

# Bayer Low Tunnel Volatility Study

Summary of 20-ARL-SB20 study

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Cropping Systems Weed Science

UNIVERSITY OF WISCONSIN-MADISON

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## Methods

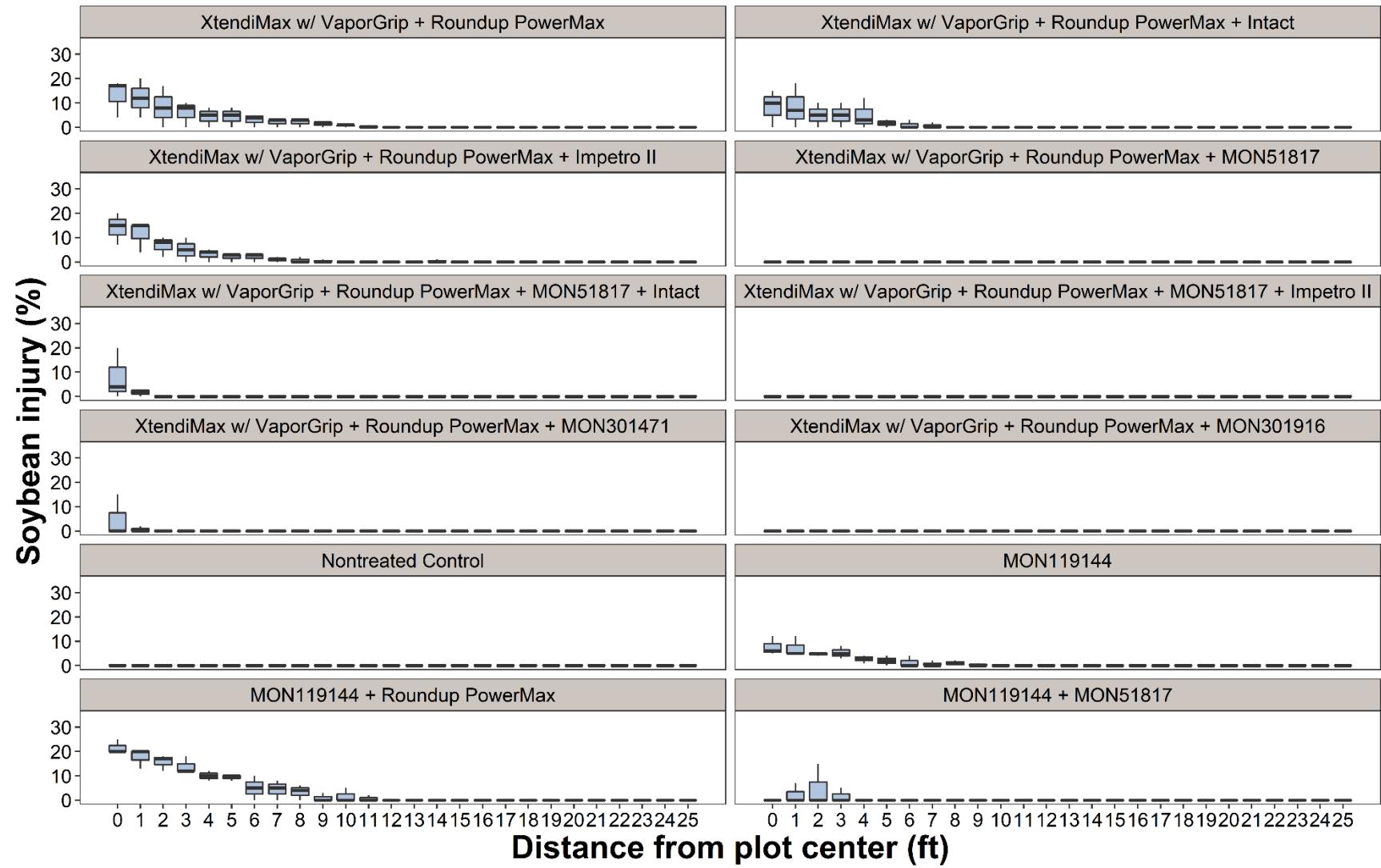
- Soybean variety: CZ 2550GTLL
- Soybean seeding rate: 140,000 seeds ac<sup>-1</sup> at 1.5" depth
- Soybean row width: 30" row width
- Soybean planting date: May 21
- Plot maintenance:
  - PRE herbicide treatment – June 8, 2 pts ac<sup>-1</sup> Prefix + 22 fl oz ac<sup>-1</sup> Roundup PowerMax + 8.5 lbs AMS/100 gal
  - POST herbicide treatment – June 23, 22 fl oz ac<sup>-1</sup> Roundup PowerMax + 8.5 lbs AMS/100 gal
- Herbicide treatment (flats): 9 to 10:15 am June 24
- Soybean stage at flat application: V4
- Flat removal from low-tunnel: 9 to 10:15 am June 26
- 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	72.8	96.3	57.6	66.7	83.2	53.8	66.1	81.8	53.0	77.8	97.5	51.2	64.1	76.2	52.4	0.0
24-48 h	79.3	102.2	62.1	73.8	89.6	60.3	73.5	90.9	60.2	67.8	93.2	40.6	70.8	81.0	59.7	0.0

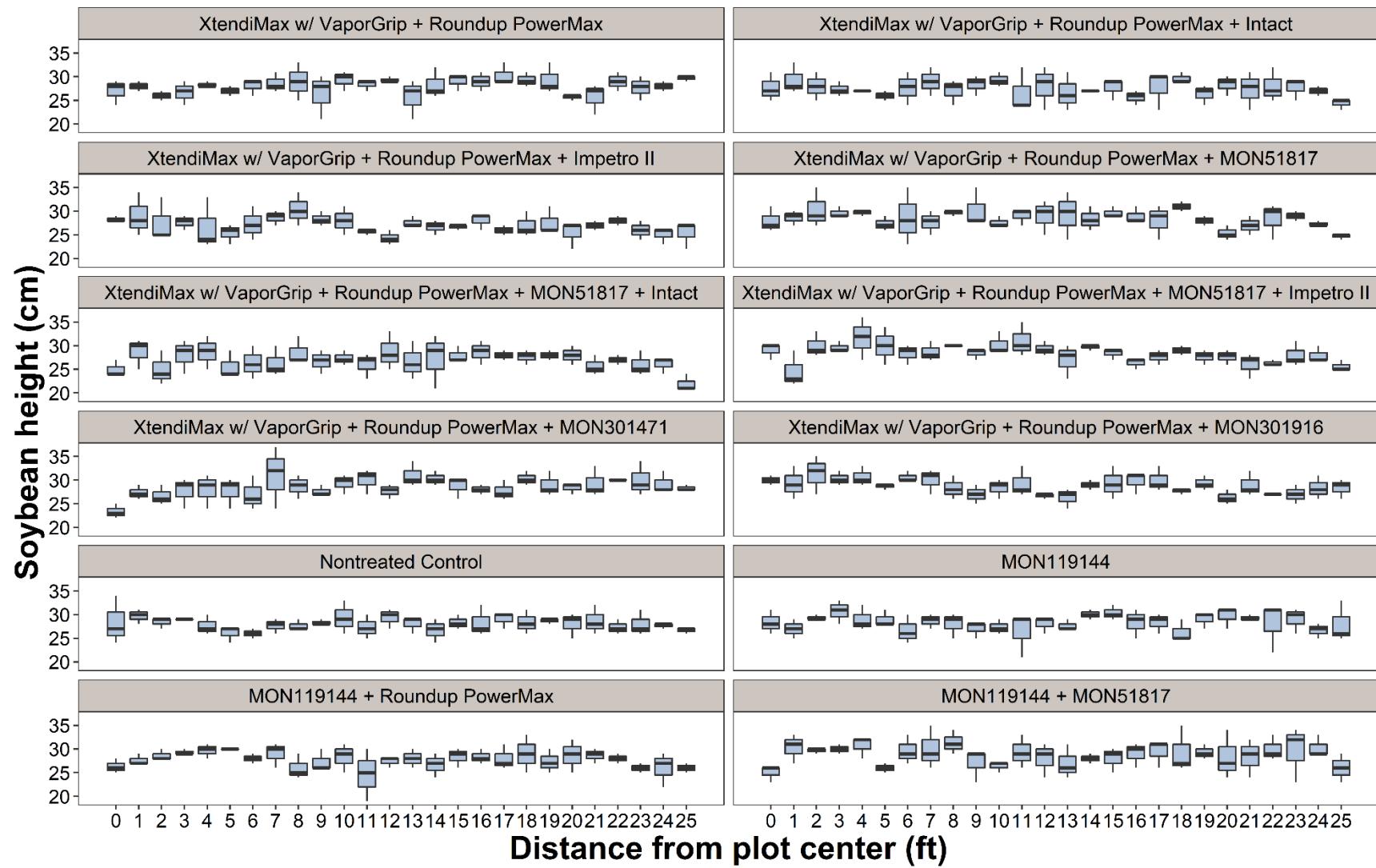
## Results

### 20-ARL-SB20 at 14 DAT



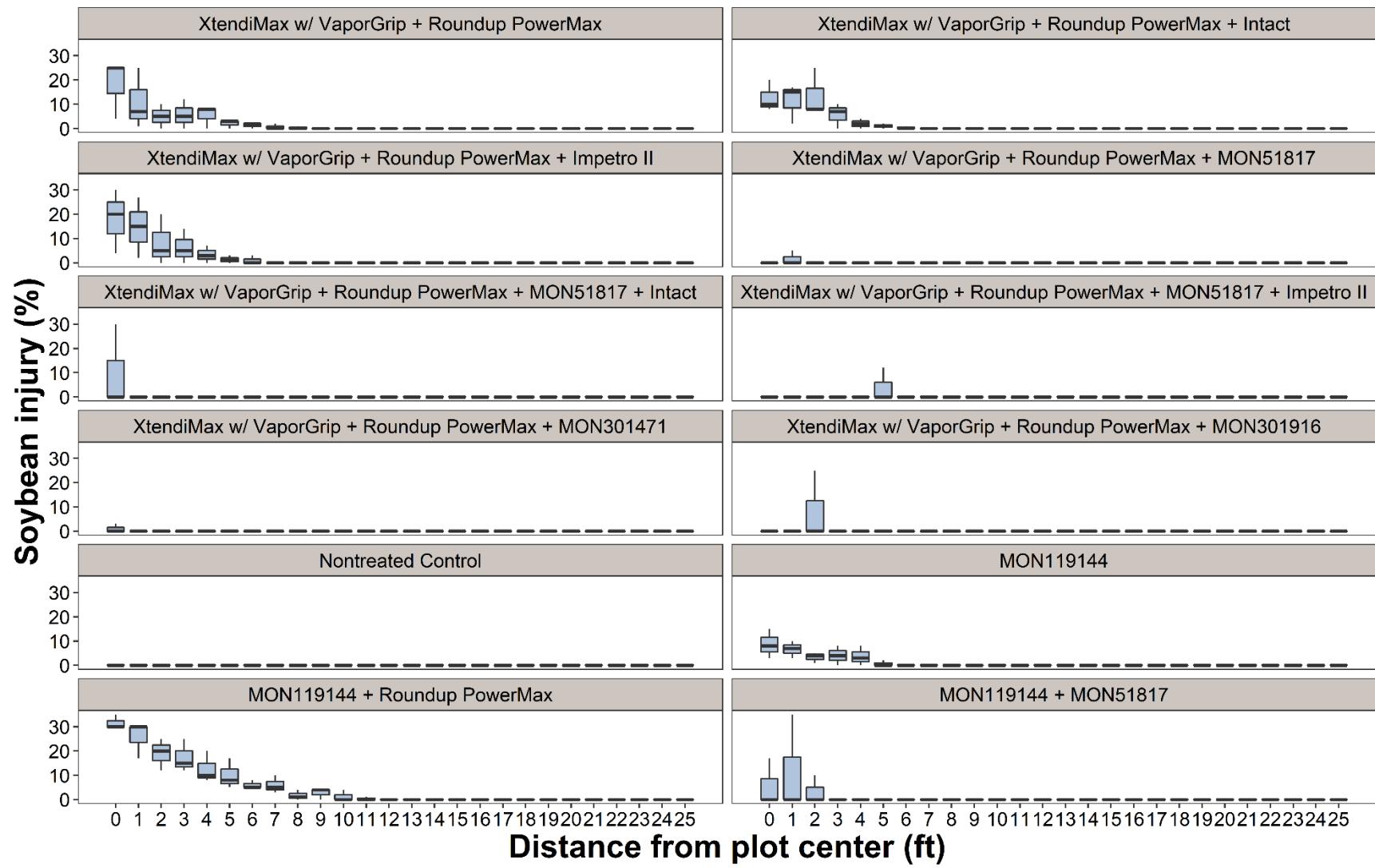
Source: University of Wisconsin-Madison Cropping Systems Weed Science, 2020

## 20-ARL-SB20 at 14 DAT



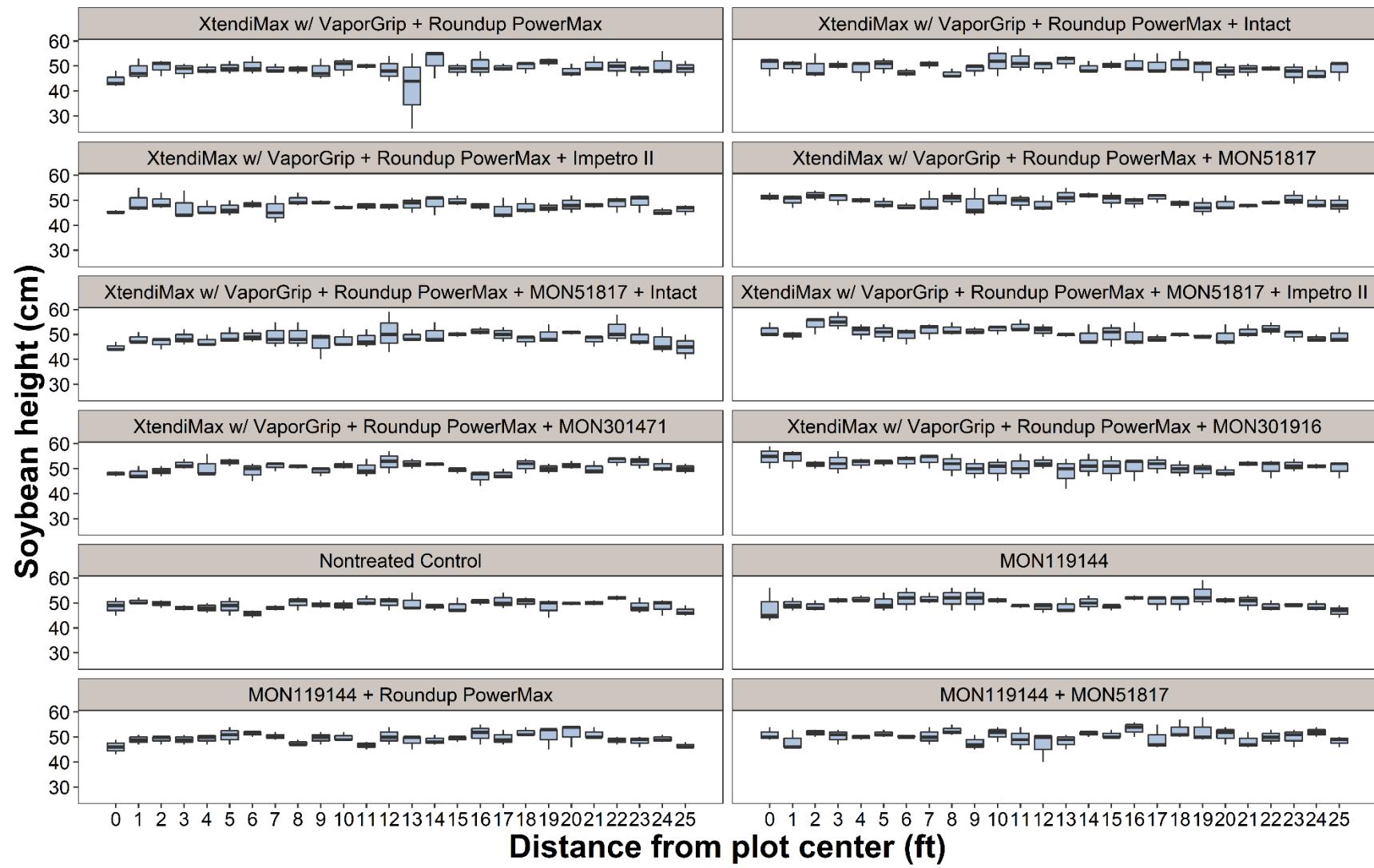
Source: University of Wisconsin-Madison Cropping Systems Weed Science, 2020

## 20-ARL-SB20 at 28 DAT



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

## 20-ARL-SB20 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
XtendiMax with VaporGrip + Roundup PowerMax	160	24	45	14.7	27.8
XtendiMax with VaporGrip + Roundup PowerMax + Intact	161	11	27	6.6	17.1
XtendiMax with VaporGrip + Roundup PowerMax + Impetro II	167	17	24	10.2	14.3
XtendiMax with VaporGrip + Roundup PowerMax + MON 51817 - VaporGrip	166	0	0	0.0	0.0
XtendiMax with VaporGrip + Roundup PowerMax + MON 51817 – VaporGrip + Intact	162	5	3	2.8	1.8
XtendiMax with VaporGrip + Roundup PowerMax + MON 51817 – VaporGrip + Impetro II	163	0	0	0.0	0.0
XtendiMax with VaporGrip + Roundup PowerMax + MON 301471 – VaporGrip + Guar	165	1	2	0.6	1.2
XtendiMax with VaporGrip + Roundup PowerMax + MON 301916 – VaporGrip + PCA	172	0	0	0.0	0.0
Nontreated Check	168	0	0	0.0	0.0
MON 119144	165	14	26	8.6	15.6
MON 119144 + Roundup PowerMax	167	33	51	19.9	30.1
MON 119144 + MON 51817 - VaporGrip	173	3	6	1.7	3.2



Figure 1. XtendiMax with VaporGrip + Roundup PowerMax at 28 DAT.



Figure 2. XtendiMax with VaporGrip + Roundup PowerMax + Intact at 28 DAT.



Figure 3. XtendiMax with VaporGrip + Roundup PowerMax + Impetro II at 28 DAT.



Figure 4. XtendiMax with VaporGrip + Roundup PowerMax + MON 51817 – VaporGrip at 28 DAT.



Figure 5. XtendiMax with VaporGrip + Roundup PowerMax + MON 51817 – VaporGrip + Intact at 28 DAT.



Figure 6. XtendiMax with VaporGrip + Roundup PowerMax + MON 51817 – VaporGrip + Impetro II at 28 DAT.



Figure 7. XtendiMax with VaporGrip + Roundup PowerMax + MON 301471 – VaporGrip + Guar at 28 DAT.



Figure 8. XtendiMax with VaporGrip + Roundup PowerMax + MON 301916 – VaporGrip + PCA at 28 DAT.



Figure 9. Nontreated Check at 28 DAT.



Figure 10. MON 119144 at 28 DAT.



Figure 11. MON 119144 + Roundup PowerMax at 28 DAT.



Figure 12. MON 119144 + MON 51817 – VaporGrip at 28 DAT.