Soybean Variety Performance in the NC Mountains

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Introduction: We have a small number of soybean producers in the North Carolina Mountains. Generally maturity group III and IV soybeans are recommended for production in this part of the state due to the earlier frost date. The NC State Official Variety Testing (OVT) Program generally does not have a Soybean Variety Test in the Mountains, therefore for the past couple years the Soybean Extension Program has worked with the Mountain Horticultural Crops Research and Extension Center to run a small replicated variety test in the mountains to generate some localized soybean variety data for the mountain producers.

Materials and Methods: Replicated soybean variety trials have been conducted in conjunction with the Mountain Horticultural Research and Extension Center since 1974. Due to the rapid turnover of soybean varieties, data from 2016 and 2018 will be presented in this publication. The Mountain variety trial was not conducted in 2017. Companies providing seed to the Soybean Extension Program were invited to enter varieties into the Mountain Variety Trial. In 2016: Soybeans were planted on 5/19/2016 on 30-inch row spacing at 150,000 seeds/A. All varieties were randomized and evaluated in four replications. Soybeans were harvested on 10/24/2016 using a small-plot combine. In 2018: Soybeans were initially planted on 5/3/2018, but extremely wet conditions justified replanting. Soybeans were re-planted on 6/18/2018 on 30-inch row spacing at 150,000 seeds/A. Soybeans were harvested on 10/19/2018 using a small-plot combine. All varieties were randomized and evaluated in four replications. Statistical analysis occurred in SAS 9.4 using PROC GLM.

Results:

2018 Mountain Soybean Variety Trial Results		
Company/Brand	**Variety**	**Yield (bu/A)**
Dyna-Gro	S39XT68	40.1*
Asgrow	AG37X9	40.0*
Dyna-Gro	S39XT08	38.6*
Asgrow	AG38X8	37.0
Syngenta	S43-V3X	36.3
Pioneer	P37A69X	35.5
Pioneer	P46A16R	34.0
Asgrow	AG35X9	34.0
Syngenta	S43XS27	30.3
Pioneer	P42A96X	30.3
*Not significantly different from the highest yielding variety		
Summary Statistics		
Mean (bu/A)	35.6	
LSD (0.10)	3.0	
P-Value	<0.01	

2016 Mountain Soybean Variety Trial Results		
Company/Brand	**Variety**	**Yield (bu/A)**
Southern States	SS 4514 NR	84.2*
Pioneer	P38T42R	82.3*
Pioneer	P46T21R	80.2*
Southern States	SS 3914 NS	78.9
Southern Harvest	SH 4815 LL	78.1
Southern States	SS 4215 NS	78.0
Southern Harvest	SH 3814 LL	77.7
Pioneer	P38T61R	75.7
Southern States	SS 4510 NR	72.5
*Not significantly different from the highest yielding variety		
Summary Statistics		
Mean (bu/A)	78.6	
LSD (0.10)	4.0	
P-Value	0.01	

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