

Snap Bean Variety Trials

Lima Bean Breeding Research Updates

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Snap Bean Variety Trials

Trial 1

Planted June 2

Harvested July 21-28

Trial 2

Planted July 14

Harvested September 1-8

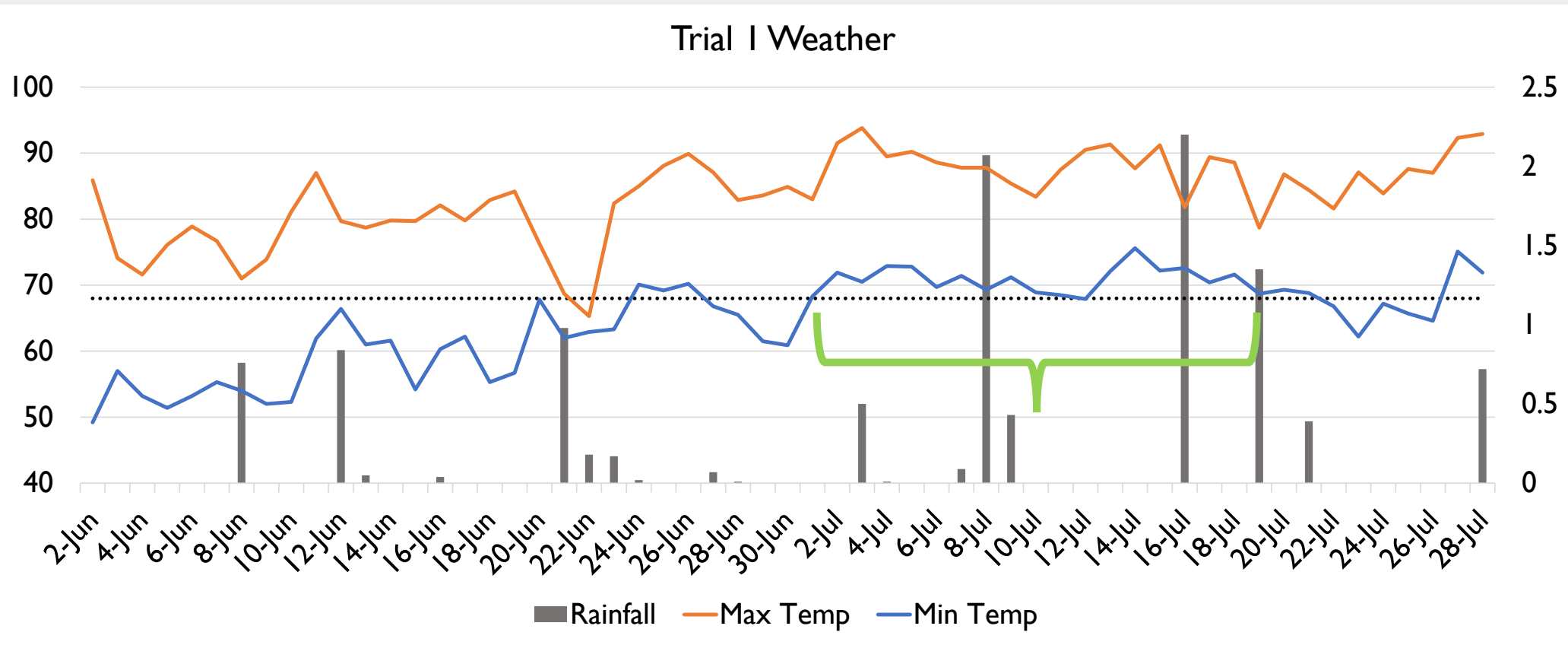
27 varieties tested

The goal of these trials is to assess heat tolerance.



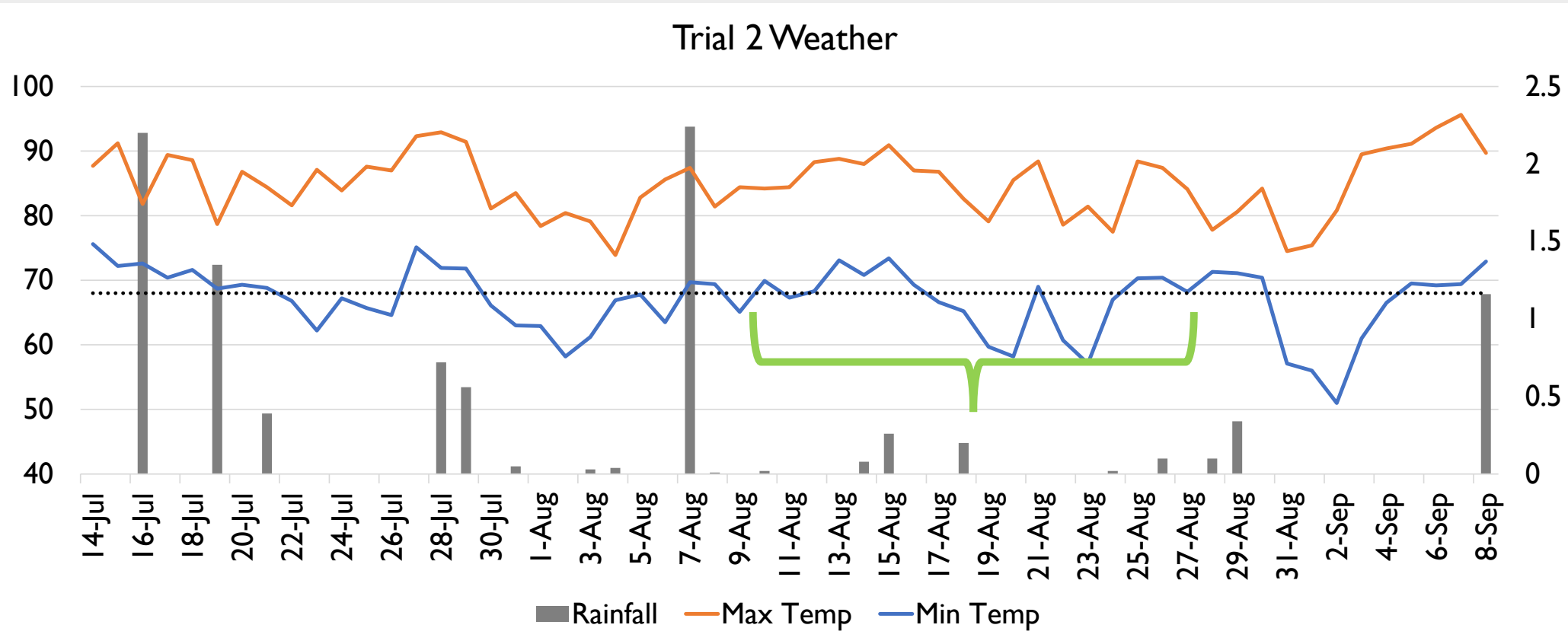
Trial 1 on July 21, 2023, the first day of harvest.

Snap Bean Variety Trials



Almost all nights during flowering had temperatures above 68°F.

Snap Bean Variety Trials



Half of the nights during flowering had temperatures above 68°F.

Snap Bean Variety Trials

Trial 1

Planted June 2

Harvested July 21-28

- Good stands
- Good plant growth
- Substantial heat stress

Trial 2

Planted July 14

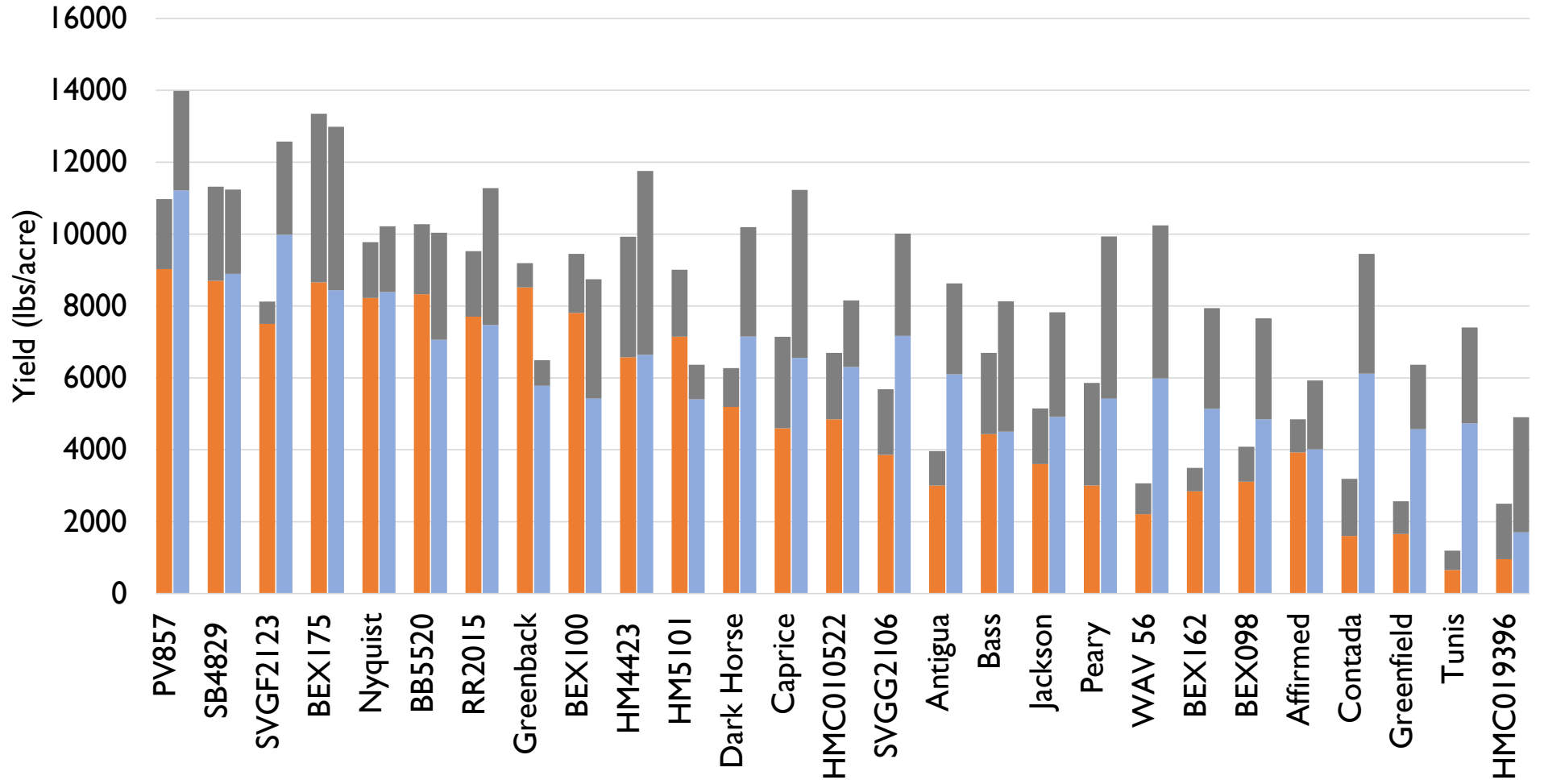
Harvested September 1-8

- Lower stands
- Moderate plant growth
- Less heat stress



Trial 1 on July 21, 2023, the first day of harvest.

Snap Bean Variety Trials



Snap Bean Variety Trials

Trial 1 Top 10

Variety	Marketable Yield (lbs/acre)
PV857	9,027 a
SB4829	8,702 ab
BEX175	8,657 ab
Greenback	8,517 ab
BB5520	8,329 ab
Nyquist	8,224 ab
BEX100	7,807 ab
RR2015	7,703 ab
SVGF2123	7,503 ab
HM5101	7,149 abc

Trial 2 Top 10

Variety	Marketable Yield (lbs/acre)
PV857	11,215 a
SVGF2123	9,985 ab
SB4829	8,895 abc
BEX175	8,438 bcd
Nyquist	8,388 bcd
RR2015	7,470 bcde
SVGG2106	7,170 cdef
Dark Horse	7,151 cdef
BB5520	7,062 cdef
HM4423	6,641 cdefg

Snap Bean Variety Trials

PV857

Crites Seed (check)
Grade 3 & 4

SB4829

Syngenta
Grade 3 & 4

Greenback

Syngenta
Grade 3 & 4

RR2015

Pure Line
Grade 4 & 5

Nyquist

Seminis
Grade 4 & 5

BB5520

Pure Line
Grade 4 & 5

SVGF2123

Seminis
Grade 4 & 5

BEX175

Brotherton
Flat

Snap Bean Stand Study

Recommended snap bean spacing seems very dense.
Can plant spacing be increased to reduce seed costs?

Spacing

Snap Beans.

Rows 30-36 inches apart, 6-10 plants/ft. Plant 50-75 lb/A of seed depending on seed size (lower rate for lighter seeds). Narrow rows increase yields but render late-season tillage difficult. Plant in rows 18-24 inches apart with 5-7 plants/ft. Plant 75-120 lb/A of seed, depending on seed size. Calibrate planter according to seed size. Sow 1-1½ inches deep in light sandy soil; shallower in heavier soil.

And how does stand loss affect yield?

Snap Bean Stand Study

Trial 1

Planted June 2

Harvested July 21-28

Trial 2

Planted July 14

couldn't harvest

Varieties

PV857, Caprice, Greenback

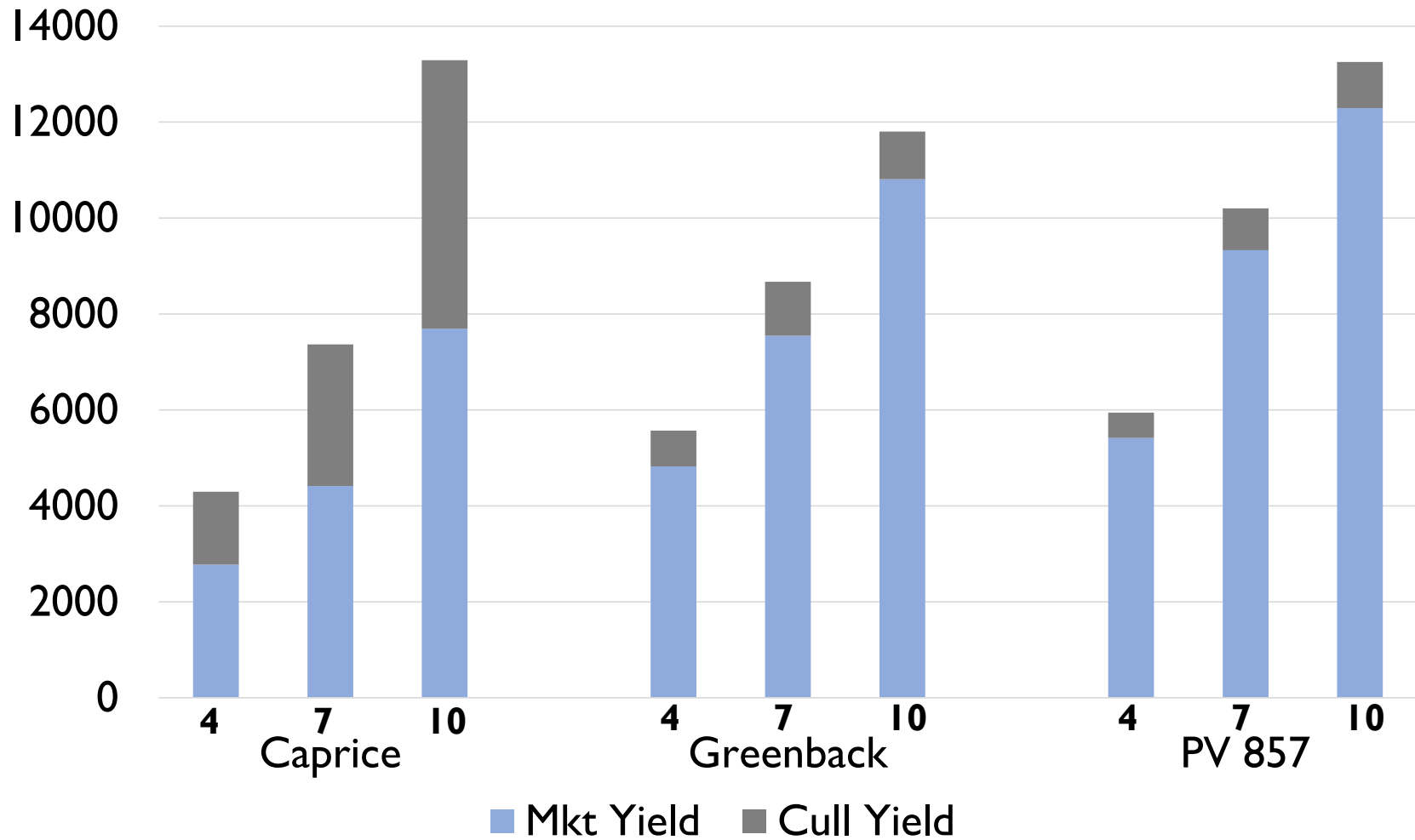
Spacings

4, 7, 10 seeds per foot



Trial 1 on July 21, 2023, the first day of harvest.

Snap Bean Stand Study



Snap Bean Stand Study

Seeds/ Foot	Seeds/ Acre	Total Yield (lbs/acre)	Marketable Yield (lbs/acre)	% Marketable	Seed Length (mm)
4	69,696	5,269 c	4,338 c	79.0 a	6.67 b
7	121,968	8,745 b	7,097 b	79.4 a	7.62 a
10	174,240	12,781 a	10,264 a	80.8 a	8.00 a

- **Total Yield and Marketable Yield are impacted by plant population.**

- **% Marketable not impacted by plant population.**

- **Maturity was slower in lowest population.**

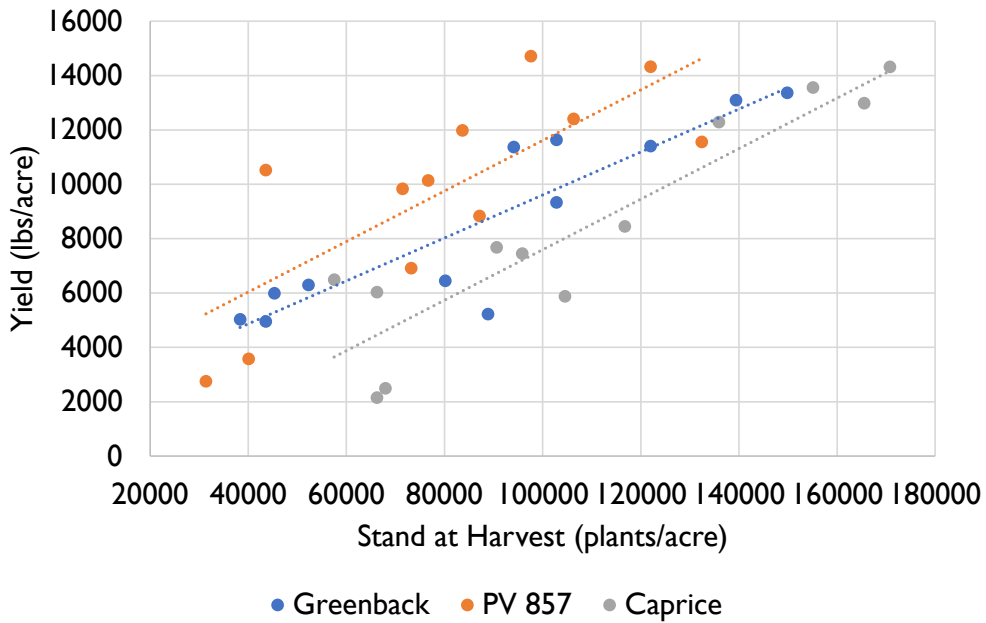
- **Planting fewer seed not economical?**

- **Protecting stand is important!**

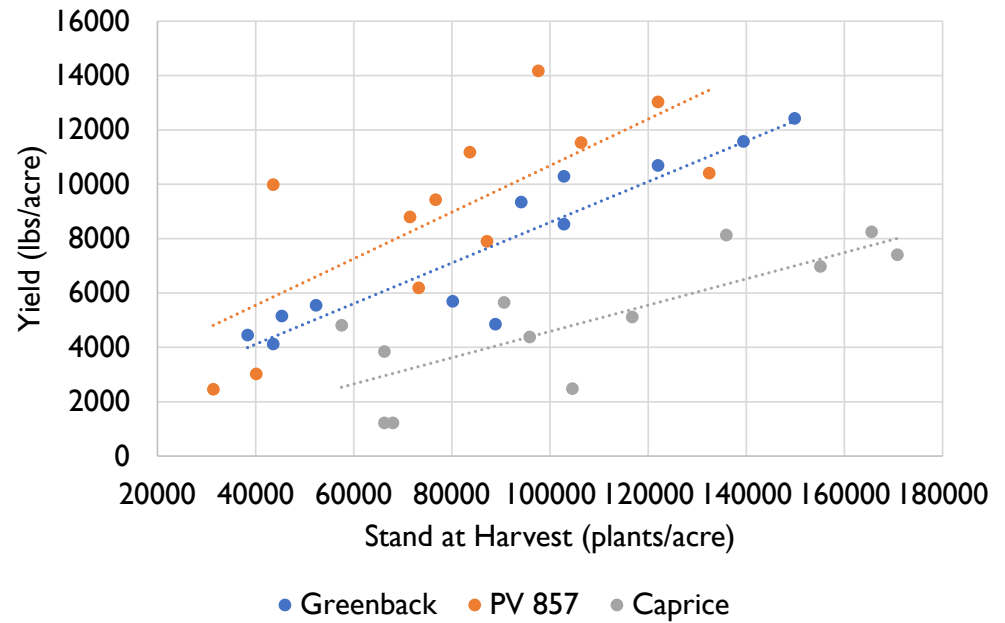
Snap Bean Stand Study

Heat susceptible **Caprice** has a different response than heat tolerant varieties **PV 857** and **Greenback**.

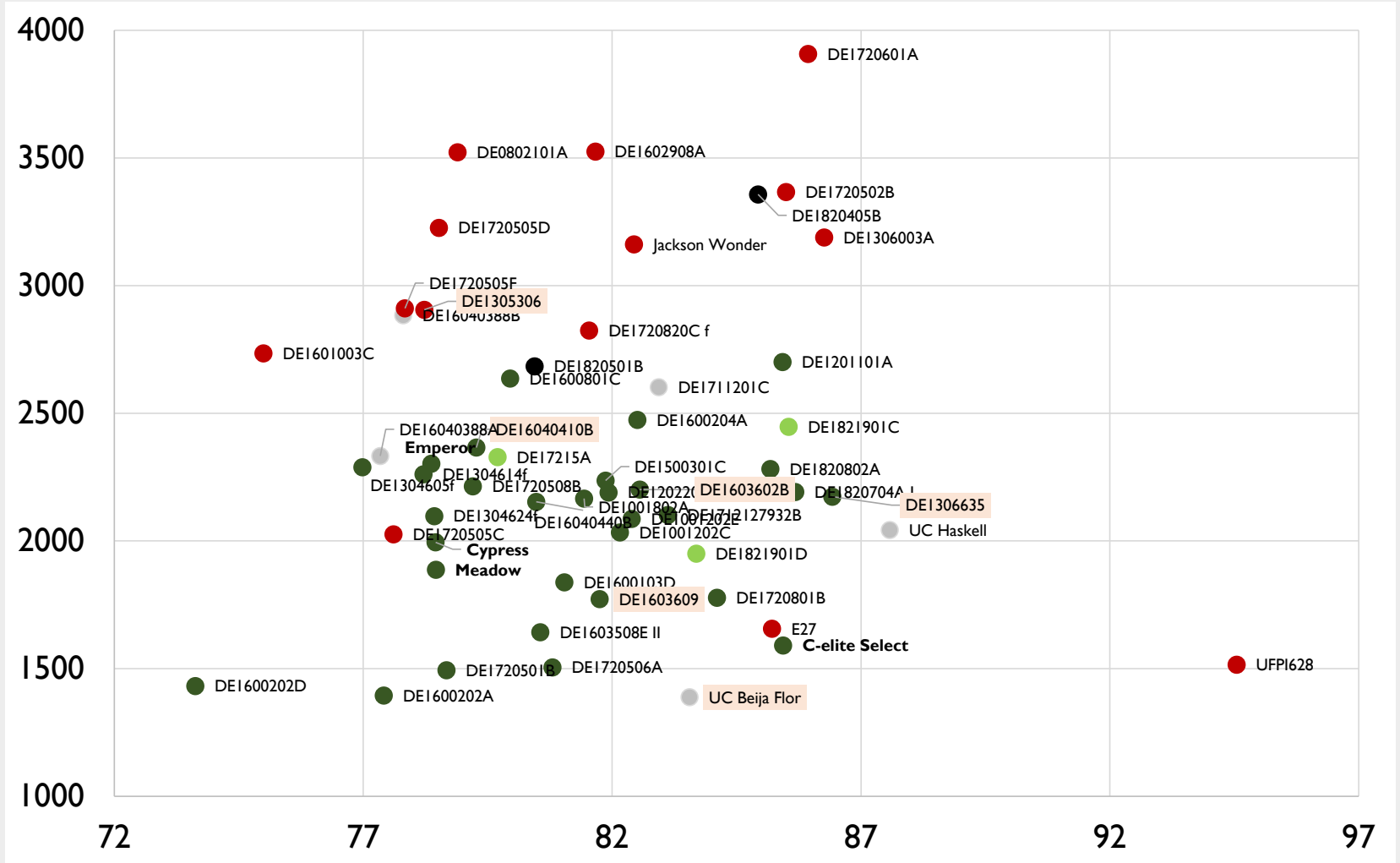
Total Yield vs Final Stand



Marketable Yield vs Final Stand



2023 Baby Lima Trial



Identifying Useful Sources of Resistance



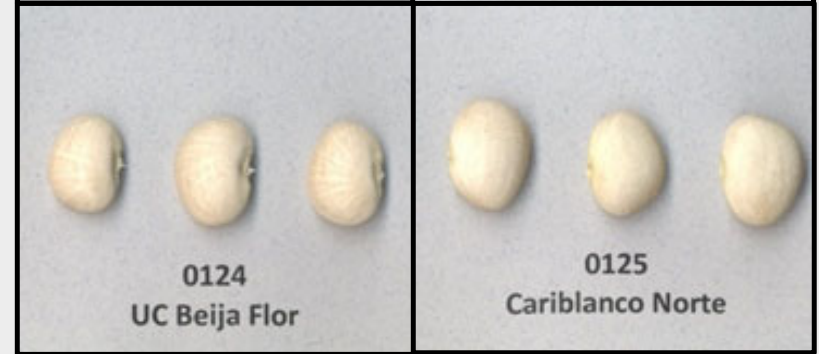
Tom Evans inoculating a field screen for white mold.

Roots of RKN resistant & susceptible lines.



Sources of Root Knot Nematode Resistance

Galling Index ≤ 2.0 & ≤ 5.0 Egg Masses Per Root System



Working to Make Seed Available

Baby Limas

Tested lines with processing seed supplier, including trial increases.

Tested lines with home garden seed supplier (specialty types).



Fordhook Limas

Processors testing lines.

Considering possible seed increase sites in California with UC Davis.



Pole Limas

Tested lines with growers in 2023.

Looking for people interested in growing and selling seed.



Trying to Inspire More Lima Bean Eaters



WHYY NEWS CLIMATE DESK

Love them or hate them, lima beans could be key to climate resilient crop

A new collaboration of scientists, farmers, and foodies are giving the lima bean a makeover. But will people actually eat them?

2 months ago

[▶ Listen 9:29](#)



Genetics Stuff



Thank You!

Delaware Department of Agriculture Specialty Crop Block Grant:

Identifying White Mold Resistant Lima Bean Germplasm and Continued Lima Bean Variety Improvement 2021-2024

Specialty Crop Research Initiative Grant:

Development of Genomic Resources to Accelerate Lima Bean Breeding for Consumer Quality and Agronomic Traits.

Participating Seed Companies

Pure Line, Syngenta, Seminis, Brotherton, HM Clause

Steve Yingling provided snap bean standards.

Pictsweet provided lima bean standards.

2023 Vegetable Program Employees

Austin Truitt, Ketsia Murat, Paige Sammons, Lily Hearn, Arely Arriaga-Gonzalez, Mya Jones, Rob Hanifin

Carvel Research & Education Center Farm Crew




Paige planting limas



Rob and Austin counting nematode eggs

https://sites.udel.edu/weeklycropupdate/



UNIVERSITY OF DELAWARE
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EXTENSION

Volume 31, Issue 21 August 18, 2023

Vegetable Crops

Vegetable Crop Insect Scouting
David Owens, Extension Entomologist,
owensd@udel.edu

Sweet Corn
Corn earworm trap counts are high, and for only the second time this summer, we have caught a European corn borer in a pheromone trap! They do exist!

During the first 10 days of silking with temperatures above 82 degrees, a 2-day spray schedule following a pyrethroid and a 3 day spray schedule following a chlorantraniliprole application is advisable, especially at sights with very high moth activity. Last week's Weekly Crop Update had a very in-depth article on earworm management. With frequent applications such as these, be sure to scout for aphids, especially about 10 days before harvest so that if a population begins developing, a high rate of Assail can be used (7 day pre harvest interval). We are in the process of conducting adult vial pyrethroid resistance tests, and so far, cyfluthrin is showing a greater level of activity against corn earworm than lambda cyhalothrin, similar to field trial results from the last couple of seasons. While I recommend the same spray schedule regardless of the pyrethroid used, it may be that cyfluthrin in the spray program might prevent a couple of misses and provide just a little bit more efficiency.

Trap counts can be found at <http://agdev.anr.udel.edu/trap/trap.php>, and thresholds can be found at: <https://www.udel.edu/academics/colleges/canr>


</cooperative-extension/sustainable-production/pest-management/insect-trapping/silk-stage-sweet-corn/>

Thursday trap counts are as follows:

Trap Location	BLT CEW	Pheromone CEW
	3 nights total catch	
Dover	6	156
Harrington	2	71
Milford/Canterbury	4	165
Rising Sun	9	65
Wyoming	8	153
Bridgeville/Redden	1	93
Concord	7	44
Georgetown	2	82
Woodenhawk	2	78
Laurel	10	117
Lewes	-	-

Snap Beans and Lima Beans
Scout beans for worms or consider a treatment if a lot of moths are observed in the crop. Unlike sweet corn and unlike European corn borer, no threshold is available for timing sprays on either crop for this pest, except a black light threshold that to be honest, we have not reached or exceeded in years upon years. In lima bean fields, a beat sheet or shaking plants and counting earworm on the ground can be used to estimate population. Thresholds in lima beans are 1 earworm per 6 row feet. Labeled insecticides include IPM and bee friendly materials such as Avaunt, Vantacor, Coragen, Blackhawk, Bt, and high rates of Intrepid. Of these, Coragen and Vantacor are going to provide the longest residual control.

August 18, 2023 Weekly Crop Update Volume 31, Issue 21 1



WEEKLY CROP UPDATE
UD COOPERATIVE EXTENSION HOME

WEEKLY CROP UPDATE

FROM UD COOPERATIVE EXTENSION

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- [Vegetable Crop Insect Scouting](#)
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- [Squash Vine Borers and Pumpkins](#)
- [Cover Cropping is a Necessary Tool for Vegetable Growers](#)
- [Cover Crops Provide Important Services for Vegetable Growers](#)

Fruit Crops

- [Fruit Crop Insect Scouting](#)
- [Netting to Control Birds in Vineyards](#)

Agronomic Crops

- [Agronomic Crop Insect Scouting](#)

General

- [Guess the Pest July 28 Answer: Asiatic Garden Beetle](#)
- [Guess the Pest August 4](#)

Announcements

- [2023 Women in Ag Webinars – 2nd Wednesdays](#)
- [High-impact Food Safety Webinar – Aug 17 | online](#)
- [Invited Listening Session on the Financial Needs of Farm and Ranch Families](#)
- [Participate in Research, Earn Money and Nutrient Management Credits](#)
- [Farmland Preservation Program August 22nd](#)
- [Farmland Preservation Program August 24th](#)
- [Small Grain Grower Meeting](#)
- [Carrot Field Crop Tour](#)
- [Fresh Market Vegetable Research Field Day](#)
- [Mar 26: Learn Salgado Sausage](#)
- [Soybean Planting Population Survey](#)
- [Farmland and Rental Rate Study](#)

Weather Maps

Pest Trends

UNCATEGORIZED 31/18

PREVIOUS ARTICLE

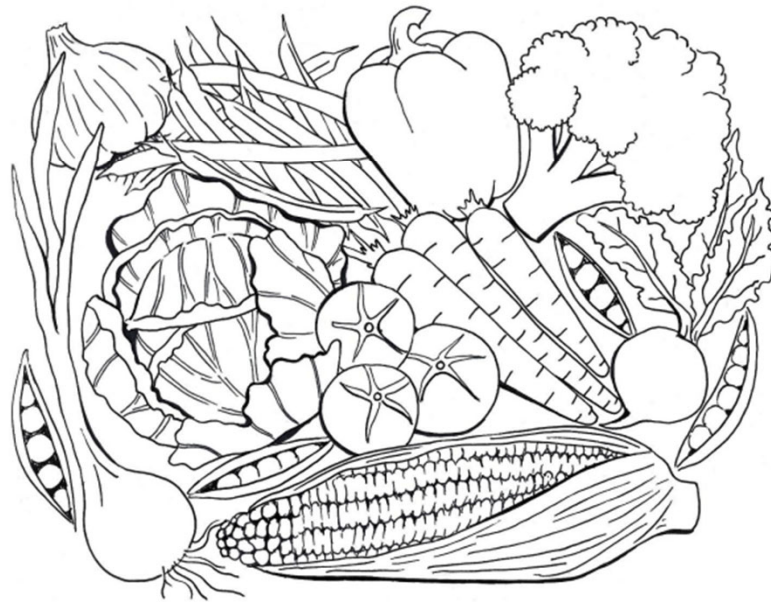
SQUASH VINE BORERS AND PUMPKINS

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**2024/2025
Mid-Atlantic Commercial Vegetable
Production Recommendations**



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