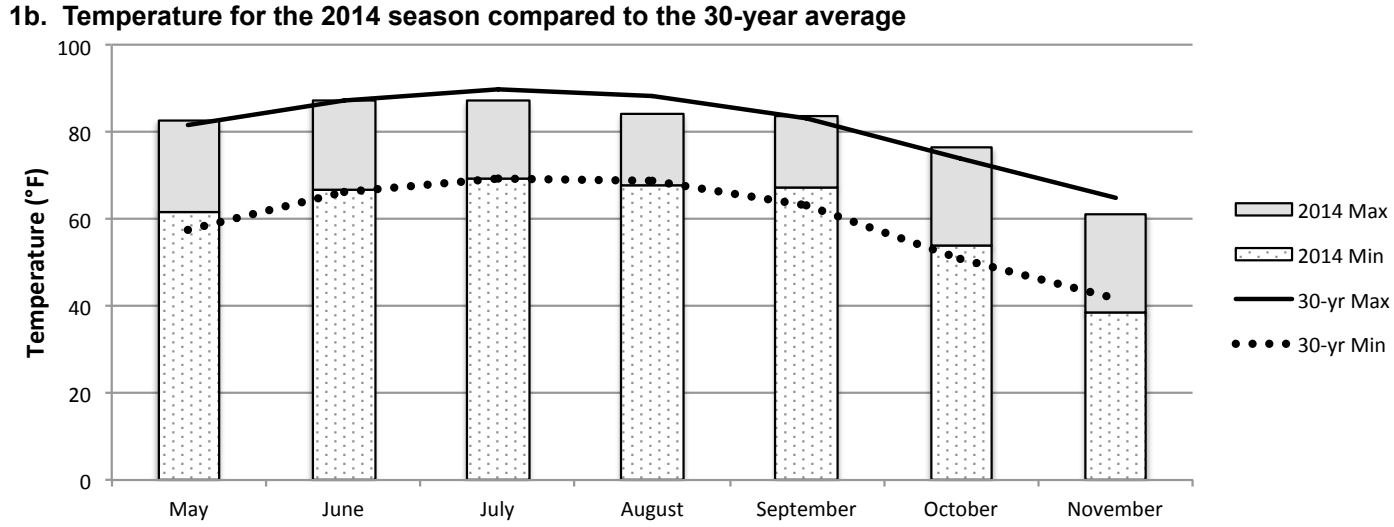
Table 44. North Carolina Official Variety Testing - Soybean Multiple Year Performance
Combined over locations across North Carolina
ROUNDUP READY - Maturity Group 7/8 - LATE PLANT

Brand / Variety or Variety	**Yield** *bu / ac*		**Lodging** *scale = 1 - 5*	**Plant Height** *inches*
THREE YEAR MEAN - 2012, 2013, 2014				
Dyna-Gro 34RY75	61.4	**	1.2	35.0
S74-M3 Brand	60.4	*	1.0	32.0
USG 77S40RR	59.0	*	1.0	32.0
Progeny 7310RY	58.9	*	1.1	31.7
S79-B9 Brand	56.6	*	1.3	34.3
S77-T7 Brand	56.4	*	1.1	34.0
NK S78-G6 Brand	56.2	*	1.3	33.3
SS 7511N R2	55.8	*	1.4	34.7
Asgrow AG 7231	55.7	*	1.0	35.3
MEAN	**57.8**		**1.2**	**33.6**
SEM	2.4			
LSD (p=0.10)	NA			
df LSD	16			
TWO YEAR MEAN - 2013, 2014				
S74-M3 Brand	58.2	**	1.0	29.0
Dyna-Gro 34RY75	58.0	*	1.3	32.0
USG 77S40RR	57.7	*	1.0	31.0
Asgrow AG 7934	56.7	*	1.1	30.5
Progeny 7310RY	55.8	*	1.1	29.0
NK S78-G6 Brand	54.5	*	1.5	29.5
SS 7511N R2	54.2	*	1.4	31.5
S79-B9 Brand	54.0	*	1.5	31.5
Dyna-Gro S74RY15	53.5	*	1.0	31.0
USG 77S13R	52.6	*	1.0	35.0
Asgrow AG 7231	52.2	*	1.0	31.0
Doebler's RPM DB7213RR	51.7	*	1.8	33.5
S77-T7 Brand	51.1	*	1.2	32.0
USG 77S63R	49.7	*	1.2	29.5
HBK 7523 RY	48.6	*	1.1	27.0
MEAN	**53.9**		**1.2**	**30.9**
SEM	4.1			
LSD (p=0.10)	NA			
df LSD	14			

**Highest yielder. *Not significantly different from highest yielder.
SEM - standard error of variety mean across environments
LSD - smallest difference between variety means considered different, across environments
NA: not appropriate under the Protected LSD at significance level = 0.1
Three year data = 3 environments; Two year data = 2 enviornments

Figure 1. Lenoir Weather Data





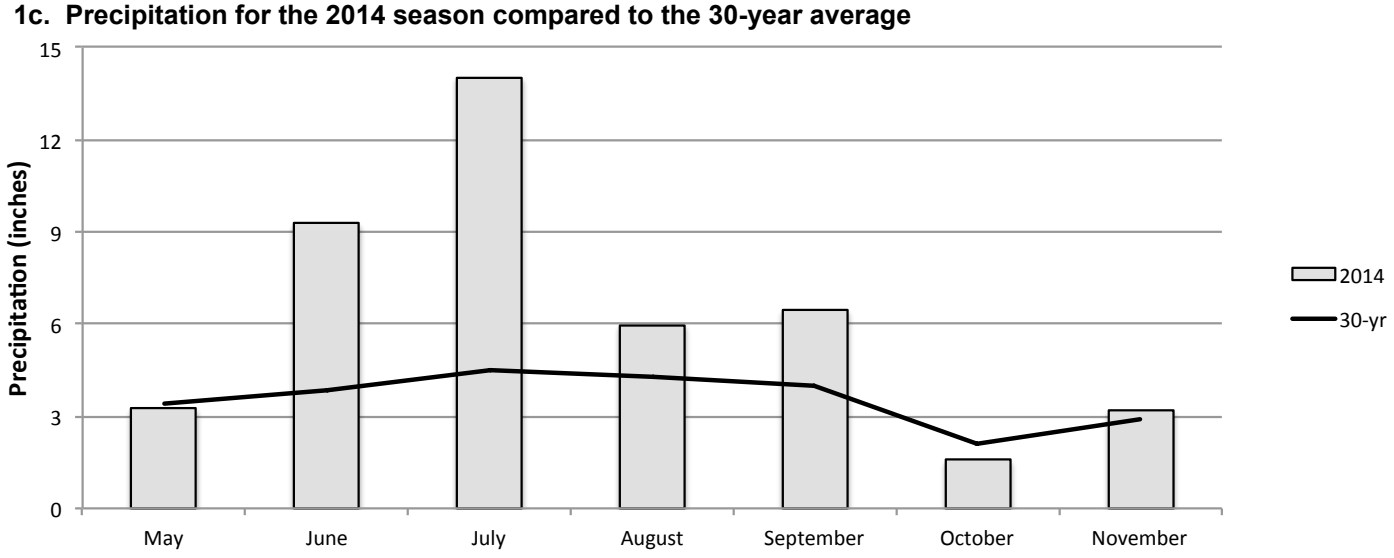
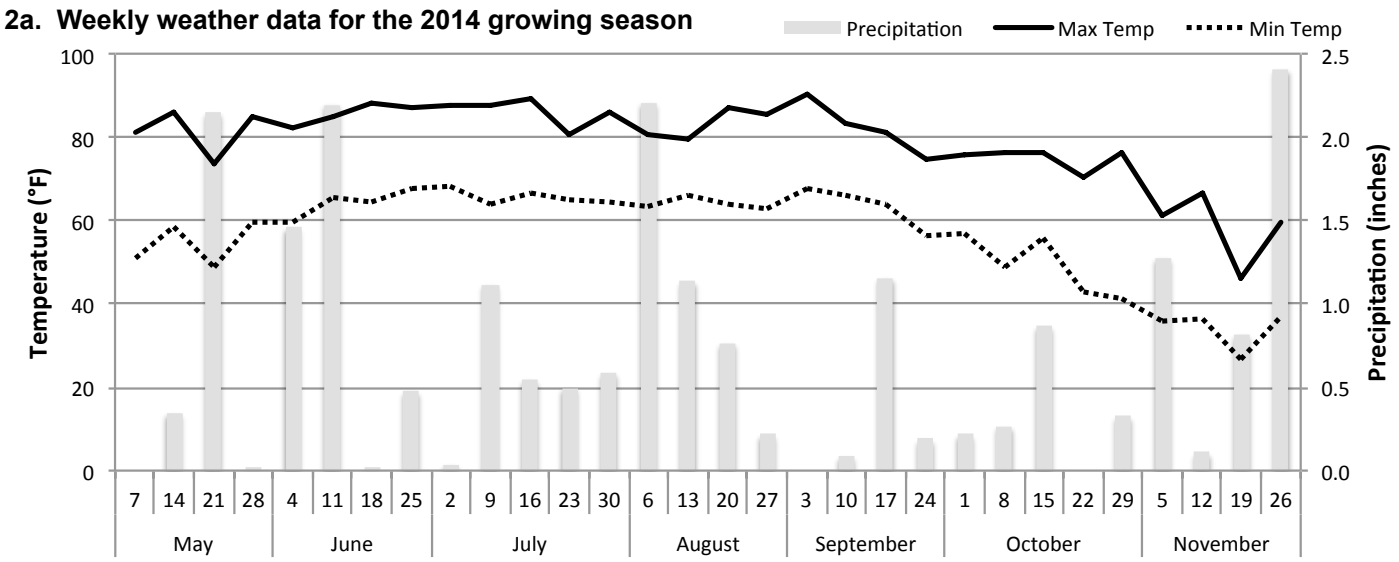
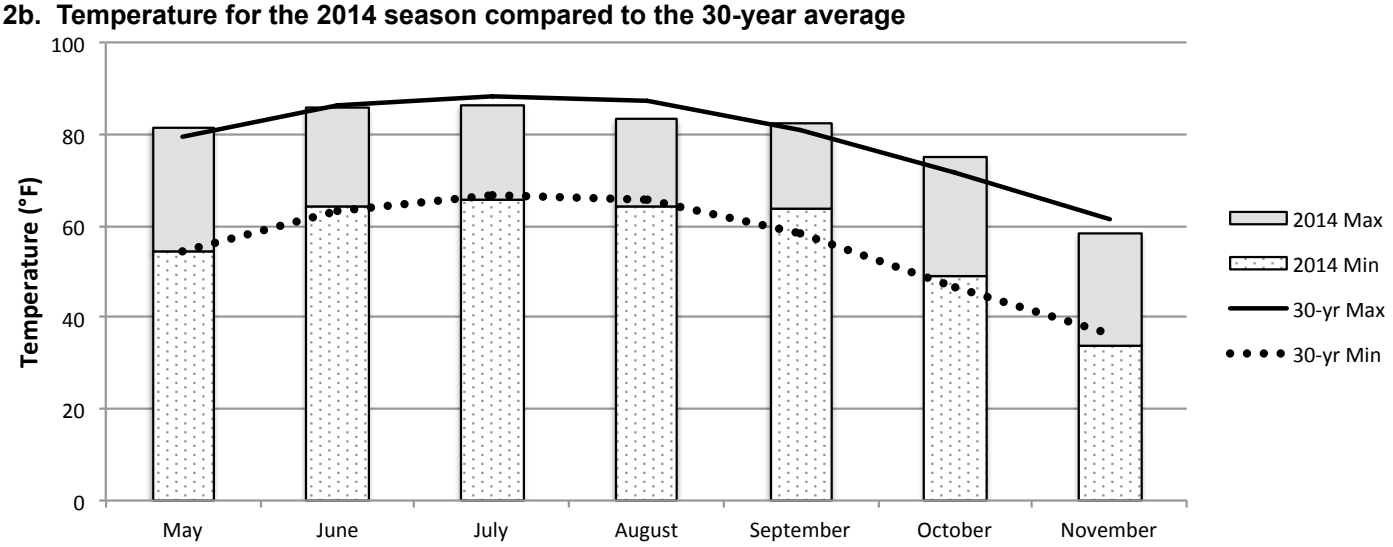


Figure 2. Rowan Weather Data





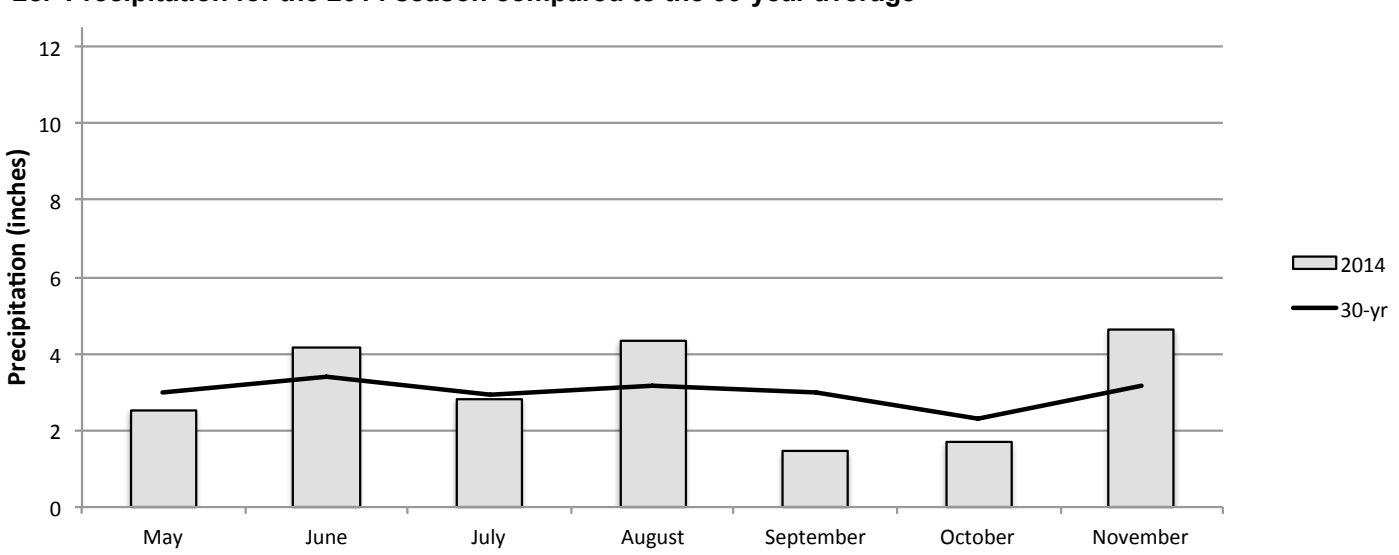
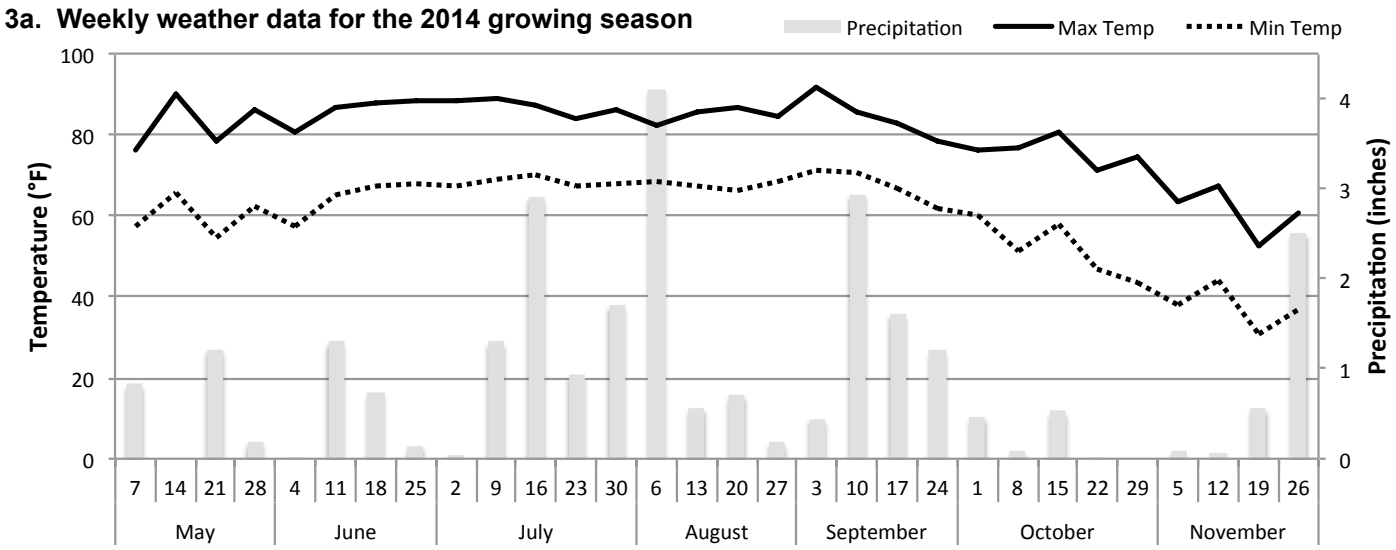
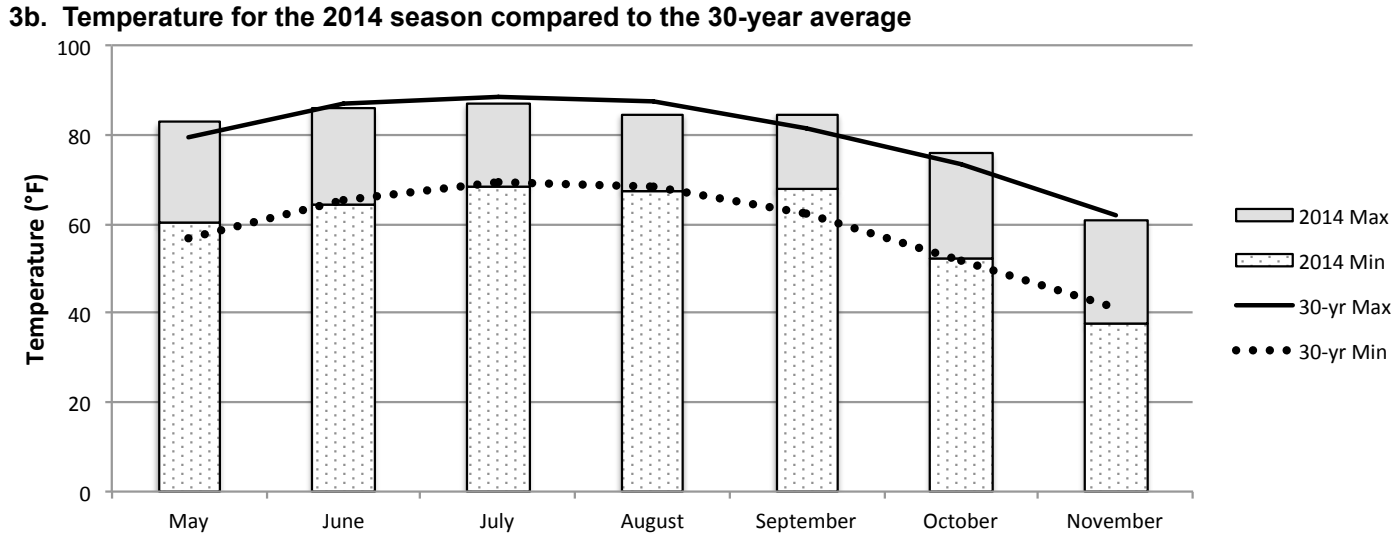
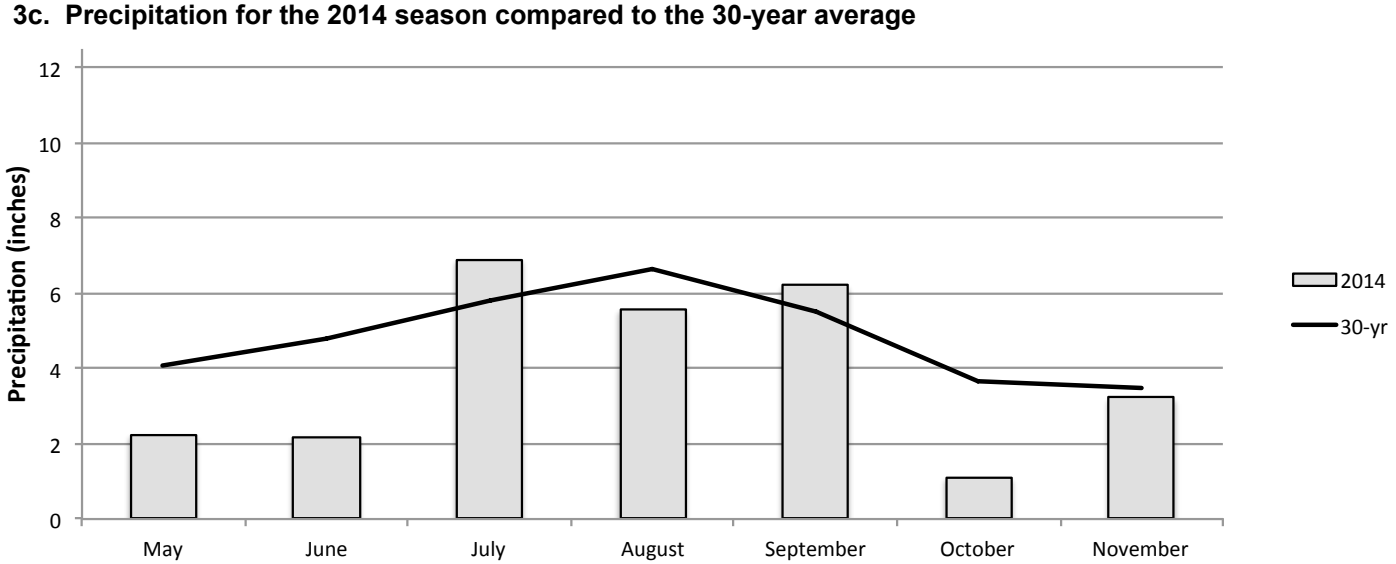


Figure 3. Washington Weather Data







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