

Radicchio Variety Trials - 2020

Instructions for On-Farm Sites across Canada

Project Context

Thank you for participating in the Canadian Organic Vegetable Improvement (CANOVI). This project is a collaboration between the Centre for Sustainable Food Systems at the University of British Columbia and the Bauta Family Initiative on Canadian Seed Security at SeedChange (formerly USC Canada). One of the goals of this project is to create a national network and platform where existing varieties and new breeding lines can be evaluated for their performance in a range of regional organic and ecological farming conditions through on-farm variety trials.

Varieties that are sold to organic and ecological farmers in Canada have not necessarily been trialed on sites that reflect the diversity of Canadian farming conditions. Through a co-ordinated trialing network across Canada and integration with partner networks in Canada and the United States, we can gather information about both existing varieties and new breeding lines grown under organic management and across a range of farming conditions.

The information gathered through this trial network will be used to help farmers:

- Identify the best-performing varieties in your region, both for market garden production and seed production
- Identify which varieties would be suitable as parents for future regional breeding projects
- Build the capacity of farmers to conduct on-farm variety trials useful for their farming operation

For any questions you may have about the variety trials, please contact the [regional coordinator](#) for the Bauta Family Initiative on Canadian Seed Security ([seedsecurity.ca](#)) for your region:

- Atlantic Canada: Steph Hughes, SeedChange, shughes@weseedchange.org
- Quebec: Hugo Martorell, SeedChange, hmartorell@weseedchange.org
- Ontario: Rebecca Ivanoff, Ecological Farmers Association of Ontario, rebecca@efao.ca
- Prairies: Iris Vaisman, Organic Alberta, iris.vaisman@prairieorganicgrain.org
- British Columbia: David Catzel, bcseeds@farmfolkcityfolk.ca

You may also contact one of the CANOVI researchers:

- Alex Lyon, UBC Centre for Sustainable Food Systems, CANOVI Lead Researcher; alexandra.lyon@ubc.ca; 604-710-2096
- Helen Jensen, Bauta Initiative Research Manager; hjensen@weseedchange.org; 514-433-8445

A NOTE ABOUT VARIETY TRIALS IN THE COVID-19 CONTEXT

On behalf of our team, we sincerely hope that you and yours are healthy and safe in the midst of the Covid-19 crisis. In Canada, and throughout the world, many agricultural research projects have been postponed or scaled-back, and while planning our season, we weren't sure if you would have the capacity or the interest to participate. We have been pleasantly surprised to find that interest in the on-farm variety trial program has actually increased this year. We thank you for your continued engagement!

In the past few months, there has been widespread recognition of the importance of resilient food systems, and local food systems. By doing this work, you're helping create knowledge that is useful to local food and seed producers. While this trial does not focus on seed production, those who wish can use it as an opportunity to explore seed production by saving seed from the OP varieties included in the trials, or by partnering with a seed grower in your region to do so. A number of resources on seed saving can be found on our website (www.seedsecurity.ca).

We understand that everyone is living with a great deal of uncertainty and facing pressure to adapt their businesses and lives to rapid change. We understand that your circumstances may change during the course of the season in a way that impacts your ability to continue the trials. If this happens, please get in touch with your regional coordinator to let them know.

Radichio for trialing

The Radichio Trial includes a range of varieties in four different market classes: Lusia, Treviso, Castelfranco, and Chioggia. In the sign-up survey, you have already chosen at least 6 varieties, and we have done our best to send you the varieties you requested although we had some shortages due to availability from seed companies. We will provide enough seed for 30 plants per variety, but people are welcome to plant as few as 16 plants/variety. This trial will require at least 96 row-feet of bed space for 6 varieties; each additional variety will add at least 16' row-feet to your trial. You are welcome to choose more if you have the space available.

In all regions, seeding will be in mid-June and transplant in mid-July. We believe that most farmers across Canada can plant varieties with 60-70 days to maturity which would be for a mid-fall harvest and varieties with 80-90 days to maturity which would be for a harvest into mid-November (doable even when there are cool temperatures of up to -10C). For those with mild coastal climates where there is no hard freeze, you are welcome to plant varieties with more than 90 days to maturity if you are interested in pushing the crop to a January-February harvest. See the chart on Page 3.

We have tried to include a range of days-to-maturity within four different types of radichio: Lusia, Treviso, Castelfranco, and Chioggia (each described below). Please note that there are a lot of unknowns about growing radichio at these latitudes and figuring out the right dates for each type is part of the trial! Please feel free to adjust your planting dates based on previous experience or local information. Most importantly, please record and report your planting dates.

Plot size:

We will provide enough seed for 30 plants per variety, but people are welcome to plant as few as 16 plants/variety.

1 foot spacing

Number of varieties:

20 available varieties, from which farmers should choose at least 6, taking into account their growing conditions and the information provided about the varieties.

Radicchio Market Classes in This Trial

- **Castelfranco (green and red speckled)**
Creamy white leaves have deep red speckles and a gentle bitterness. It grows into a lettuce-like ball and then unfolds from the centre like an opening rose. The leaves are tender and flavourful, and some of the best for raw eating in salads.
- **Lusia (green and red speckled).**
Radicchio di Lusia is similar to Castelfranco and has primarily green leaves, with subtle red speckle
- **Chioggia (round and red)**
Radicchio di Chioggia, which has a spherical shape, intensely red leaves, and bright white veins. The supermarket standard features a tight, cabbage-like head of leaves and a slightly astringent flavor that breathes life into salads.
- **Treviso (oblong and red)**
Tall and pointed, it looks like a large red endive, with a similarly mild flavor. The sturdy, narrow leaves are made for scooping up dips. Radicchio di Treviso grows with an upright, football-like shape. The petioles (stems) are longer, more pronounced, and have a distinctive succulent and tangy taste. This is one of the most popular varieties in Italy, and is recommended as a grilled vegetable. Cooking reduces the plant's natural bitterness somewhat, and results in a very unique and tasty side dish.

Full Variety Lists for 2020

Market Class	Variety	DTM	Seed Company	F1/OP
Castelfranco Type	Cecilia*	120-135	Levantia	
Castelfranco Type	Fenice	90	Osborne Quality Seeds	OP
Castelfranco Type	Lucrezia	110-115	Osborne Quality Seeds	OP
Castelfranco Type	Variegata di Castelfranco	70	Adaptive Seeds	OP
Castelfranco Type	Variegata Marinanta*	135-145	Levantia	
Lusia Type	Bel Fiore	60	Johnny's Select Seeds	OP
Lusia Type	Bornio Tardiva*	115-125	Leventia	

Lusia Type	Radicchio di Lusia*	85	West Coast Seeds/Franchi	OP
Chioggia Type	4050 (OP)	90	Osborne Quality Seeds	OP
Chioggia Type	Drake*	135-145	Levantia	
Chioggia Type	Indigo	65	Johnny's Select Seeds	F1
Chioggia Type	Leonardo	65	Johnny's Select Seeds	F1
Chioggia Type	Rubro	145	Osborne Quality Seeds	F1
Chioggia Type	Sirio*	65	Osborne Quality Seeds	OP
Verona Type	Giulietta	95	Osborne Quality Seeds	OP
Treviso Type	Bottiglione Treviso	130	Osborne Quality Seeds	OP
Treviso Type	Early Treviso	unknown	Wild Garden Seed	OP
Treviso Type	TVG1	75	Osborne Quality Seeds	OP

*** Note: Varieties with limited or no seed:**

Some varieties that we hoped to include in the trial had to be dropped due to seed shortages or other issues with sourcing this year. If you signed up for any of these varieties, we have replaced it with seed from another variety chosen at random from the list (we tried to substitute varieties with similar DTM, but were not always to do so). We apologize for the inconvenience and hope to make these varieties available next year.

Planting and Cultivation Recommendations

The table below provides *suggestions only* for trial implementation. **The trial should be grown as you would normally grow radicchio, including your normal bed and row spacing - the purpose of on-farm trials, is to test them on your farm!**

Seeding dates	<ul style="list-style-type: none"> Mid-June (generally around the summer solstice) depending on weather conditions and your normal planting dates for radicchio. Sow seeds 3-4 weeks before transplanting date. Try to keep the trays below 24C
Transplanting dates	<ul style="list-style-type: none"> Transplanting is recommended over direct seeding.

Plants per Variety	<ul style="list-style-type: none"> ● 16-20 plants per variety per replication
Row and bed spacing	<ul style="list-style-type: none"> ● Bed width may vary depending on tillage methods; at the UBC farm beds are 3.67 ft center-to-center. <ul style="list-style-type: none"> ● Aim for in-row spacing of 8" to 12". Many seed catalogues recommend 12" spacing but some farms have found better success with closer plantings. Please report your spacing in SeedLinked..
Evaluation	<ul style="list-style-type: none"> ● You will be receiving an invitation to this trial on SeedLinked. The evaluation will include appearance, marketability, yield, uniformity, bolting, flavour, planting and harvest dates. Since there is so much diversity in radicchio appearance, we encourage you to add pictures and free-form notes about these varieties.
Days to harvest	<ul style="list-style-type: none"> ● 65-145 days depending on the variety, weather conditions and your judgement. ● For most farmers across Canada can plant varieties with 60-70 days to maturity which would be for a mid-fall harvest and varieties with 80-90 days to maturity which would be for a harvest into mid-November. ● For those with mild coastal climates where there is no hard freeze, you may have chosen varieties with more than 90 days to maturity for a January-February harvest.
Weeding	<ul style="list-style-type: none"> ● Please use organic pest and disease control measures you would normally use.

How to Arrange the Trial

Please plant a single plot of each variety, with 16 - 20 plants per plot. If you have enough seedlings and space, please feel free to plant more plants per plot as radicchio varieties may have a lot of variation between individuals. Radicchio is typically planted in double or triple rows per bed, but this is up to you. Please observe these best practices to the extent possible:

- Plots may be distributed in multiple side-by-side beds or planted in one bed.
- Avoid the edge of the field and the end of the bed when finding a place for the trial, as well as any areas with known soil, shade, or irrigation differences that would affect some plots more than others.
- A border around your trial of buffer crops not included in your trial is recommended to prevent crop loss from mechanical damage or pests/critters. The crops that make up the border can be other varieties of chicory, or other types of crops.
- You may wish to plant varieties of the same market class together for easier comparison.
- Use stakes to label the plots AND draw a field map showing the order and location of varieties. This serves as a backup in case the stakes get lost!

Data collection and analysis

This year, we will again be using an online platform for data collection called [Seedlinked](#). This platform helped us make final results of the trials accessible to farmers faster in 2019. Data can be entered on SeedLinked directly in the field through the use of apps for iOS or Android. It is also possible to enter data by logging on to the platform from a computer. We will provide downloadable .pdf versions of paper data forms. These give you the option to collect your data using paper and pencil in the field and enter the data in the SeedLinked platform at a later time.

A helpful video tutorial for using SeedLinked can be found on Youtube [here](#). Webinars to orient participants to the use of “Seedlinked” for data entry were held in April 2019. See the webinar at the links below:

- **English:** <https://tinyurl.com/y6a29elj>
- **French:** <https://tinyurl.com/y5jhw8w>

We strongly encourage growers to read [On-Farm Variety Trials](#) by the Organic Seed Alliance - an incredible how-to-guide on how to implement variety trials for your own farm.

Other resources and growing guides:

- [Osborne blog post](#)
- [Johnny's Chicory Production Sheet: https://bit.ly/2yTQNF0](#)
- Descriptions of radicchio types, and recipes:
<https://vancouverradicchiofestival.ca/radicchio-family/>

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