

Herbicide performance in soybeans at Morris, MN - 2010. Jeffery L. Gunsolus, George Nelson, and Thomas Hoverstad

The study site was located in field E16-9W and was in soybeans the previous year. Fall tillage was performed with a chisel plow. The site was field cultivated on May 2, 2010 and seeded on May 17th to P-90M80 soybeans in 30-inch rows at 186,000 seeds per acre. Pre-emergence treatments were applied after seeding on May 17th with the wind was out of the east at 15 mph and the temperature was 70°F. Early post-emergence treatments were applied on June 16th. Weeds were 2-6 inches in height and the wind was out of the south at 5 mph with the temperature at 80°F. Late post-emergence treatments were applied on June 29th with an east wind at 5 mph. Warrior II was applied at 1.6 oz/ac on August 6th for aphid control. The study was harvested on September 29th, harvest area 5 ft x 27.5 ft. Data are presented in the following table.

Table. Herbicide performance in soybeans at Morris, MN - 2010. (Gunsolus, Nelson, and Hoverstad)

Treatment	Rate (Product/A or % v/v)	Weed Control								Soybean Injury	Soybean Yield (Bu/A)
		Barnyardgrass		Common Lambsquarters		Powell Amaranth		6/24	7/12		
		6/24	7/12	6/24	7/12	6/24	7/12	(%)	(%)		
<u>Preemergence on May 17 / POST on June 16 (2-6 inch weeds)</u>											
Boundary / Flexstar + Fusion + Harmony SG + MSO + 28%N	1.5 pt / 16 oz + 8 oz + 0.125 oz + 1.0% + 2.5%	100	100	99	100	100	100	0	0	39	
Authority First / Flexstar + Select + COC + 28%N	6.4 oz / 16 oz + 6 oz + 1% + 2.5%	100	100	100	100	100	100	0	0	38	
Gangster V + Gangster FR / Raptor + Select + COC + 28%N	2.5 oz + 0.5 oz / 4 oz + 6 oz + 1% + 2.5%	100	100	85	88	100	100	0	8	36	
<u>Preemergence on May 17 / POST on June 29</u>											
Authority First / Roundup Original Max + AMS	3.2 oz / 22 oz + 3qt	80	100	95	100	100	100	0	0	35	
Authority Assist / Roundup Original Max + AMS	5 oz / 22 oz + 3 qt	83	100	84	98	100	100	0	0	38	
Gangster V + Gangster FR / Roundup Original Max + AMS	2 oz + 0.4 oz / 22 oz + 3 qt	93	98	88	91	100	100	0	0	39	
Prefix / Touchdown Total + AMS	1 qt / 24 oz + 3 qt	100	98	59	94	100	98	0	0	37	
Boundary / Touchdown Total + AMS	1.5 pt / 24 oz + 3 qt	93	100	91	100	100	100	0	0	40	
Fierce / Roundup Original Max + AMS	3 oz / 22 oz + 3 qt	93	100	98	100	100	100	0	0	38	
Valor SX / Roundup Original Max + AMS	2 oz / 22 oz + 3 qt	85	100	65	91	70	100	0	0	35	
Optill / Roundup Original Max + AMS	2 oz / 22 oz + 3 qt	100	100	69	94	100	100	0	0	35	
Sonic / Durango DMA + AMS	3 oz / 24 oz + 3 qt	85	99	86	96	99	100	0	3	40	
Enlite / Abundit Extra + AMS	2.8 oz / 32 oz + 3 qt	65	100	79	100	100	100	0	0	39	
Enlite / Abundit Extra + Harmony SG + AMS	2.8 oz / 32 oz + 0.125 oz + 3 qt	88	98	89	93	100	100	0	0	36	
<u>POST on June 16 (2-6 inch weeds)</u>											
Warrant + Roundup Weathermax + AMS	3 pt + 22 oz + 3 qt	100	100	98	96	100	98	0	3	38	
<u>POST on June 16 (2-6 inch weeds) / POST on June 29</u>											
Roundup Weathermax + AMS / Roundup Weathermax + AMS	22 oz + 3 qt / 22 oz + 3 qt	100	100	86	100	100	100	0	0	36	
Durango DMA + FirstRate + AMS / Durango DMA + AMS	24 oz + 0.3 oz + 3 qt / 24 oz + 3 qt	100	100	98	100	98	100	0	0	38	
Flexstar GT + AMS / Touchdown Total + AMS	3 pt + 3 qt / 24 oz + 3 qt	100	100	97	100	100	100	0	0	35	
Synchrony XP + Abundit Extra + AMS / Abundit Extra + AMS	0.375 oz + 32 oz + 3 qt / 32 oz + 3 qt	100	100	99	100	100	100	0	0	36	
Roundup Original Max + Resource + NIS + AMS / Roundup Original Max + AMS	22 oz + 2 oz + 0.25% + 3 qt / 22 oz + 3 qt	100	100	100	100	100	100	0	3	36	
Roundup Original Max + Cadet + NIS + AMS / Roundup Original Max + AMS	22 oz + 0.5 oz + 0.25% + 3 qt / 22 oz + 3 qt	98	100	95	100	95	100	0	4	36	
<u>POST on June 29</u>											
Roundup Weathermax + AMS	22 oz + 3 qt	--	100		73	--	93	0	8	34	
Weedy Check	--	--	--	--	--	--	--	0	0	13	
Weed-free Check	--	100	100	100	100	100	100	0	0	38	
LSD (0.05)	--	17.4	ns	16.1	7.9	11.4	ns	ns	ns	5.7	

Boundary 6.5L = s-metolachlor (5.25 lb ai/gal) & metribuzin (1.25 lb ai/gal).
 Flexstar 1.88L = fomesafen.
 Fusion 2.56E = fluzafop-P (2.0 lb ai/gal) & fenoxaprop (0.56 lb ai/gal).
 Harmony SG 50SG = thifensulfuron-methyl.
 MSO = Destiny (methylated soybean oil and nonionic surfactant blend).
 28% = 28% UAN (urea ammonium nitrate solution).
 Authority First 70DF = chloransulam-methyl (8%) & sulfentrazone (62%).
 Select 2E = clethodim.
 COC = crop oil concentrate.
 Gangster V 51DG = flumioxazin (component #1 of Gangster Multi-Pack).
 Gangster FR 84DG = chloransulam-methyl (component #2 of Gangster Multi-Pack).
 Raptor 1S = imazamox.
 Roundup Original Max 4.5S = glyphosate.
 AMS = N-PaK AMS 34% ammonium sulfate solution (3.4 lbs ammonium sulfate/gal).
 Authority Assist 4SC = sulfentrazone (3.3 lb ai/gal) & imazethapyr(0.67 lb ai/gal).
 Prefix 5.29E = s-metolachlor (4.34 lb ai/gal) & fomesafen (0.95 lb ai/gal).

Touchdown Total 4.17L = glyphosate.
 Fierce 76WDG = 33.5% flumioxazin & 42.5% pyroxasulfone.
 Valor SX 51WDG = flumioxazin.
 Sonic 70DF = cloransulam-methyl (8) & sulfentrazone (62).
 Durango DMA 4S = glyphosate.
 Enlite 47.48DG = clorimuron-ethyl (2.85%) & flumioxazin (36.21%) & thifensulfuron-methyl (8.8%).
 Abundit Extra 3S = glyphosate.
 Warrant 3CS = acetochlor.
 Roundup Weathermax 4.5S = glyphosate.
 FirstRate 84DG = cloransulam-methyl.
 Flexstar GT 3.29L = fomesafen (0.66 lbs ai/gal) & glyphosate (2.63 lbs ae/gal).
 Synchrony XP 28.4DF = chlorimuron-ethyl (21.5%) & thifensulfuron-methyl (6.9%).
 Resource 0.86L = flumiclorac.
 NIS = Preference nonionic surfactant.
 Cadet 0.91EC = fluthiacet-methyl.