

NE SARE Project LNE19-388R: "Control of Cucumber Downy Mildew through Nighttime Application of Ultraviolet Light Before and After Infection"

Tables and Figures for Results & Discussion Sections of Final Report

UV-C Tolerance Lab Study:

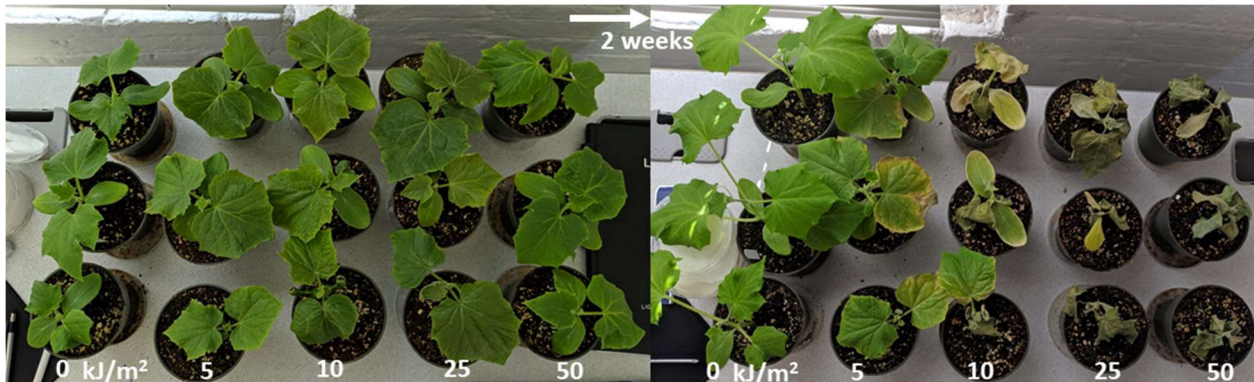


Figure 2. Effect of various UV-C doses on cucumber seedlings thirteen days after exposure.

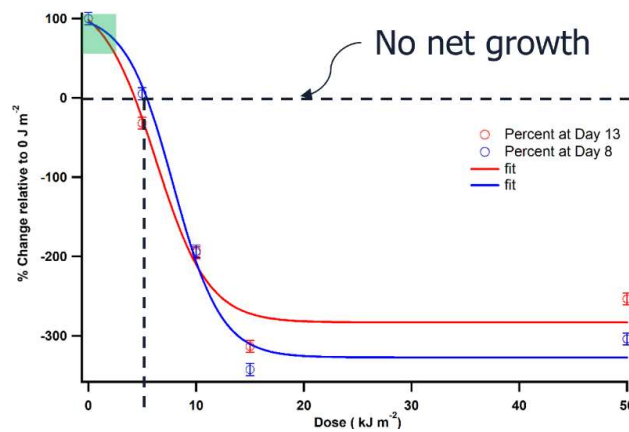


Figure 3. Model of leaf area as a function of UV-C dose.

2020 Field Data:



Figure 4. Disease progress curves for 2020 under each condition using black mulch.



Figure 5. Disease progress curves for 2020 under each condition using reflective mulch.

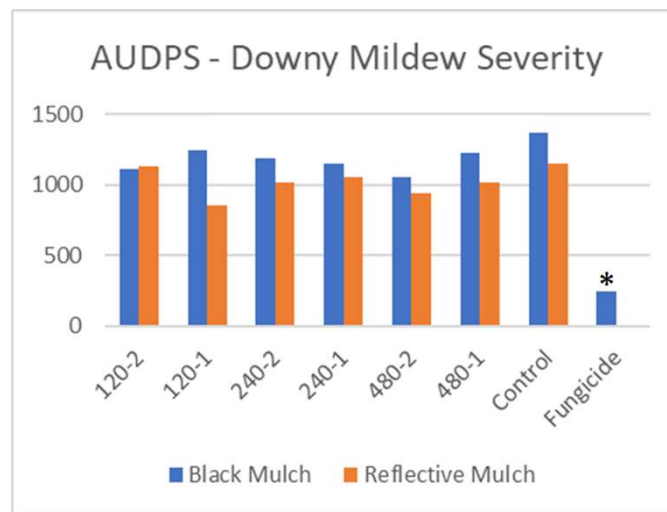


Figure 6. AUDPS values (Simko and Peipho, 2012) for each treatment and control condition in 2020. The asterisk (*) for the fungicide condition indicates that this condition was statistically significantly ($p < 0.05$) different from all other conditions. Vertical error bars for the conditions are not shown because each value is either a single measurement or the average of two measurement values.

2021 Field Data:

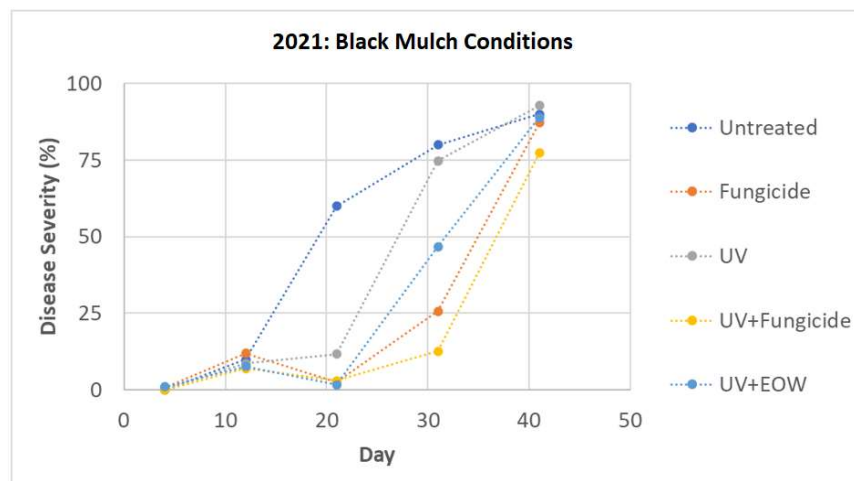


Figure 7. Foliar disease progression curves for 2021 under each condition using black mulch.

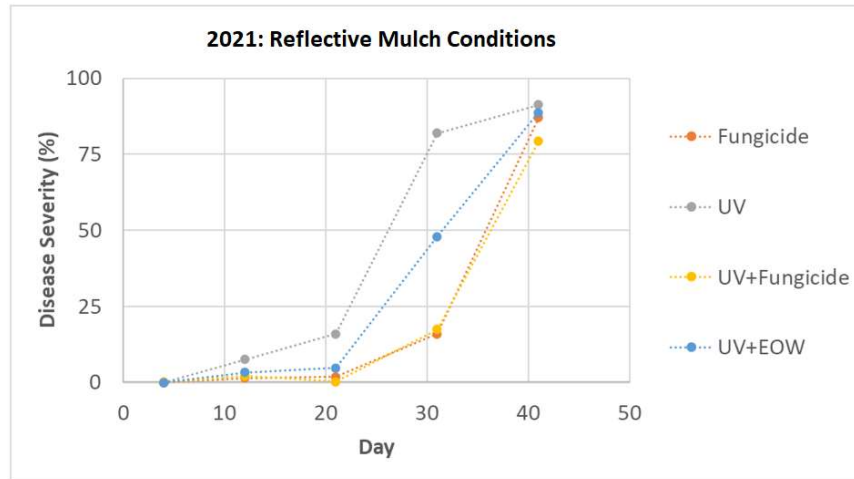


Figure 8. Foliar disease progression curves for 2021 under each condition using reflective mulch.

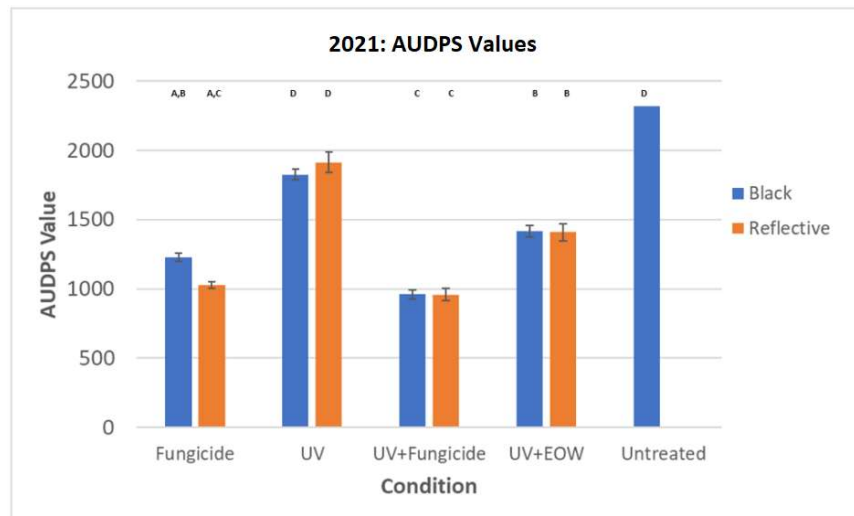


Figure 9. AUDPS values (Simko and Piepho, 2012) for each treatment and mulch condition in 2021. Letters above each bar indicate non-statistically significant differences among conditions with a common letter.

	Untreated (black mulch)	Fungicide (black mulch)	Fungicide (reflective mulch)	UV (black mulch)	UV (reflective mulch)	UV+Fung. (black mulch)	UV+Fung. (reflective mulch)(UV+EOW (black mulch)
Fungicide (black mulch)	t=4.67 (p<0.05)	-	-	-	-	-	-	-
Fungicide (reflective mulch)	t=5.49 (p<0.05)	n.s.	-	-	-	-	-	-
UV (black mulch)	n.s.	t=7.74 (p<0.05)	t=10.4 (p<0.05)	-	-	-	-	-
UV (reflective mulch)	n.s.	t=9.21 (p<0.05)	t=11.9 (p<0.05)	n.s.	-	-	-	-
UV+Fung. (black mulch)	t=5.78 (p<0.05)	t=3.63 (p<0.05)	n.s.	t=11.27 (p<0.05)	t=12.8 (p<0.05)	-	-	-
UV+Fung. (reflective mulch)	t=5.78 (p<0.05)	t=3.64 (p<0.05)	n.s.	t=11.27 (p<0.05)	t=12.8 (p<0.05)	n.s.	-	-
UV+EOW (black mulch)	t=3.91 (p<0.05)	n.s.	t=5.19 (p<0.05)	t=5.32 (p<0.05)	t=6.72 (p<0.05)	t=6.11 (p<0.05)	t=6.12 (p<0.05)	-
UV+EOW (reflective mulch)	t=3.93 (p<0.05)	n.s.	t=5.11 (p<0.05)	t=5.40 (p<0.05)	t=6.80 (p<0.05)	t=6.03 (p<0.05)	t=6.04 (p<0.05)	n.s.

Table 2. Results of Tukey's paired comparisons among all the conditions in 2021.