

Bayer Low Tunnel Volatility Study

Summary of 20-ARL-SB23 study

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Cropping Systems Weed Science

UNIVERSITY OF WISCONSIN-MADISON

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Methods

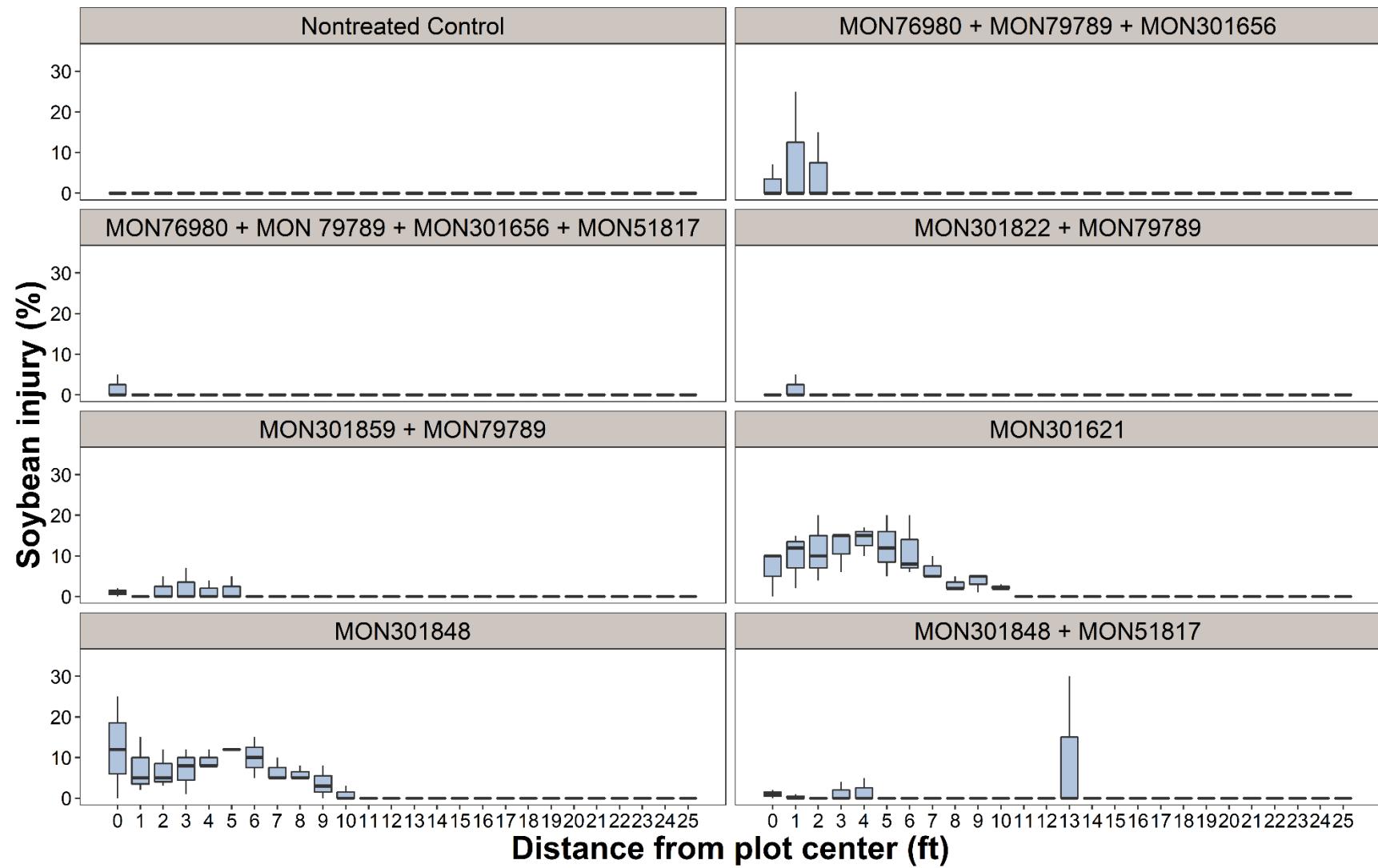
- Soybean variety: CZ 1549GTLL
- Soybean seeding rate: 140,000 seeds ac⁻¹ at 1.5" depth
- Soybean row width: 30" row width
- Soybean planting date: June 15
- Plot maintenance:
 - PRE herbicide treatment – June 15, 2 pts ac⁻¹ Prefix + 22 fl oz ac⁻¹ Roundup PowerMax + 8.5 lbs AMS/100 gal
 - POST herbicide treatment – July 1, 22 fl oz ac⁻¹ Roundup PowerMax + 8.5 lbs AMS/100 gal
- Herbicide treatment (flats): 9:00 to 9:30 am July 13
- Soybean stage at flat application: V4
- Flat removal from low-tunnel: 3:45 to 5 pm July 14
- Results presented at 14 and 28 days after treatment (DAT) for the 25-ft quadrant with the most severe and consistent injury
- Photos taken at 28 DAT

Table 1. Weather conditions in the 48 h period of flat placement under the low tunnels at the University of Wisconsin-Madison Arlington Agriculture Research Station.

Date	Soil flat temp (F)			Air temp (6 in, F)			Air temp (27 in, F)			Relative humidity (%)			Air temp (39 in, F)			Rainfall (in)
	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	
0-24 h	79.2	103.8	65.3	75.4	92.7	63.9	74.1	90.3	64.0	75.4	94.5	49.3	72.2	83.2	63.7	0.4
24-48 h	84.4	93.3	76.6	80.1	86.6	74.1	78.7	83.6	74.0	65.5	71.9	61.0	77.9	82.0	73.7	0.0

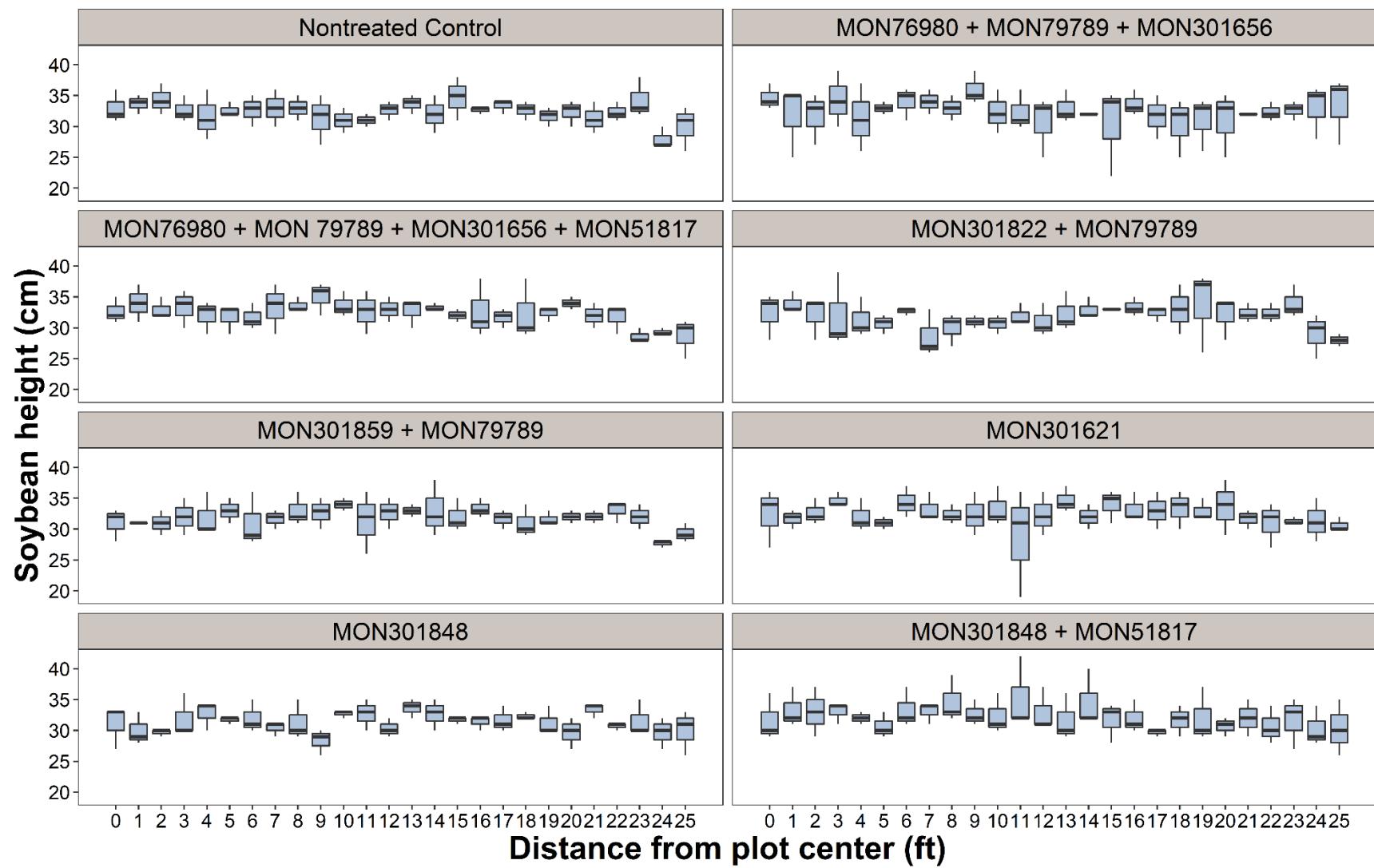
Results

20-ARL-SB23 at 14 DAT



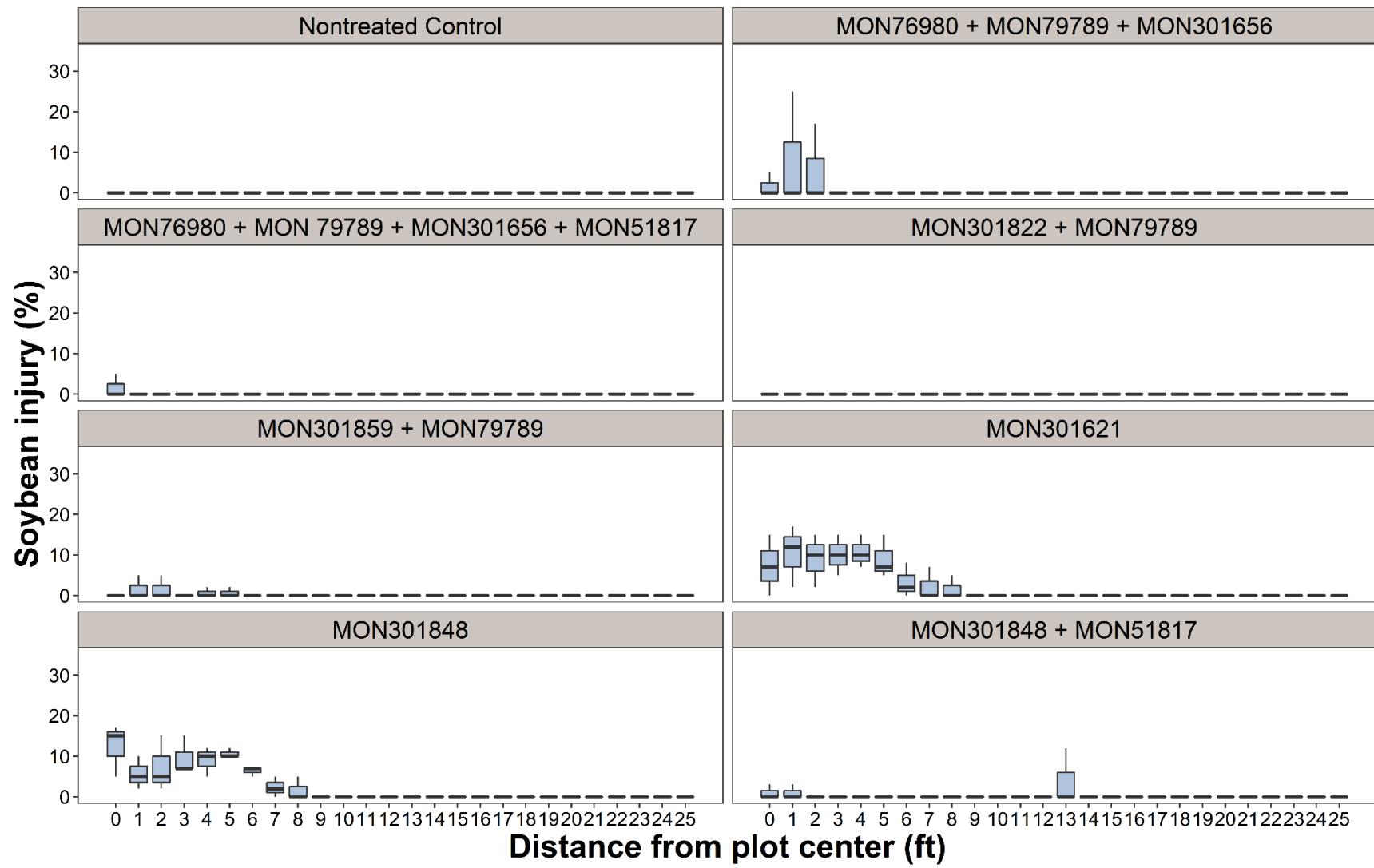
Source: University of Wisconsin-Madison Cropping Systems Weed Science, 2020

20-ARL-SB23 at 14 DAT



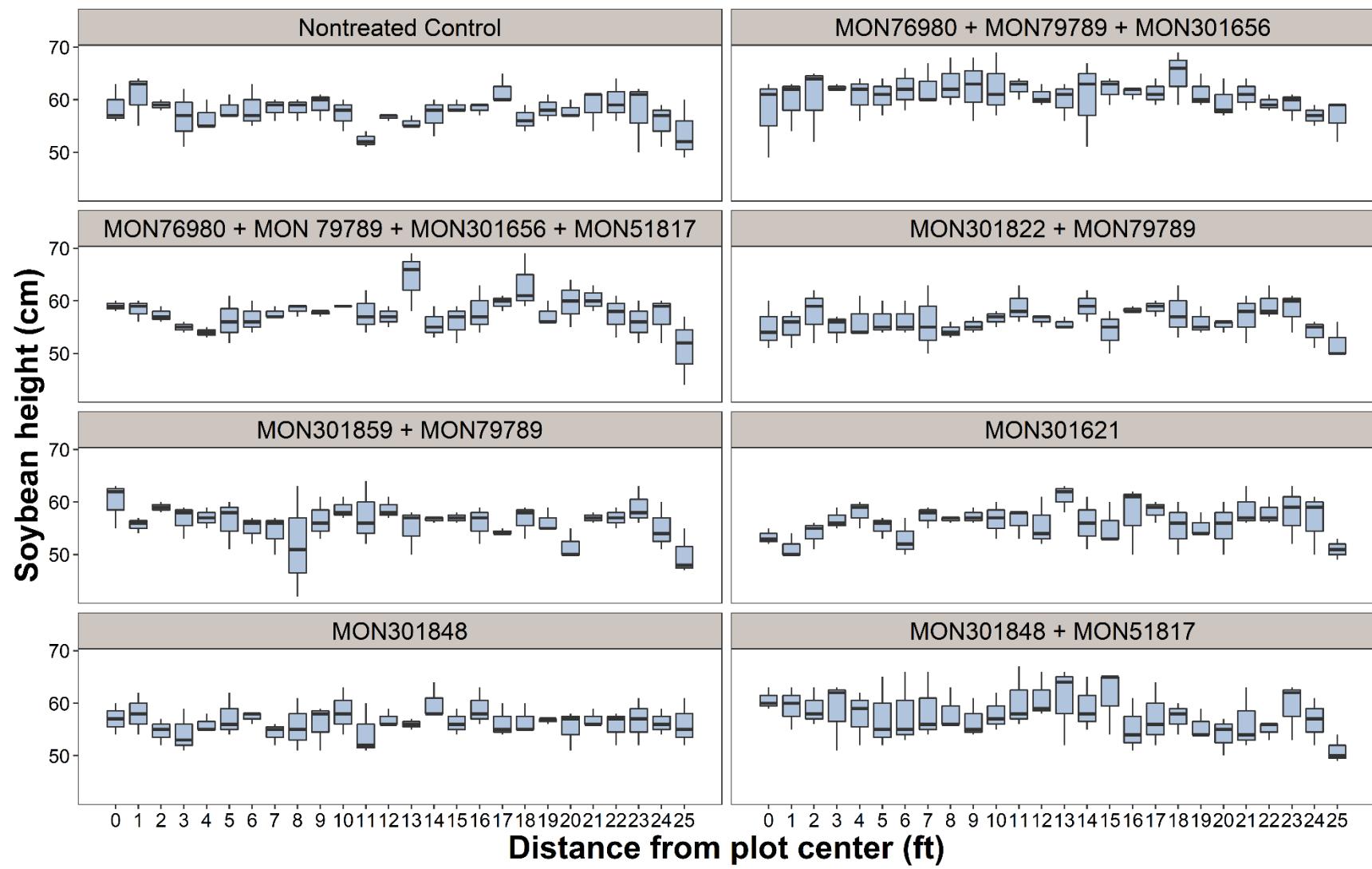
Source: University of Wisconsin-Madison Cropping Systems Weed Science, 2020

20-ARL-SB23 at 28 DAT



Source: University of Wisconsin-Madison Cropping Systems Weed Science, 2020

20-ARL-SB23 at 28 DAT



Source: University of Wisconsin-Madison Cropping Systems Weed Science, 2020

Table 2. Sum of soybean stand count, sum of injured plants and the % of injured soybean plants 14 and 28 days after treatment in the three replications within 25 ft quadrant at the University of Wisconsin-Madison Agriculture Research Station.

Treatment	Stand count	Injured plants		% Injured plants	
		14	28	14	28
Nontreated Check	157	0	0	0	0.0
MON 76980 + MON 79789 + MON 301656	169	4	8	2.4	4.5
MON 76980 + MON 79789 + MON 301656 + MON 51817 – VaporGrip	159	2	0	1.4	0.0
MON 301822 + MON 79789	179	1	0	0.8	0.0
MON 301859 + MON 79789	178	4	3	2.5	1.6
MON 301621	151	50	49	32.8	32.4
MON 301848	171	59	61	34.5	35.8
MON 301848 + MON 51817 - VaporGrip	166	7	3	4.4	1.5



Figure 1. Nontreated Check at 28 DAT.



Figure 2. MON 76980 + MON 79789 + MON 301656 at 28 DAT.



Figure 3. MON 76980 + MON 79789 + MON 301656 + MON 51817 – VaporGrip at 28 DAT.



Figure 4. MON 301822 + MON 79789 at 28 DAT.



Figure 5. MON 301859 + MON 79789 at 28 DAT.



Figure 6. MON 301621 at 28 DAT.



Figure 7. MON 301848 at 28 DAT.



Figure 8. MON 301848 + MON 51817 – VaporGrip at 28 DAT.