



# Variety Trial of Bush Beans In Organic Cropping systems

(*Phaseolus vulgaris*)

By Harley Cech



## Introduction

The goal of this trial is to find out the strengths and weaknesses of bush beans produced in organic systems.

### Why are variety trials important?

It's important to show what beans will do well in an area and what varieties will do the best for farmers. That is part of the reason I am measuring more than just yield. All the different measurements will help determine which varieties outshine the others.

### What is an organic system?

A rapidly growing process of farming that focuses on ecological systems, using non-synthetic inputs to improve overall soil quality and fertility and optimize pest management. It's important to do research in this field as Organic farming is better for our planet but can be challenging dealing with pests and diseases without the use of synthetics.

### Common bush bean pests?

Mexican Bean Beetle, Japanese Beetle

### What is a bush bean?

They are one of the two main styles of what most people know as green beans.

### Benefits of bush beans?

They are legumes which means they can fix nitrogen; this is good for soil health. They have lots antioxidants, including Vitamin C, A K and quercetin.

### Bean varieties tested:

Provider, Celine, Goldilocks, Royal Burgundy, Rocodor, Gold Rush, Capitano, Bronco, Dulcina, BBL 274

## Methods

Beans were first planted May 17<sup>th</sup>. Due to poor germination, I replanted July 7<sup>th</sup>. The plot is 35 by 10 feet, with two rows per variety. varieties were 2 ft apart, the two rows of the same variety are 18 inches apart.

There were 60 seeds sown per row.

Beans were harvested four times and weighed.

### Bean varieties:

Provider, Celine, Goldilocks, Royal Burgundy, Rocodor, Gold Rush, Capitano, Bronco, Dulcina, BBL 274

For the bean taste test, I had seven people try each bean and rate the flavor on a scale of 1-5.

## References

- [https://www.uvm.edu/sites/default/files/Northwest-Crops-and-Soils-Program/2022%20Research%20Reports/2022 Organic Dry Bean Variety Trial Report.pdf](https://www.uvm.edu/sites/default/files/Northwest-Crops-and-Soils-Program/2022%20Research%20Reports/2022%20Organic%20Dry%20Bean%20Variety%20Trial%20Report.pdf)
- <https://edis.ifas.ufl.edu/publication/CV118>
- <https://www.stylecraze.com/articles/amazing-benefits-of-green-beans/>

## Results

Seven of the 10 varieties germinated with the first seeding Here's how many plants of each variety emerged:

Provider:	1
Celine:	2
Goldilocks:	4
Royal Burgundy:	3
Rocodor:	0
Gold Rush:	0
Capitano:	1
Bronco:	0
Dulcina:	3
BBL 274:	33

### Average Weight (lbs) of each variety from harvest:

Provider:	1.0
Celine:	0.15
Goldilocks:	0.3
Royal Burgundy:	0.14
Rocodor:	0
Gold Rush:	0
Capitano:	1.44
Bronco:	0
Dulcina:	0.49
BBL 274:	2.44

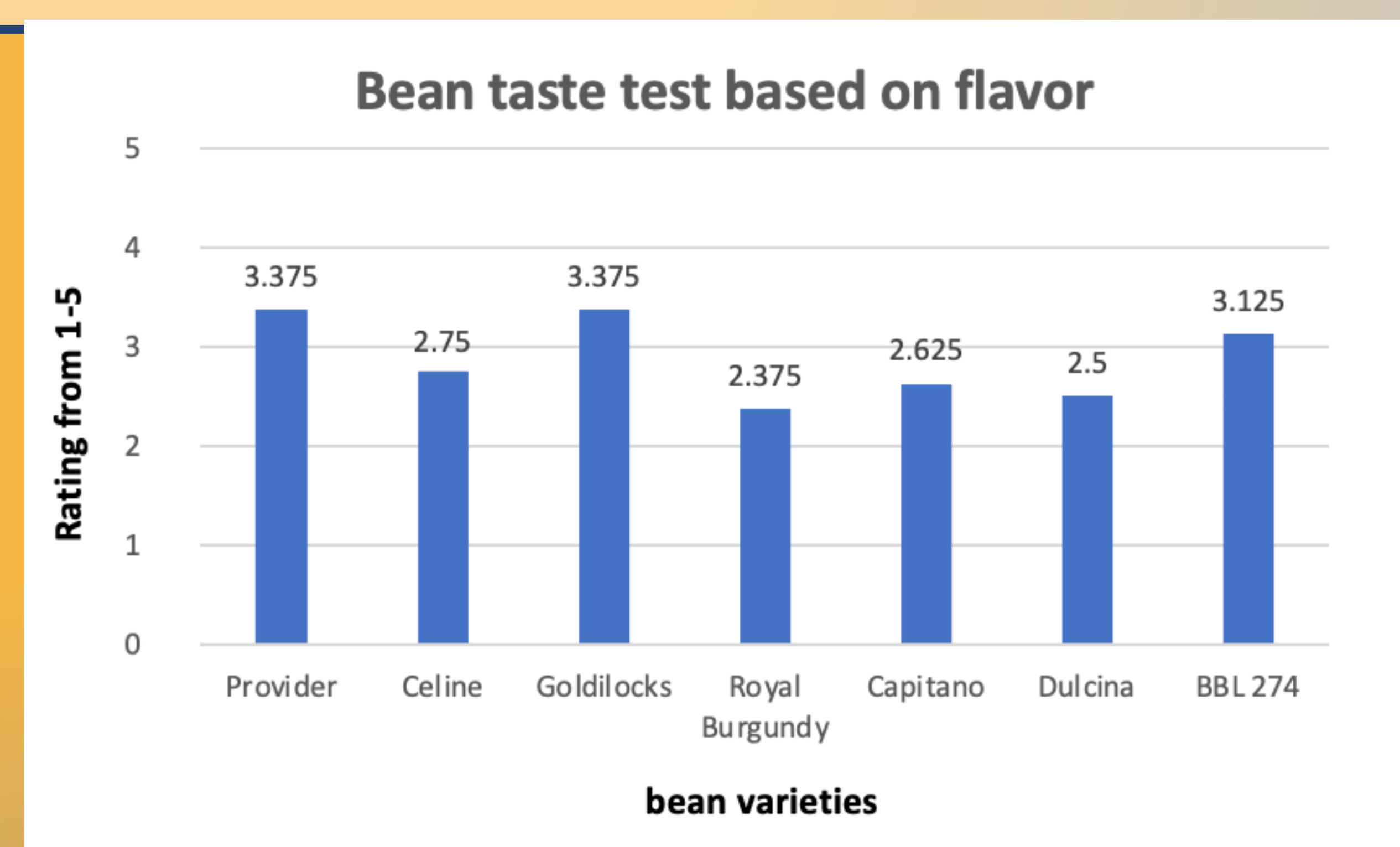
### Taste test results:

Favorite varieties: Provider and Goldilocks

Second: BBL 274

Least favorite: Dulcina and Royal Burgundy

\*Ratings shown on bar graph below\*



## Conclusion

In conclusion, out of all the varieties the BBL 274 was by far the most successful. When first planting all the beans in May there was not much rain. Taking this into account shows which varieties are the most drought resistant. Although most of the varieties were able to produce a plant. There was not a significant amount, that would be good enough for a real harvest for any farmer. With that I decided to reseed the varieties that had the little or no bean plants come up. The reseeding was a success and now every variety has more than one plant. Unfortunately, I did not reseed soon enough for them to grow beans on the plants. I learned a lot from this project and If given the chance to do it again I would make sure that the seeds were watered in well and not planted too deep as to give them a better chance of germinating. I'd also try varieties that are more pest reason because as the summer ended the thriving varieties had lots of damage.