

Managing Black Rot with Accelerate Trial

Objectives:

1. Determine if foliar applications of Accelerate reduces the presence of black rot in Brussels sprouts and broccoli crops.

Farmer-cooperator will:

- Follow Research Protocols for study
- **Take photos** throughout the project.
- Keep in contact with PFI with updates and questions
- Turn in all data by October 2017

Practical Farmers of Iowa will:

- *Help set up research protocol.*
- *Monitor progress of project and provide support when needed.*
- *Publish results in a PFI research report, on PFI website, and potentially other outlets.*
- *Provide \$550 cooperator payment at conclusion of project year.*

RESEARCH PROTOCOL

Crops:

Brussels sprouts (Scheibel); broccoli (Holub)

Transplanting and In-field practices:

Each farmer can decide their own in field practices, but should record what was done and when. Practices should be consistent for both varieties and all plots.

Field Layout:

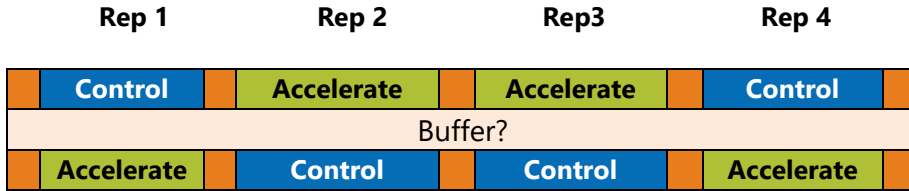
- At least 10 plants are needed per plot. If possible, use a couple "buffer" plants between replications that will not be used for data collection.
- Four replications of two treatments.

Treatments:

1. **Accelerate:** Apply Accelerate at a rate of 3 qt./ac on a bi-weekly basis as a preventative measure, beginning two weeks after transplanting. If signs of black rot appear in treatment plots, increase rate to 2 gal/ac.
2. **Control:** No Accelerate or other treatment should be applied to these plots.
(if you wish to compare a different control method, it will need to be an additional treatment)

Example Plot Layout

Orange columns between Reps are 2-3 buffer plants, for which no data is collected. Depending on your spray equipment, you might want to also have a buffer between the rows of plots, rather than having them side-by-side in the field. If you feel the foliar application will be easy to contain with the 18 in. row spacing (or whatever you use), then I'm ok with having the rows next to each other. The proper setup for a spray would contain a buffer between...



Harvest and Data Collection:

- See **excel workbook** for data collection sheets for scouting, foliar applications, and planting and harvest data.
- **Data collection on black rot:** After first sign of black rot in ANY plot, begin tallying affected plants, categorizing as: "no rot, light rot, moderate rot, severe rot". **Repeat tally prior to each foliar application.**
 - Harvest **crop** from plots as mature. Record weight by plot, count number of plants in each plot still living.
 - **Take photos of the trial in the field.**

Data Analysis

Data analysis will be done at PFI by Liz Kolbe and presented in a Research Report at the Cooperators' Meeting.

General growing Info	
varieties used:	
# plants / plot:	
w/in row spacing:	
row spacing:	
plot ft2:	
bed configuration notes:	
irrigation (Y/N and type):	
mulch (Y/N and type):	

Accelerate Spray to Treatment Plots	
Date of first application with 3 qt/ac:	
Date of first sign of black rot in any plot (note if treatment or control plot):	
Date of first application with 2 gal/ac:	

Black Rot Scouting, 2017 - begin scouting count after first sign of black rot in any plot. Count affected plants prior to each Accelerate application.							
Scout Date	Treatment (Accelerate, Control)	Rep	# plants "No BR"	# plants "Light BR"	# plants "Moderate BR"	# plants "Severe BR"	notes

Harvest, 2017					
Harvest Date	Treatment (Accelerate, Control)	Rep	# plants living at harvest date	Plot Weight (lbs)	notes