

# Improved Soybeans For Missouri

*Breeding Soybeans for Missouri and the Mid-South*

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The objective of this project is to develop high yielding Roundup tolerant (RR1 and RR2), Sulfonylurea (STS), and conventional soybeans resistant to soybean cyst nematode (SCN) and other diseases in maturity groups IV and V. Evaluation for yield and other agronomic and disease traits is done in Missouri research tests, state variety tests and in the USDA Regional Uniform Tests.

## **New Releases**

A RR1 cultivar, S06-4649RR1 (early V) has been developed and it is being sold by Missouri Premium Genetics as MPV 5214nRR. It has moderate resistance to three nematode species, SCN, root knot nematode and reniform nematodes and good productivity across various soil types. Key features are:

### **Key Features MPV 5214nRR**

#### **RR Early group V maturity (RM 5.1)**

- Resistant to SCN races 1,2,3,5,14
- Resistant to stem canker
- Moderately resistant to root knot nematode
- Moderately resistant to SDS
- Resistant to reniform nematode
- Tall growth for tough soils

Other releases include five RR1 and one conventional line. These releases vary in relative maturity from 4.2 to 5.4 and are listed below.

### **RR1 Releases**

S08-14117RR1 (RM 4.2)

S08-9942RR1 (RM 4.7)

S08-14087RR1 (RM 4.8)

S08-9936RR1 (RM 5.2)

S08-9927RR1 (RM 5.4)

### **Conventional Release**

S08-17361 (5.2)

Key features and performance of three releases S08-14117RR1, S08-9936RR1 & S08-17361 are as follows:

### **S08-14117RR1- Key Features**

- Early Group IV (RM 4.2) Roundup Ready 1
- Excellent yield potential across soil types
- Moderately resistant to SCN races 2, 3, 5, & 14
- Resistant to stem canker
- MR to SDS

## **Yield Performance of S08-14117RR1 vs AG4130RR2Y in SEMO, 2009-2011**

### **Overall Yield Means (BU/A) by soil type**

<u>Variety</u>	<u>Loam</u>	<u>Clay</u>	<u>Sand</u>	<u>Combined</u>
S08-14117RR1	63.2	67.6	52.0	63.5
AG4130RR2Y	58.6	67.7	48.3	61.0
# Loc	6	6	2	14

### **S08-9936RR1 Key Features**

- Early Group V Maturity (RM 5.2) Roundup Ready
- Excellent yield potential across soil types
- Moderately resistant to SCN races 3 & 14
- Resistant to stem canker
- MR to SDS & frogeye leaf spot
- Chloride excluder

## **Yield Performance of S08-9936RR1 versus AG4903RR1 in SEMO, 2009-2011**

### **Overall Yield Means (BU/A) by soil type**

<u>Variety</u>	<u>Loam</u>	<u>Clay</u>	<u>Sand</u>	<u>Combined</u>
S08-9936RR1	65.8	65.0	63.0	65.1
AG4903*	63.3	56.9	43.1	57.7
# Loc	6	5	2	13

\*AG4907 used as check in 2011.

### **S08-17361 Key Features**

- Mid-Group V (RM 5.2) Conventional
- Indeterminate growth
- Excellent performance across soil types
- Resistant to stem canker
- Moderately resistant to frogeye

## **Yield performance of S08-17361 versus AG4903RR1 in SEMO, 2009-2011**

### **Yield Means (BU/A) by soil type**

<u>Variety</u>	<u>Loam</u>	<u>Clay</u>	<u>Sand</u>	<u>Combined</u>
S08-17361	70.9	64.0	62.3	66.9
AG 4903*	63.3	58.8	50.1	59.5
# Locs	6	5	2	13

\*AG4907 used as check in 2011