

Horticulture

Research Protocols

Summer Lettuce Variety Trial, 2018

Objectives:

1. Determine which lettuce variety: Concept, Magenta, Cherokee, and Nevada (Faux will run Magenta, Muir, Bronze Arrowhead and Concept or Nevada), performs best as a summer lettuce in Iowa. (For this study, a summer lettuce is harvested during **July and early September**).

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 November 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.*

Crops:

Varieties: Concept, Magenta, Cherokee, and Nevada (Faux will run Magenta, Muir, Bronze Arrowhead and Concept or Nevada). Two (or more) successions of lettuce planting is preferred, **target of first harvest is July 1**.

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:

- treatment plot lengths can be 10-20 plants depending on farm needs.
- Four replications of each variety is preferred, three is ok.
- Two successions of lettuce is preferred; a single planting is ok (still need three or four reps in each succession).
- **Please provide PFI with planting info as requested in the datasheet.**

Example Plot Layout (for 4 varieties)

Rep1	Rep2	Rep3	Rep4
Concept	Nevada	Cherokee	Magenta
Magenta	Concept	Nevada	Cherokee
Cherokee	Magenta	Concept	Nevada
Nevada	Cherokee	Magenta	Concept

Example Plot Layout (for 3 varieties)

Rep1	Rep2	Rep3	Rep4
Cherokee	Magenta	Cherokee	Concept
Magenta	Concept	Concept	Cherokee
Concept	Cherokee	Magenta	Magenta

Harvest and Data Collection:

- **Score plot** for indications of: **bolting, tip burn, bottom rot, flavor** (spit test – if you spit it out, it isn't acceptable)
- Harvest **lettuce as mature. Record weight and count harvested** by plot. If marked as cull after harvest, note as "wash cull"; and do not include wash culls in marketable count or weight.
- **Take photos of varietal groups, and the plants in the field.**
- See **excel workbook** for pick sheets, scoring, and irrigation info and data entry.

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):	

By Succession (use as many as needed)		
	Seeding date	Transplanting date
Succession 1		
Succession 2		
Succession 3		
Succession 4		

Harvest Data						choose: "acceptable" or "unacceptable" (A/U)			
Harvest Date	Succession	Plot	Variety	Plot Weight (lb)	Plot Head Count (if harvested as heads)	bolting	tip burn	bottom rot	flavor (spit test)