

Evaluation of fungicides for control of *Sclerotinia* drop of lettuce, Kinston, NC 2019.

The experiment was conducted at the Cunningham Research Station in Kinston, NC. Plots were bare ground double row beds on 42-in. centers, 12-ft long with 5-ft fallow borders at each end. In 2018, the field was planted with lettuce. Lettuce was transplanted in the field on 14 May in double rows spaced 12-in. apart with 12-in. plant spacing within the row (24 plants/plot). Irrigation and fertilization were applied via drip tape on top of the soil surface. Treatments were randomized into four complete blocks. On 21, 24, 28 and 31 May and 4 and 6 Jun, plots were inoculated by spreading and incorporating 125g of *Sclerotinia sclerotiorum* infested oat grain into the top inch of soil between the rows. Fungicide treatments were applied using a CO₂-pressurized backpack sprayer equipped with a hollow cone nozzle (TXVS-26). Applications were made on a 14-day interval: 22 May and 7 Jun. Lettuce drop incidence was evaluated on 28 May and 4, 11, 17 and 25 Jun and 2 Jul. Disease incidence was assessed as the number of plants collapsed or showing symptoms of *S. sclerotiorum*. Data were analyzed in the software ARM (Gylling Data Management, Brookings, SD) using analysis of variance (AOV) and Fisher’s protected least significant difference (LSD) test to separate the means.

Lettuce drop was first observed on 21 May in about 2% of the field due to natural inoculum that was present in the field prior to artificial inoculation. These symptomatic plants were removed and replaced with transplants before the first spray application. Applications of Excalia, Endura and Intuity resulted in lower disease incidence (%) of drop when compared to the non-treated. No phytotoxicity was observed. In the table, treatments are sorted by total disease incidence (%).

Treatment and rate of product per acre	Application no. ^y	Disease incidence ^z (%)			Total
		4-Jun	17-Jun	2-Jul	
Excalia 2.84SC 3 fl oz	1,2	2.3 a ^x (9.4%)	1.5 a (6.3%)	1.3 b (5.2%)	5.0 b (20.8%)
Endura 70WG 11 oz	1,2	3.0 a (12.5%)	1.5 a (6.3%)	1.5 b (6.3%)	6.0 b (25.0%)
Intuity 4SC 12 fl oz	1,2	3.5 a (14.6%)	2.0 a (8.3%)	1.0 b (4.2%)	6.5 b (27.1%)
Non-treated	N/A	2.3 a (9.4%)	2.8 a (11.5%)	5.3 a (21.9%)	10.3 a (42.7%)

^z Disease incidence based on the average number of diseased plants per plot (24 plants/plot).

^y Application dates: 1=22 May and 2=7 Jun.

^x Treatments followed by the same letter(s) within a column are not statistically different ($P=0.05$, Fisher’s protected LSD).