

Bayer Low Tunnel Volatility Study

Summary of 20-ARL-SB21 study

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Cropping Systems Weed Science

UNIVERSITY OF WISCONSIN-MADISON

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Methods

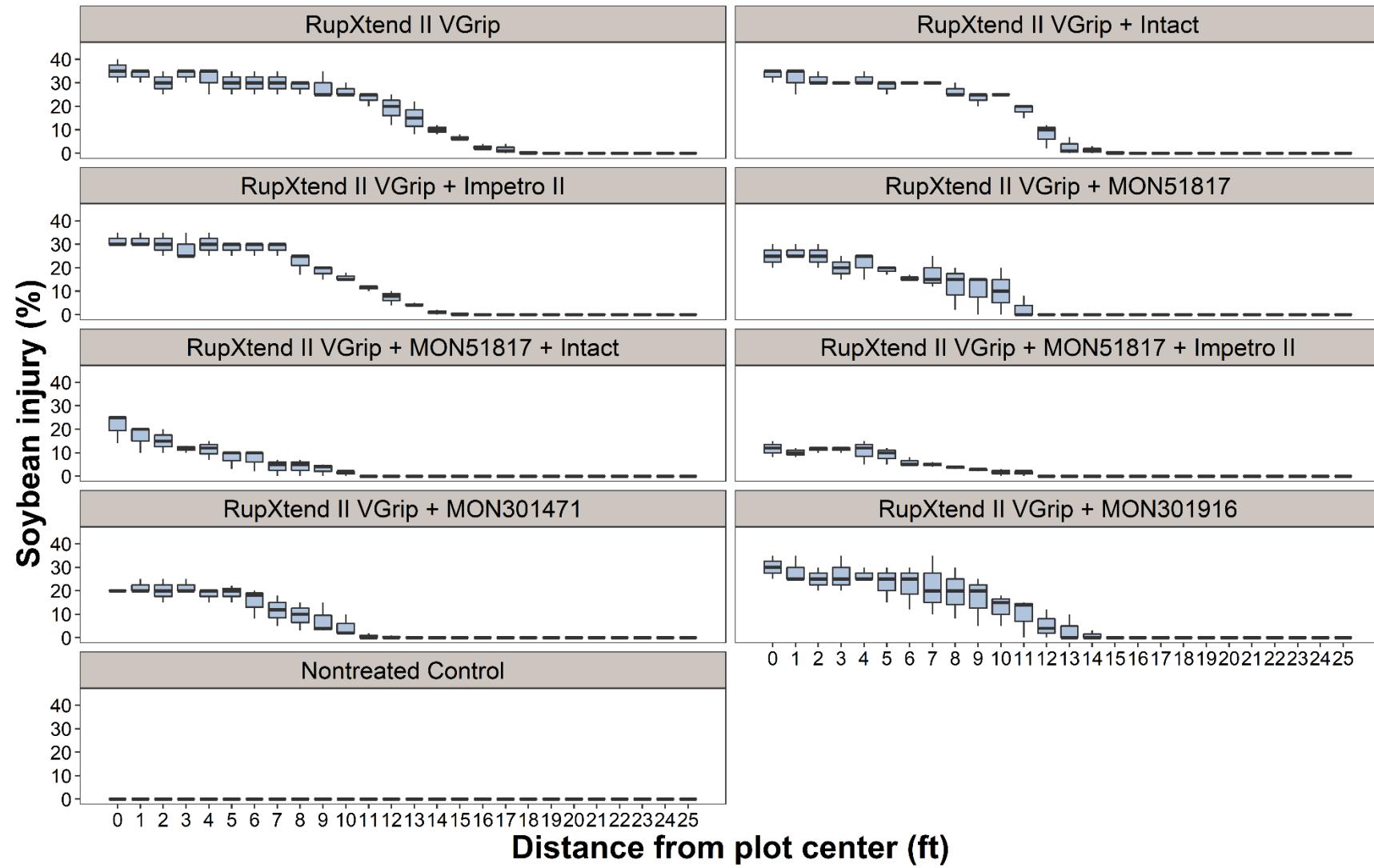
- Soybean variety: CZ 2550GTLL
- Soybean seeding rate: 140,000 seeds ac⁻¹ at 1.5" depth
- Soybean row width: 30" row width
- Soybean planting date: June 1
- Plot maintenance:
 - PRE herbicide treatment – June 1, 6 oz ac⁻¹ Authority First (+ 26 fl oz ac⁻¹ Roundup PowerMax to control emerged weeds)
 - POST herbicide treatment – June 23, 22 fl oz ac⁻¹ Roundup PowerMax + 8.5 lbs AMS/100 gal
- Herbicide treatment (flats): 8:00 to 9:05 am June 30
- Soybean stage at flat application: V4
- Flat removal from low-tunnel: 8 to 9:05 am July 1
- 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	80.0	93.1	66.1	79.9	93.3	64.8	79.3	91.6	65.3	79.9	93.5	59.7	77.0	88.2	65.3	0.0
24-48 h	83.2	108.0	64.2	78.5	100.1	61.1	77.3	96.2	61.4	72.7	91.0	50.8	73.9	87.8	61.0	0.0

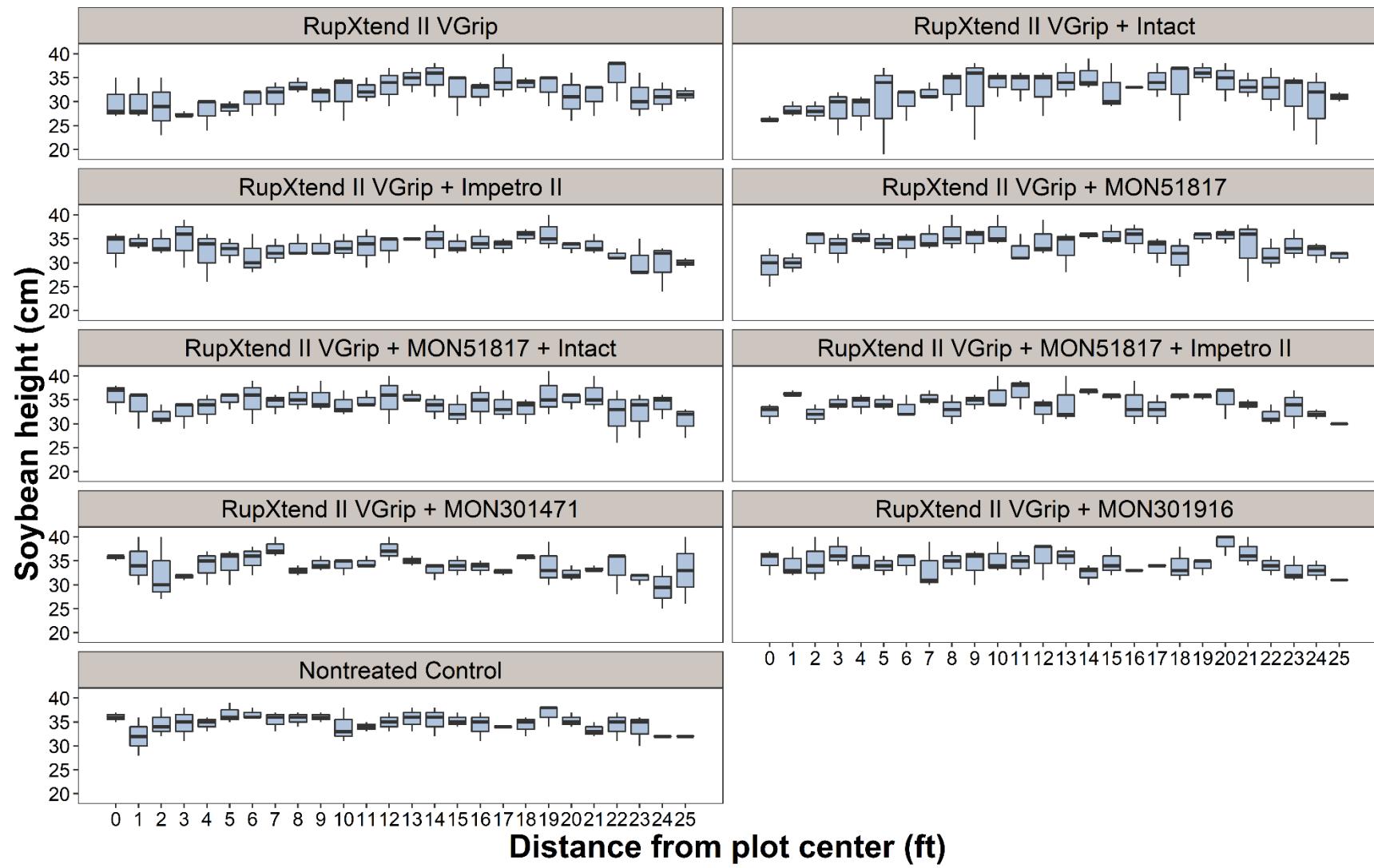
Results

20-ARL-SB21 at 14 DAT



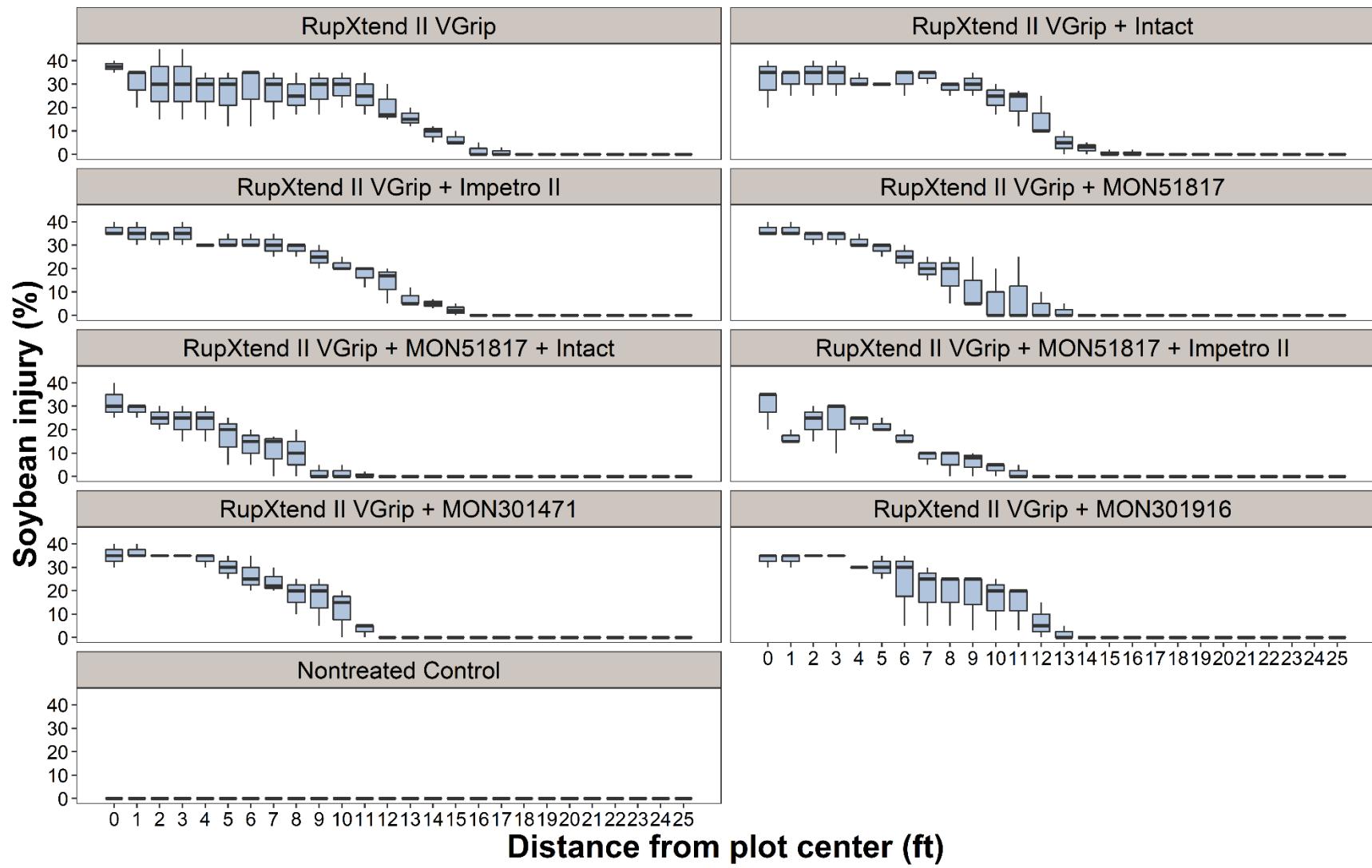
Source: University of Wisconsin-Madison Cropping Systems Weed Science, 2020

20-ARL-SB21 at 14 DAT



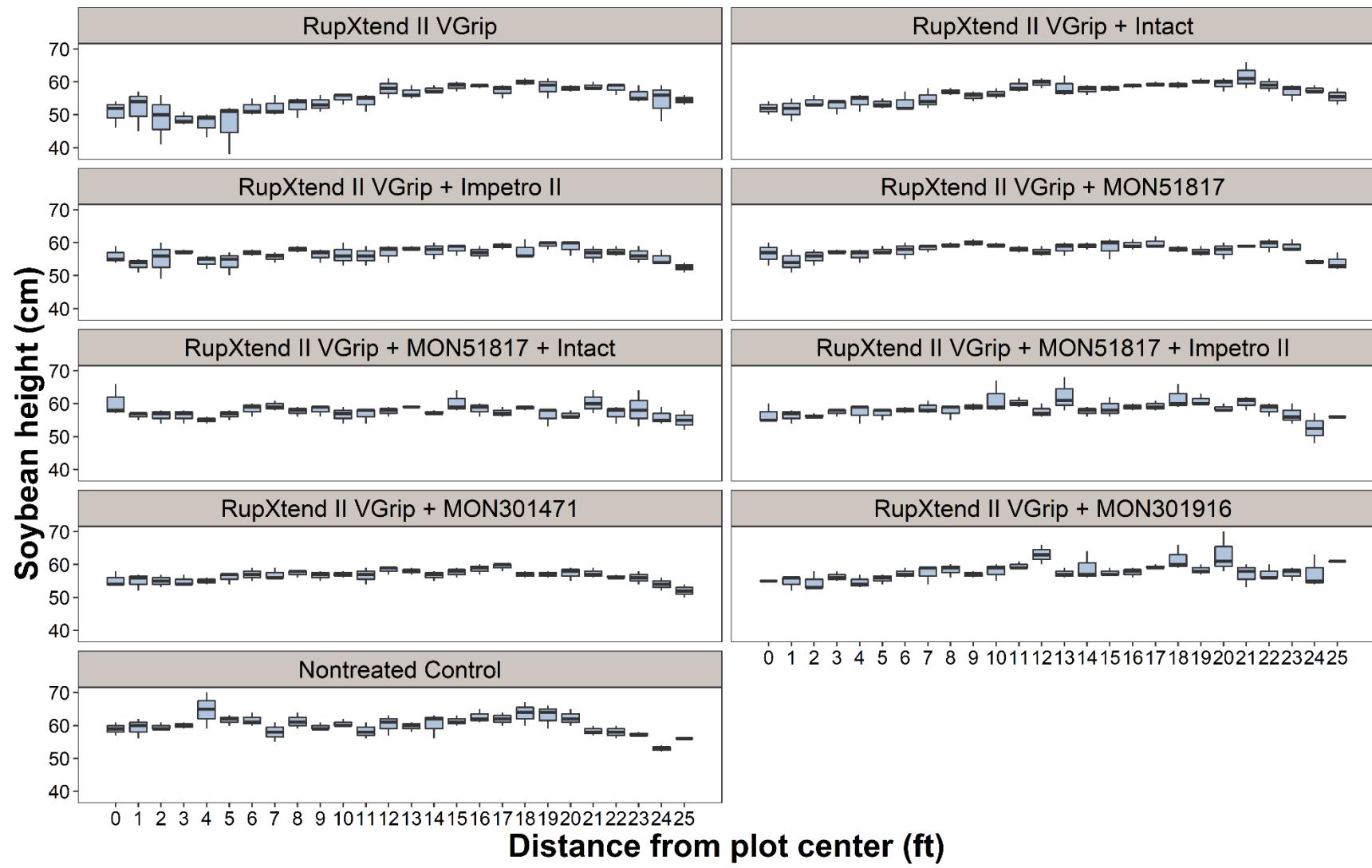
Source: University of Wisconsin-Madison Cropping Systems Weed Science, 2020

20-ARL-SB21 at 28 DAT



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

20-ARL-SB21 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
MON 301286 – RupXtend II VGrip	177	115	118	64.6	66.7
MON 301286 – RupXtend II VGrip + Intact	176	99	106	55.9	60.0
MON 301286 – RupXtend II VGrip + Impetro II	172	106	93	61.6	53.6
MON 301286 – RupXtend II VGrip + MON 51817 - VaporGrip	174	82	76	47.3	43.7
MON 301286 – RupXtend II VGrip + MON 51817 – VaporGrip + Intact	179	77	70	42.4	39.2
MON 301286 – RupXtend II VGrip + MON 51817 – VaporGrip + Impetro II	175	56	78	32.4	44.7
MON 301286 – RupXtend II VGrip + MON 301471 – VaporGrip + Guar	171	89	75	52.2	43.9
MON 301286 – RupXtend II VGrip + MON 301916 – VaporGrip + PCA	175	103	89	59.1	50.9
Nontreated Check	179	0	0	0.0	0.0



Figure 1. MON 301286 – RupXtend II VGrip at 28 DAT.



Figure 2. MON 301286 – RupXtend II VGrip + Intact at 28 DAT.



Figure 3. MON 301286 – RupXtend II VGrip + Impetro II at 28 DAT.



Figure 4. MON 301286 – RupXtend II VGrip + MON 51817 – VaporGrip at 28 DAT.



Figure 5. MON 301286 – RupXtend II VGrip + MON 51817 – VaporGrip + Intact at 28 DAT.



Figure 6. MON 301286 – RupXtend II VGrip + MON 51817 – VaporGrip + Impetro II at 28 DAT.



Figure 7. MON 301286 – RupXtend II VGrip + MON 301471 – VaporGrip + Guar at 28 DAT.



Figure 8. MON 301286 – RupXtend II VGrip + MON 301916 – VaporGrip + PCA at 28 DAT.



Figure 9. Nontreated Check at 28 DAT.