

Mycorrhizal Inoculant in Onion Transplants, 2018

1. Determine if inoculating leek starts with mycorrhizal fungi improves yield. Factors of 0.5x, 1.0x, and 1.5x the prescribed application rate will be tested, along with a non-inoculated control.

Farmer-cooperator will:

- Follow Research Protocols for study
- Take photos of plots and plants throughout the project
- Keep in contact with PFI with updates and questions
- Turn in all data by October 2018

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: Leeks

Transplanting and In-field practices:

Each farmer can decide their own transplanting and in-field practices, but should record what was done and when. Practices should be consistent for all plots, except for differences in the treatment being studied (addition of the inoculants). Some planting information is requested in the excel document.

Inoculating Transplant media: Using instructions from your selected mycorrhizal product, apply the mycorrhizal to enough trays of starts to complete your trial:

Control flats: No mycorrhizal applied

0.5x flats: Apply half the recommended rate

1.0x flats: Apply the recommended rate

1.5x flats: Apply 1.5x the recommended rate

Field Layout:

- Treatment plot lengths can be 10-20 plants depending on farm needs.

- Plant transplants into the field in a randomized, replicated design, with the differing levels of mycorrhizal being the treatments. Four replications of each set is preferred, three is ok.

Example Plot Layout in field

Rep 1	Rep 2	Rep 3	Rep 4
1x	0.5x	control	1.5x
1.5x	1x	0.5x	control
control	1.5x	1x	0.5x
0.5x	control	1.5x	1x

Harvest and Data Collection:

- Harvest as needed. Record marketable weight and count of the plot; count culls.

- See Excel spreadsheet for data collection.