TENNESSEE HOME GARDEN VARIETY TRIALS 2022 RESULTS

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INTRODUCTION

The goal of the Tennessee Home Garden Variety Trials program is to help home gardeners answer the question "Which variety will do best in my Tennessee home garden?" Growing a well-adapted variety can result in higher yields, more flavorful produce and reduced chemical applications to control pests and diseases. Unfortunately, it is a tough question to answer. Because of the high cost of trialing vegetable varieties, there is very little information on variety performance specific to the many different regions within Tennessee. We decided to approach this dilemma from a different angle. By involving Tennessee home gardeners in a citizen science approach to variety evaluation, we are able to see how varieties perform across many different locations and gather important data on attributes that make varieties valuable in a home garden, such as germination, plant health, yield, attractiveness and flavor. We are excited about the opportunity to work side by side with our Tennessee citizens, and we hope that you will find these results useful in answering the question of which variety will grow best in your Tennessee home garden.

GOALS

- 1. Gardeners will collect data on variety performance, which will be compiled to identify varieties with superior performance in Tennessee.
- 2. Gardeners will be introduced to new varieties, which will lead to more productive gardens and healthier diets.
- **3.** Gardeners will be introduced to and become active participants in the scientific process.

METHODS

Varieties were selected from sources available to home gardeners, including Johnny's Selected Seeds, Territorial, Harris, Southern Exposure, Seed Savers, HPS and others. Selections included both tried and true varieties as well as promising new varieties. These were grouped into paired comparisons within more specific sub-categories (e.g., bean — green pole, green compact bush).





Participants were allowed to sign up for a maximum of five trials. A trial fee of \$2 per trial was collected. Families with children under 18 were allowed one free youth trial. Enough seed for a 10-foot row was packaged in coin envelopes and distributed to participants, along with information specific to their selected trial. Participants were responsible for managing their garden trials, evaluating characteristics identified in the evaluation sheet and returning data upon completion of the trial. More information on how to participate can be found at tiny.utk.edu/hgvt.

When evaluating trials, participants were asked to mark which of the two varieties performed better in terms of germination, plant health, first fruit, yield, appearance and flavor. They were also asked to give a performance rating on a scale of 1 to 10, with 1 indicating poor performance and 10 indicating excellent performance. Participants were asked to select whether they would recommend either variety to other home gardeners.

ANALYSIS

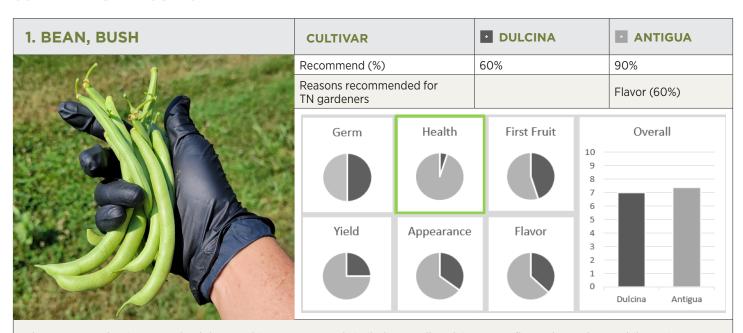
Data were evaluated using a two-tailed chi-square test for categorical variables (germination, health, first fruit, yield, appearance, flavor) and a one-way analysis of variance for continuous variables (performance). Both tests used an alpha level of 0.1 to determine significance. Graphs show the percentage of evaluations in which a variety was marked as superior for a given trait and report the mean performance score for each variety. Traits that were identified as significantly superior in one variety compared with the other variety are outlined in green.

PARTICIPATION

In 2022, 216 participants representing 62 Tennessee counties planted 887 trials. The number of sites for which useable data was returned is indicated for each trial.

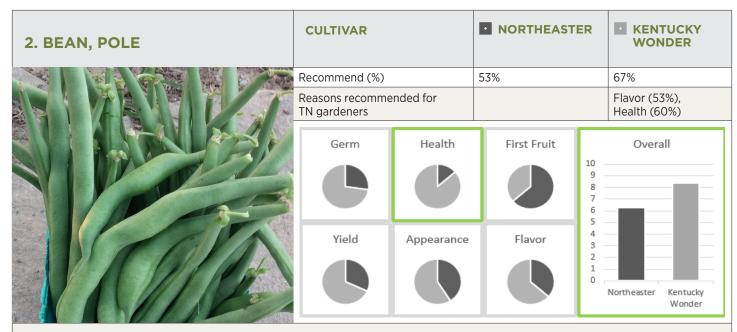


SUMMARY OF RESULTS



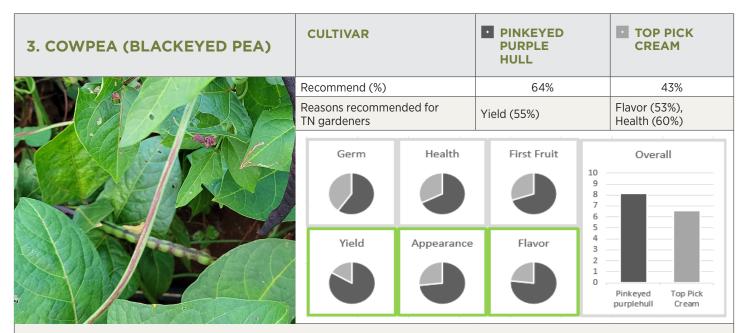
These two productive green bush bean cultivars were rated similarly overall. Dulcina was a flatter, larger bean while Antigua was a darker green roun bean with a wider range of disease resistance. Both had positive comments about flavor as well as some effects from a challenging summer in terms of weather.

*for traits outlined in green, varieties differed significantly at P < 0.1		(10 sites)
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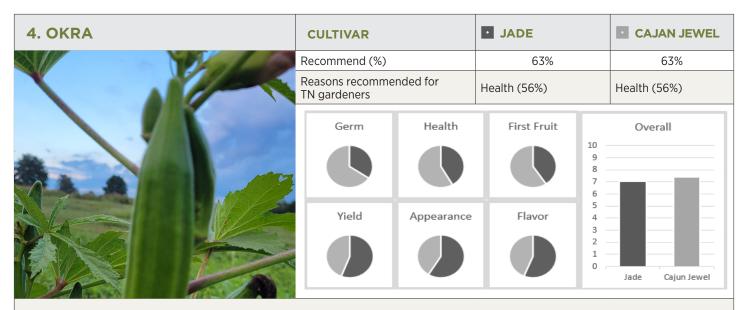


Once again, a staple of the garden, Kentucky Wonder, performed well with an overall higher rating than Northeaster. While there were good comments about Northeaster as a large, romano type bean "Very tasty and easy to grow", the classic is hard to beat. Of Kentucky Wonder trialers said, "Awesome large bean. I love them," and "Kentucky Wonder is always a winner. It is just a foolproof bean."

*for traits outlined in green, varieties differed significantly at P < 0.1		(11 sites)
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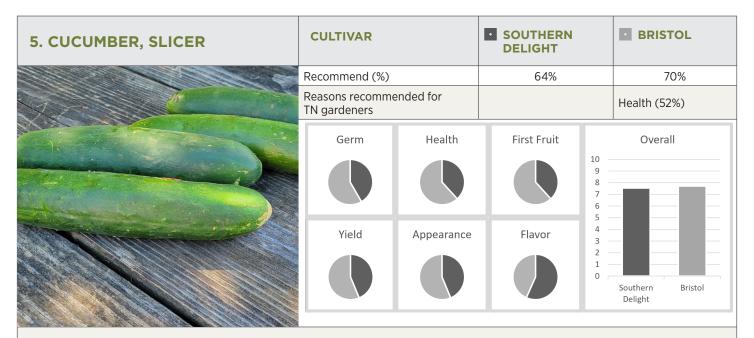


It was the first time blackeyed peas have been trialed, so there were new gardeners as well as experienced ones growing this Southern staple. On the basis of yield, appearance and flavor, pinkeyed purplehull came out ahead. This semi-vine plant had good comments on taste, freezing potential and performance in a challenging summer. Top Pick Cream had good comments on flavor and habit but was a smaller bean that took more time in shelling.



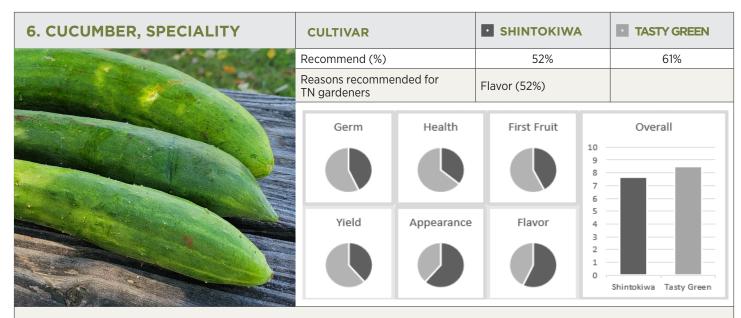
The okra trial paired two green early producing cultivars that both performed well. Cajan Jewel received good comments on its smaller size and production on side shoots as well as on harvest window. Others found that Jade produced very well especially early in the season. With nearly identical ratings, it seems both could be good choices for Tennessee gardeners when picked in a timely manner.

*for traits outlined in green, varieties differed significantly at P < 0.1		(16 sites)
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The slicer cucumber trial included two hybrids that were a newer disease-resistant 8-inch slicer in Bristol and a longer (8- to 10-inch), slender, dark green burpless type Southern Delight. Bristol had good comments on yield, earliness, plant productivity and ease of trellising. Trialers enjoyed the long and slender fruit of Southern Delight and there were good comments on the taste "Everyone loved this cucumber." However, the hot summer did produce some bitter fruit comments for both cultivars in the trial.

*for traits outlined in green, varieties differed significantly at P < 0.1		(18 sites)
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This specialty cucumber trial focused on two cucumbers that produced long, slender fruit. Shintokiwa is an open-pollinated dark green fruit that was noted to have low bitterness and good taste even when large. "No bitterness, great yield, great drought resistance" was one comment. Tasty Green was a hybrid similar in type but lighter green with comments about "sweet flavor." It was noted that these fruit with thinner skins could have more issues with feeding damage by cucumber beetles.

*for traits outlined in green, varieties differed significantly at P < 0.1		(14 sites)
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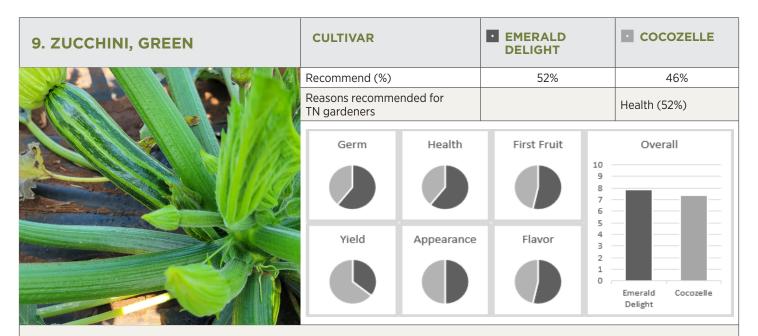
This trial compared two novel tomatoes. Gold Nugget was a hybrid that had earlier fruit and higher yield while producing yellow fruit on a larger plant. The Red Robin is a very small open-pollinated plant with red fruit. One trialer said, "Red Robin was the start of my 2022 garden. I put two plants in a 12" pot and harvested over 100 cherry tomatoes. Thank you very much for bringing this cultivar to my attention."

*for traits outlined in green, varieties differed significantly at P < 0.1	(16 sites)

BUSH DELICATA HONEY BOAT **CULTIVAR** 8. WINTER SQUASH Recommend (%) 40% 37% Reasons recommended for Flavor (52%) TN gardeners Overall Germ Health First Fruit 10 Yield Appearance Flavor Bush Delicata Honey Boat

The winter squash trial had issues with weather that created a challenging environment for a long-season crop. Those challenges were reflected in the evaluations with germination and growth issues. There were positive comments about the compact plants of Bush Delicata and the holding ability and taste of these small to medium sized squash.

*for traits outlined in green, varieties differed significantly at P < 0.1	(10 sites)
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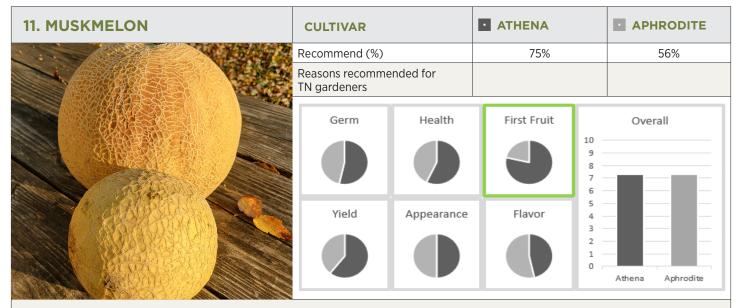
This green zucchini trial compared a hybrid with a wide disease resistance package in Emerald Delight with an open-pollinated Italian Costata type in Cocozelle. The overall rating was similar and both performed well. Trialers noted some differences in taste and fruit type with Emerald Delight a dark green, more slender fruit. Several trialers noted it was a challenging year for squash overall in terms of soil moisture and temperature patterns.

*for traits outlined in green, varieties differed significantly at P < 0.1	(14 sites)



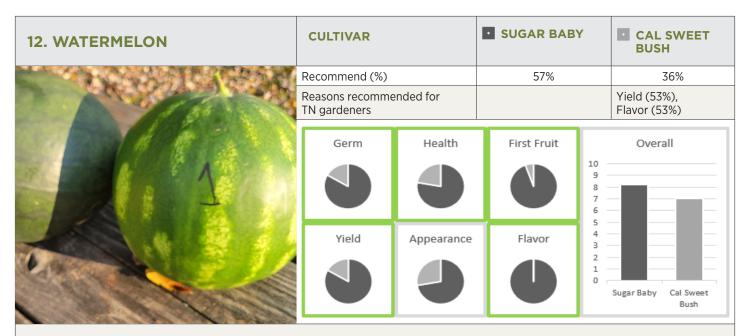
This yellow squash trial showed clear differences with the hybrid Slik Pik having a higher overall rating as well as first fruit and flavor than the open-pollinated Yellow Crookneck. Even in a challenging year for squash, many trialers noted the good yield, tender fruit and good plant performance of Slik Pik. One trialer said, "We ate squash, froze squash, and gave away squash until we were tired of squash." That pretty much says it all in terms of squash success in the southern garden!

*for traits outlined in green, varieties differed significantly at I	< 0.1 (12 sites)



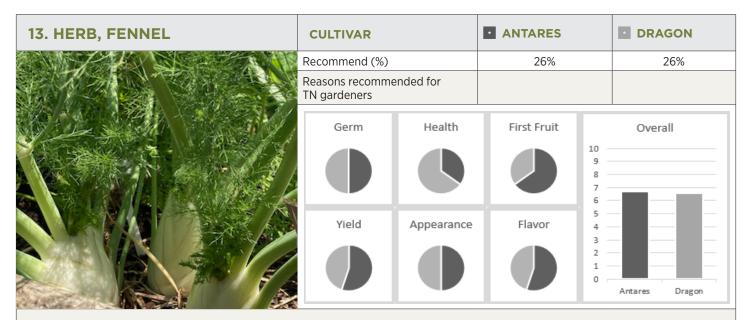
In a trial year when many of their cucurbit cousins struggled, it was actually a pretty good melon year. These two hybrids both had very solid overall ratings with some interesting comments on taste and performance. Aphrodite produced very large fruit for some melons but some commented on low shelf life potentially due to disease. One trialer commented about Aphrodite that it was the "best tasting melon I have had in years!" Others preferred the long-running favorite Athena with comments on "HUGE amount of fruit" and "Great flavor!"

*for traits outlined in green, varieties differed significantly at P < 0.1	(14 sites)	



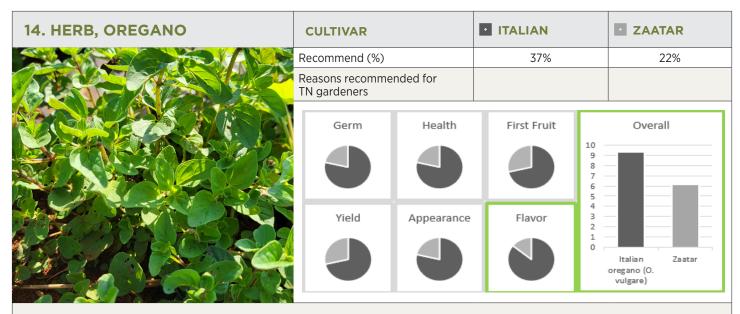
The watermelon trial compared a newer hybrid with a compact habit with a familiar open-pollinated icebox melon. While trialers commented on the nice size and crisp texture of Cal Sweet Bush, the ratings showed a preference for flavor, health, earliness, yield and germination for Sugar Baby. Both of these cultivars were seeded, although trialers commented that Sugar Baby had a "wonderful flavor and not many seeds." "Great performer" kind of sums up how this classic performed in our trial.

*for traits outlined in green, varieties differed significantly at P < 0.1		(9 sites)
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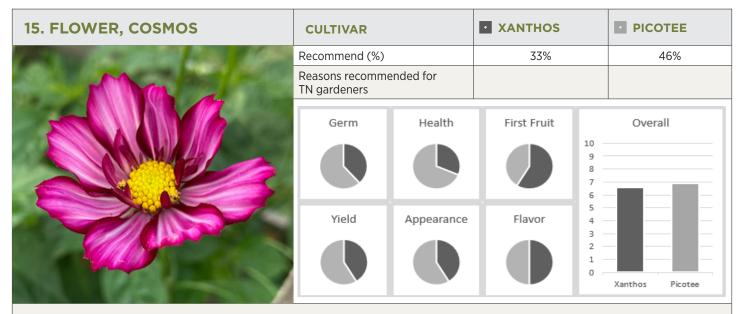
Fennel was a first time crop for many trialers and a unique one that provides edible bulb-like structures as well as pollinator host plant support and an attractive plant that has aesthetic appeal and can be used as an ornamental edible. Antares was an AAS winner noted by some to be better tasting and more prolific with a larger base. Dragon had a narrower base and was noted to be slow to bolt. Due to being a direct seeded herb and a new crop for some, there were germination and early growth issues that may have led to some of the lower recommendation rates. However, the fun of this trial was summed up by one trialer as "the butterfly caterpillars ate the top and left me the base!"

*for traits outlined in green, varieties differed significantly at P < 0.1 (10 sites)



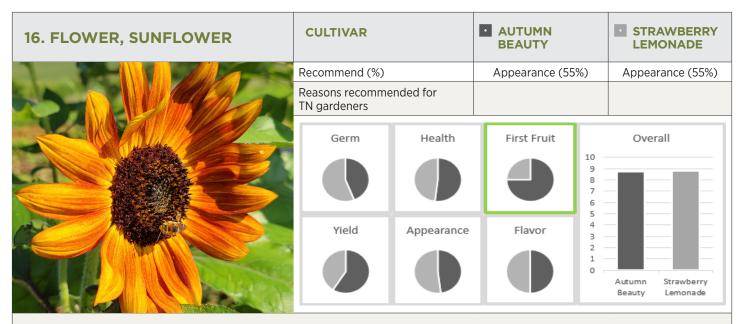
Oregano was another first time crop in our trial. As a small seeded herb, it did lead to some challenges for some in getting good transplants started with some commenting on germination issues and slower growth early in the season. Overall, trialers preferred the more traditional Italian oregano over the more novel, zesty flavored Zaatar. Trialers noted that once plants got started, they did perform well in the rather hot and dry summer that occured in 2022. One trialer even commented about Zaatar, "I LOVE this variety. It started a bit slow, but when it took off, it was productive, tasty and gorgeous. I hope to overwinter it for next summer!"

*for traits outlined in green, varieties differed significantly at P < 0.1 (7 sites	*for traits outlined in green, varieties differed significantly at P < 0.1		(7 sites
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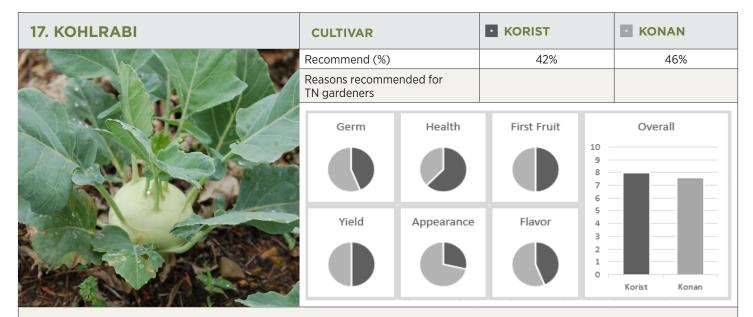
The flower trials are always a highlight and this year two interesting cosmos were under evaluation. Xanthos was a light yellow with Picotee as a white/purple combination. Although the statistical comparison was similar, the comments told the story on these cultivars. Xanthos was reported to be a smaller plant well suited for containers with "soft, butter-yellow" flowers. Picotee was generally reported to be a stronger plant that had good health and did well in the hot summer. One trialer said, "Once it got going, it was unstoppable!"

*for traits outlined in green, varieties differed significantly at P < 0.1	(17 sites)
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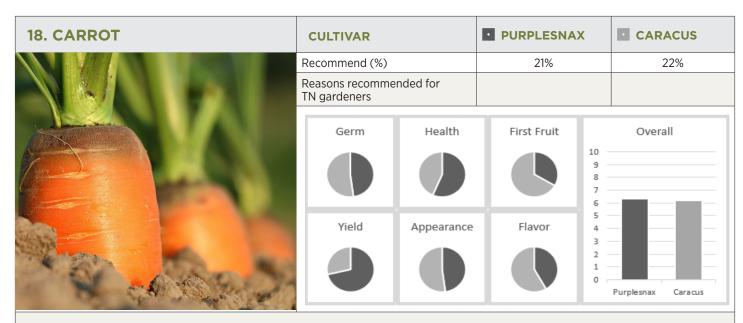
Even in a challenging garden year, these 2022 trials received strong ratings overall. Autumn Beauty was a open-pollinated, mulit-branching old fashioned type with a range of colors on smallish flowers. Trialers commented on the many branches and performance with one stating, "Beautiful healthy sunflowers. Will grow again." Strawberry Lemonade was a newer hybrid with a similar mix of colors and a branching habit. While it did receive strong ratings and comments such as "strong and hardy" and "still blooming in September," there was a seed supplier issue that resulted in some trialers getting a Baby Bear type of flower rather than the actual Strawberry Lemonade. In the collegial fashion of our fabulous trialers, they really liked those blooms as well!

*for traits outlined in green, varieties differed significantly at P < 0.1 (12.5 sites)



This cool season brassica crop was a first for some trialers with an enlarged stem similar to a turnip. Most are direct seeded and can be grown as a spring or fall crop. Although certainly a cool season crop, they have shown good flavor even when maturing in warmer, late spring conditions. Few differences were noted in the two cultivars that both were hybrid green types. One trialer noted that both cultivars "performed better than the purple variety I typically grow," showing how these trials can provide great options for new and experienced gardeners alike!

*for traits outlined in green, varieties differed significantly at P < 0.1 (8 sites)
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Carrots just seem to be a challenging crop for our Tennessee trialers, and 2022 certainly presented a challenge in terms of weather variability. The hybrid Purplesnax is a longer, slender carrot that was "attractive and tasty" for those preferring purple carrots with orange centers. The open-pollinated Caracus was noted to be a "truly mini carrot" with short, sturdy orange roots. Several trialers did experience germination issues or sensitivity with planting times.

*for traits outlined in green, varieties differed significantly at P < 0.1 (11.5 sites)

Tennessee Home Garden Variety Trials



Listed here, you will find varieties that 70 percent or more of trial participants indicated they would recommend to other Tennessee home gardeners. Because varieties evaluated in multiple years did not always reach a 70 percent recommendation in all evaluation years, bold text is used to indicate years in which a variety did receive a 70 percent or greater recommendation.

Category	Variety	"Rating (1-10)"	"Recommend (%)"	Years Evaluated	Why we love it
Bachelor's Buttons	Choice Mix	6.9	80%	2020	Appearance
Bachelor's Buttons	Classic Magic	7.4	100%	2020	Health, Appearance
Basil	Devotion	7.8	90%	2021	Health, Size
Basil	Everleaf	8.4	94%	2020	Health, Appearance, Flavor
Basil	Newton	6.9	70%	2021	Flavor, Health
Basil	Obsession	8.2	100%	2020	Health, Size, Yield
Basil, Genovese	Aroma II	8.0	90%	2019	Health, Yield, Flavor

Category	Variety	"Rating (1-10)"	"Recommend (%)"	Years Evaluated	Why we love it
Basil, Genovese	Dolce Fresca	7.9, 7.1	86%, 63%	2019 , 2018	Health, Size, Yield, Appearance, Flavor
Bean, Bush	Amethyst	8.4	92%	2020	Health, Yield, Appearance, Flavor
Bean, Bush	Annihilator	7.3	70%	2020	Yield, Appearance, Flavor
Bean, Bush	Antigua	7.4	90%	2022	Flavor
Bean, Bush	Contender	8.9	92%	2021	Yield, Flavor
Bean, Bush	Provider	8.6, 8	100%, 29%	2020 , 2017	Health, Yield
Bean, Bush	Wyatt	7.9	91%	2021	Flavor, Yield, Health
Bean, Compact Snap	Calima	7.3	80%	2019	Health, Yield, Flavor
Bean, Compact Snap	Mascotte	7, 6	80%, 63%	2019 , 2017	Health, Yield, Flavor
Bean, Filet	Borsalino	8.4	78%	2021	Yield, Flavor
Bean, Filet	Maxibel	9, 6.3	100%, 63%	2020 , 2017	Health, Yield, Flavor
Bean, Filet	Nickel	7.6	88%	2021	Yield, Health
Bean, Filet	Tavera	7.6	71%	2020	Health, Yield
Bean, Green Pole	Kentucky Blue	6.7, 6.8	83%, 60%	2019, 2017	Health, Yield, Flavor
Bean, Green Pole	Kentucky Wonder	7, 5.8	78%, 60%	2018, 2017, 2022	
Bean, Green Snap	Blue Lake 274	8.4	100%	2019 (Blind)	Health, Size, Yield, Appearance, Flavor
Bean, Green Snap	Jade II	6.9, 7.6, 6.8	83%, 86%, 60%	2019, 2019 (Blind), 2018	Health, Yield, Appearance
Bean, Heritage	Cherokee Black	8.2	92%	2021	Yield, Flavor, Health
Bean, Heritage	Rattlesnake	8.6	100%	2020	Health, Size, Yield, Appearance, Flavor
Bean, Heritage	Turkey Craw	6.4, 8.4	86%, 100%	2019, 2021	Flavor, Yield, Health
Bean, Yard Long	Python	6.5	78%	2021	Health
Bean, Yard Long	Red Noodle	7.9	100%	2021	Yield, Appearance, Health, Size, Flavor
Chives	Geisha Garlic	8.4	88%	2020	Health
Chives	Polyvert	6.1	75%	2020	
Collards	Champion	7.7	86%	2020	Size, Yield
Collards	Flash	7.8	86%	2020	Health, Yield
Corn, Late-Season Bicolor	Delectable	7.3	75%	2017	
Cosmos	Double Click Pink	7.9	88%	2020	Health, Size, Appearance
Cosmos	Sensation Mix	7.7	84%	2020	
Cucumber, Compact	Bush Crop	6.1	81%	2019	Size, Flavor
Cucumber, Compact	Spacemaster	7.6, 7.5	82%, 94%	2020, 2019	Health, Size, Appearance, Flavor
Cucumber, Garden Slicer	Bristol	8, 8, 7.72	90%, 91%, 70%	2019, 2019 (Blind), 2022	Health, Size, Yield, Appearance, Flavor
Cucumber, Garden Slicer	General Lee	7.4, 7.5	73%, 64%	2020, 2018	
Cucumber, Garden Slicer	Marketmore 76	7.8, 9.1, 7.6	100%, 100%, 90%	2019, 2019 (Blind), 2021	Health, Size, Yield, Flavor, Appearance
Cucumber, Garden Slicer	Straight Eight	7.7	83%	2017	
Cucumber, Pickling	Bush Pickle	7.5	80%	2021	Yield, Flavor
Cucumber, Snacker	Green Light	7.5, 6.9	90%, 86%	2020, 2021	Yield, Health
Cucumber, Speciality	Suyo Long	5.5	78%	2019	

Category	Variety	"Rating (1-10)"	"Recommend (%)"	Years Evaluated	Why we love it
Edamame	Chiba Green	5.9	71%	2020	
Edamame	Tankuro	8.3	100%	2020	Health, Yield, Flavor
Gourd	Small Warted Mix	8.0	100%	2020	Health, Appearance
Gourd	TN Dancing Gourd	6.9	86%	2020	Health, Yield, Appearance
Lettuce	Sandy	8.8	88%	2021	Health, Yield, Size, Flavor
Marigold	Super Hero Spry	8.7	100%	2021	Appearance, Health, Size
Muskmelon	Ambrosia	9.5	100%	2019	Health, Size, Yield, Flavor
Muskmelon	Athena	7.8, 7.28	75%, 75%	2017, 2022	Flavor
Muskmelon	Savor	6.5	75%	2020	Size, Appearance, Flavor
Muskmelon	Sugar Cube	8.8, 7.9	100%, 65%	2020, 2018	Health, Size, Yield, Flavor
Okra	Candle Fire	8.3	77%	2018	
Okra	Carmine Splendor	7.9	85%	2021	Flavor, Health, Yield, Size, Appearance
Okra	Clemson Spineless	8.7, 7.1	100%, 81%	2020, 2018	Health, Yield, Flavor
Okra	Jambalaya	8.7, 8.2	86%, 86%	2020, 2019	Health, Yield, Appearance, Flavor
Pumpkin, Blue	Triamble	9.0	100%	2017	
Pumpkin, Novelty	Knucklehead	8.0	83%	2018	
Pumpkin, Orange Large	Cargo	7.0	100%	2017	
Pumpkin, Orange Large	Howden	8.0	100%	2017	
Pumpkin, Orange Small	Spark	8.1	73%	2018	
Pumpkin, Orange Small	Cinnamon Girl	7.2	100%	2020 (Blind)	Health, Yield, Appearance
Pumpkin, White	Moonshine	7.4, 8.3	100%, 100%	2019, 2017	Health, Appearance
Pumpkin, Yellow	Sunlight	7.9	86%	2019	Health, Yield, Appearance
Squash	Starry Night	6.4	73%	2019 (Blind)	Flavor
Squash, Butternut	Waldo	9.0	100%	2021	Health, Yield, Flavor, Appearance, Size
Squash, Butternut	Waltham	8.8	100%	2021	Health, Size, Yield, Appearance, Flavor
Squash, Butternut Small	Honeynut	6.6	75%	2019	Health, Yield, Appearance, Flavor
Squash, Patty Pan	Bennings Gr. Tint	7.3	88%	2020	Appearance
Squash, Patty Pan	G-Star	7.5	88%	2020	Flavor
Squash, Summer Green	Easy Pick Green	7.0	75%	2019	Yield, Appearance, Flavor
Squash, Summer Green	Pantheon	6.6	75%	2019	Health, Yield, Appearance, Flavor
Squash, Summer Green	Raven	7.4	71%	2017	
Squash, Summer Small	Eight Ball	7.7, 7.3	85%, 75%	2017, 2021	
Squash, Summer Small	Lemon Sun	7.0	75%	2021	
Squash, Summer Yellow	Grandprize	8.7, 8.8	89%, 100%	2020, 2021	Health, Yield, Appearance, Flavor, Size
Squash, Summer Yellow	Success	7.0	78%	2020	Size, Yield, Appearance, Flavor
Squash, Summer Yellow	Tempest	8.1, 7.9, 8.4	100%, 89%, 100%	2019, 2018	Health, Size, Yield, Appearance, Flavor
Squash, Summer Yellow	Zephyr	7.6, 8.1	100%, 77%	2019, 2017	Health, Size, Yield, Appearance, Flavor
Squash, Winter	Brulee	7.5	88%	2020	Size, Yield

Category	Variety	"Rating (1-10)"	"Recommend (%)"	Years Evaluated	Why we love it
Squash, Winter	Metro	8.3	88%	2020	Health, Yield
Squash, Zucchini Green	Bossa Nova	7.6, 7.6, 6.4	80%, 82%, 75%	2017, 2018, 2021	
Squash, Zucchini Green	Desert	9.0	86%	2020	Health, Yield, Appearance, Flavor
Squash, Zucchini Green	Green Machine	6.4	71%	2020	Appearance, Flavor
Squash, Zucchini Green	Green Tiger	8.8	100%	2021	Appearance, Flavor, Yield, Health
Squash, Zucchini Yellow	Chiffon	7.8	88%	2021	Appearance, Health
Squash, Zucchini Yellow	Easy Pick Gold II	8.6	100%	2019	Health, Yield, Appearance, Flavor
Squash, Zucchini Yellow	Gold Rush	5.7	71%	2021	Flavor
Squash, Zucchini Yellow	Golden Glory	8.2	82%	2020	Health, Size, Yield, Appearance, Flavor
Squash, Zucchini Yellow	Golden Star	9.3	100%	2019	Health, Size, Yield, Appearance, Flavor
Squash, Zucchini Yellow	Goldmine	7.9	82%	2020	Health, Size, Yield, Flavor
Sweet Corn	Sweetness	7.1, 5.8	75%, 50%	2019, 2017	Health, Yield, Flavor
Sweet Corn	Temptress	7.4	75%	2019	
Swiss Chard	Bright Lights	8.2	100%	2021	Size, Health, Yield, Appearance
Swiss Chard	Rhubarb	7.8	100%	2021	Size, Yield, Appearance, Flavor
Tomato, Compact	Patio Choice Yellow	7.9	81%	2021	Yield, Size, Appearance
Tomato, Compact	Tidy Treats	7.8	85%	2021	Flavor, Size, Health, Yield
Watermelon	Baby Doll	5.8	100%	2019	Health, Size, Appearance, Flavor
Watermelon	Mambo	7.3	80%	2020	Appearance
Watermelon	Sweetie Pie	8.5	100%	2020	Yield, Appearance, Flavor
Zinnia	Candy Mix	7.4	71%	2019	Appearance
Zinnia	Profusion Mix	7.0	88%	2021	Appearance
Zinnia	Zahara Sunburst	7.6	83%	2021	Appearance



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