

# Seed Saving from Biennials in Australia



**AUSTRALIAN SEED SAVERS CONNECT**

*National seed savers zoom*

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# Introductions

Before we start recording, if you would like to, let's go around and please share:

 Your name & location

 Any seed saving groups you are affiliated with

 What is your climate like? Do you get cold winters, what the winter temperatures are like in your location? Do you get hot, dry summers? This is a big question for growing biennials!

## Some points for this discussion...

- What does 'biennial' mean? In practice, in Australia?
- How can you grow biennial plants for the best seed? Is it different to annuals?
- What is 'vernalisation'? Do you really need a root cellar?
- What triggers flowering? Is it bad to have early flowering or early seed setting?
- Selection, processing and storage of seed from biennials
- What can you do about seed saving biennials if you live in a tropical climate?
- Troubleshooting and tips for biennials
- The best resources on seed saving from biennials

# First, some basics about biennials

What does biennial mean? (do you really have to wait for two years?!)

What plant types are biennial?

We're going to focus on carrots, silverbeet/beets and kale.

There's special cases like onions which have other requirements like day length and are more complicated - we can look at those in future.

# What does 'biennial' mean in seed saving?

Plants that we ordinarily save seeds from are classified as 'annual' or 'biennial'.

**Annual plants** set seed in their first season of growth (they don't need to overwinter). The majority of food and flower crops are annuals.

**Biennial plants** set seed in their second season of growth (they need a period of 'vernalisation' or overwintering). Some common biennials include carrots, onions, silverbeet, kale.

BUT does that mean that biennial plants have to spend two years growing before they set and you can save seed?

Well... no!

All the advice you read on seed saving biennials comes from the northern hemisphere. How is it different in Australia? The gardening books make assumptions based on the northern winter going across two years.

# Some examples of biennials

Vegetables include onion family, leeks, parsley, celery, fennel, carrot, salsify, cabbage family, kale, turnip, silverbeet/beetroot/chard, parsnip...

Flowers include foxglove, stock, mullein, lunari...



# How to grow biennials for the best seed?

When should you plant biennial seed?

How should you grow biennial plants differently from annuals or perennials?

When do they produce seed and when should it be harvested?

When and how does it ripen?

How do you select the best biennial plants and seed?

What triggers the flowering?

How do you avoid fast flowering or 'bolting' plants?

How long can you store vegetables out of the ground?

What has been your experience with growing biennials IN YOUR CLIMATE? Do they set seed in your climate?

# What can cause a biennial to flower? (it's not just old age!)

**Biennials need a period of colder weather followed by warmer weather to 'switch on' flowering.**

But often they will flower 'early'. Triggers for early flowering:

Cold weather: Sudden cold snaps in spring can confuse the onion plant, making it think it's the second year and time to flower.

Heat and drought: Prolonged hot, dry periods can also stress the plant, causing it to bolt.

Varietal susceptibility: Some onion varieties are more prone to bolting than others.

Planting time: Planting onions too early in the season can expose them to the risk of cold snaps, triggering bolting.

Over-fertilizing: Excessive nitrogen fertilizer can also encourage bolting.

Disturbed soil: If the soil is too loose, it can also possibly cause bolting.

It's not just time growing that causes bolting. Have you had carrots bolt to seed early?

There's also the question of daylength for onions (a more complicated topic for another session!) and the link between daylength and vernalisation!

What has been your experience of biennials flowering? Have you had early flowering? What do you think it was caused by?

Does it matter if you save seed from early flowering biennials once or twice? What is the best approach to early flowering?



# Do you have to 'lift and store' biennial root crops over winter?

The advice to lift biennial root crops out of the ground and store them in sawdust in root cellars until they can be replanted in spring comes from the northern hemisphere where ground might freeze over winter, causing the roots to be destroyed.

Do we have to do this?

What is the alternative?

Are there other reasons to dig up biennial root crops and if so, when do you do it?

What do you do when you're overwintering biennials?

# Some examples of different approaches

Carrots

Silverbeet

?

Have you tried to save seed from biennials? Which ones? What was your experience? What worked and what didn't?

## Some Biennial “Rules of Thumb” change this slide based on notes from organising zoom

- Need to overwinter in cold temperatures - plants grown in warmer climates may behave as annuals and produce seed more quickly.
- If ground doesn't hard freeze in winter, can leave plants in (protect from frost damage if needed) - e.g. leave the carrots in the ground over winter or in the fridge!
- Debate: can get away with a year or two of harvesting biennial seed as annual seed but not good for keeping the genetics going strong.
- Biennials tend to be 'outcrossers' and need lots and lots of plants to go to seed at the same time to keep genetic robustness.
- All the books say you should lift biennials at the end of autumn, select the best and store in a root cellar to replant in spring and allow to flower and set seed. Is that true?

# Resources/ Where to get more information...

[www.seedsavers.org.au](http://www.seedsavers.org.au)

