Seed saving

How garden plants grow, hold and release seeds

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How do you harvest seeds from a carrot?



Carrot flowers appear in year two



The first-year root is food. After winter, the plant can flower and produce seeds.

Plant life cycles in Québec gardens

Annuals

Tomato, beans, lettuce, dill and squash can make seed in one season.

Biennials

Carrot, beet, Swiss chard and onion generally require a second season.

Local planning

Select healthy parent plants and protect or store them over winter. Pick the traits of the plant you want to promote the following year (big, tasty, resistant, etc.)

Three places to look for seeds

Inside fleshy fruits

Tomatoes, peppers, cucumbers and squash.

Inside dry pods

Beans, peas, broccoli and radishes.

In umbels, heads or stalks

Carrots, dill, lettuce, sunflower and alliums.

Many “vegetables” are botanical fruits. The seed-bearing part matters more than the food label.

SECTION 01

Inside fleshy fruits

Seeds develop inside fruits, but a fruit ready to eat may not contain mature seeds.

TOMATO · PEPPER · EGGPLANT · CUCUMBER · SQUASH · GROUND CHERRY

Tomato



Seeds sit in gel-filled chambers. Save from fully ripe fruits.

Pepper



Seeds attach inside the fruit. Wait for the fully mature colour.

Eggplant



Leave fruits beyond the usual eating stage for mature seeds.

Cucumber



WHERE TO LOOK

Let cucumbers ripen beyond the usual eating stage.

The skin often turns yellow and the fruit becomes swollen.

Cut lengthwise; mature seeds sit in the central pulp.

Leave selected cucumbers until fully mature, often yellow and oversized.

Winter squash and pumpkin



WHERE TO LOOK

Save seed from a fully mature winter squash with a firm rind.

Scoop developed seeds out of the central cavity.

Rinse away pulp and dry the seeds thoroughly.

Squash can cross pollinate.

Allow fruit and seeds to mature fully before extracting and drying.

Zucchini



WHERE TO LOOK

A seed-saving zucchini is much older than a tender zucchini for eating.

Let the fruit become oversized with a firm skin.

Open it to find the larger, fully developed seeds.

For seed saving, leave zucchini to become overgrown and hard-skinned.

Ground Cherry



WHERE TO LOOK

Ground cherries are Physalis pruinosa.

Ripe berries fall inside papery husks.

Split a berry to see the many tiny seeds in its flesh.

Seeds are tiny inside the berry. Close-up: a related Physalis species, cut open.

Tomatillo





WHERE TO LOOK

Tomatillo fruits grow inside a papery husk.

Use a mature fruit to collect viable seeds.

Cut open to see the numerous pale seeds in the flesh.

Cut open a fully ripe tomatillo to find its numerous tiny seeds.

Inside dry pods

Pods develop after flowers and release mature, hard seeds when they dry.

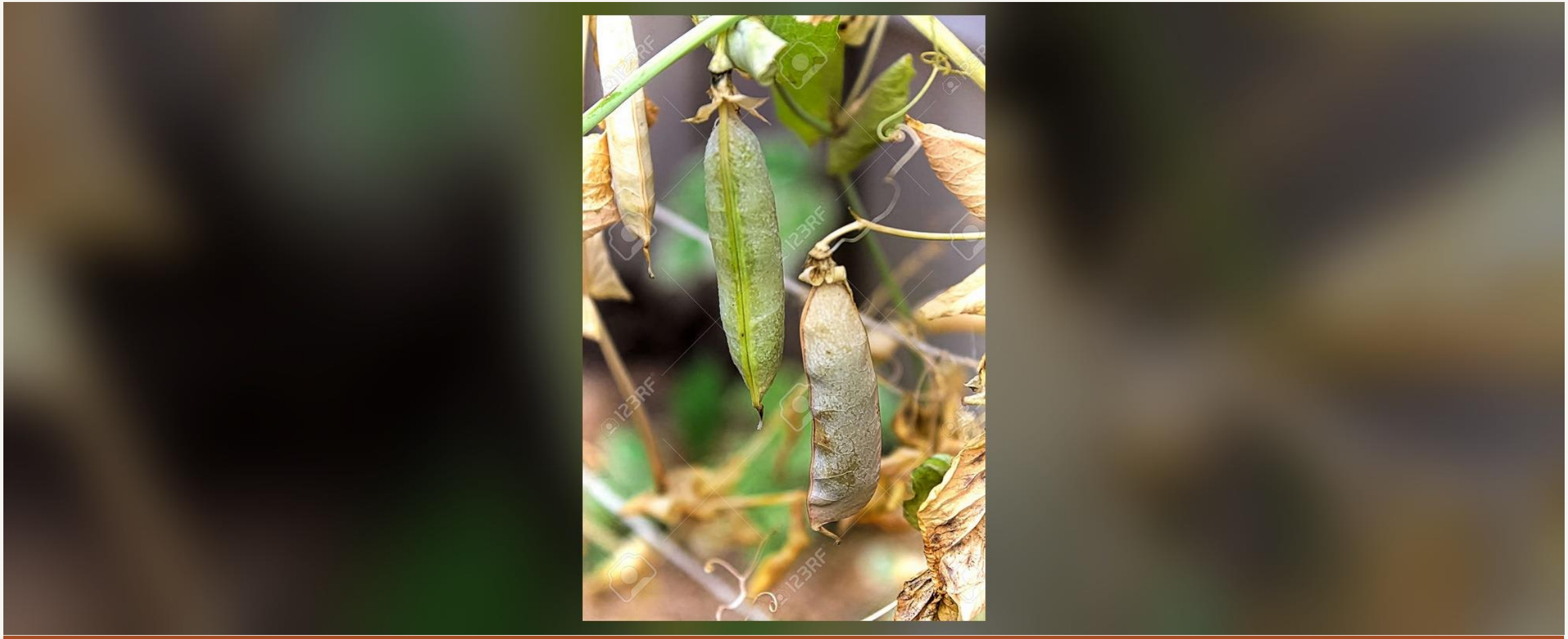
BEANS · PEAS · BROCCOLI · RADISHES

Beans



Leave pods until they turn papery; mature beans become firm.

Peas



Tender peas are eaten young; seed peas are collected after pods mature.

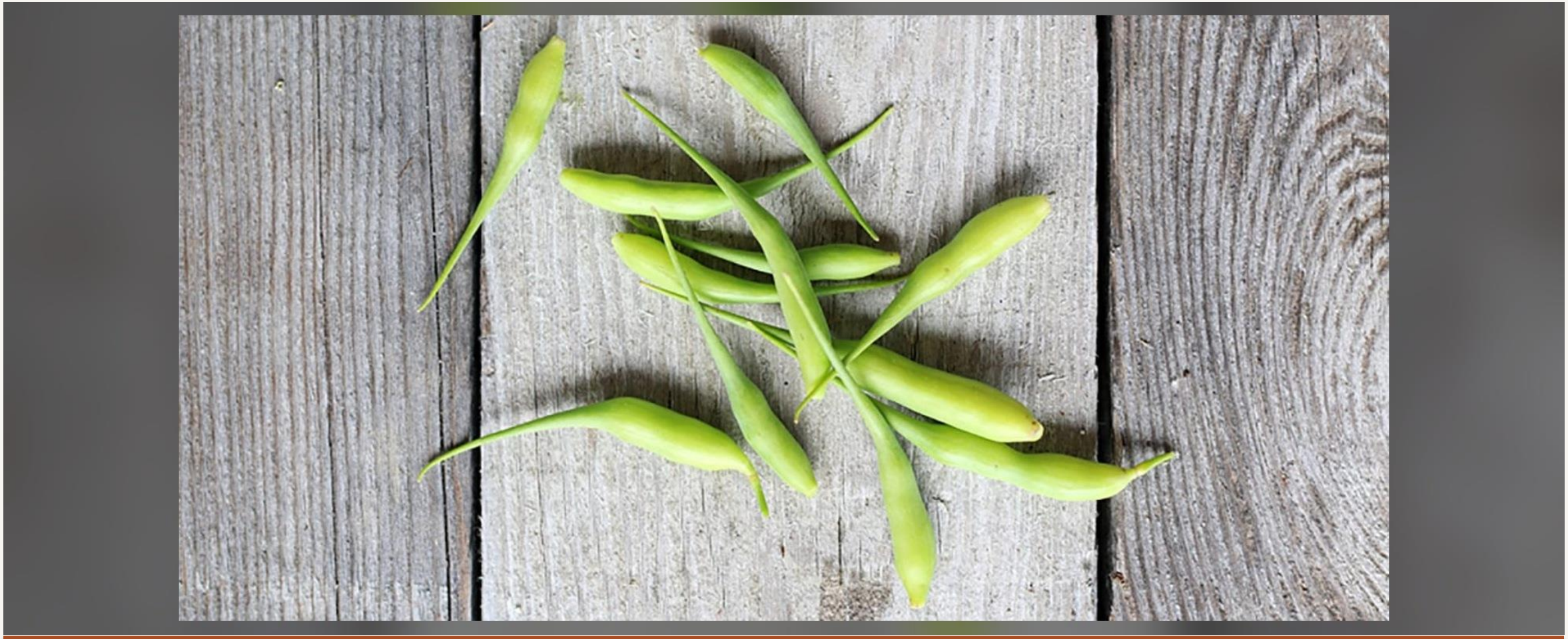
Broccoli





Yellow flowers make long seed pods called siliques. Let them dry.

Radish



Flowering plants form elongated pods containing the seeds.

Brassicas are related, but not identical

Same species

Broccoli, cauliflower, kale and many cabbages are Brassica oleracea.

Different species

Radish is Raphanus sativus; common turnip is Brassica rapa.

Seed-saving implications

Manage isolation or timing when varieties of the same species flower.

Plant names and species matter more than the appearance of the vegetable.

Seeds on umbels

Umbels are branching clusters of small flowers; many become dry seed-bearing fruits.

CARROT · DILL · CORIANDER · PARSNIP · PARSLEY

Coriander (cilantro)



Green round fruits form on cilantro umbels and mature into brown coriander seeds.

Dill



Dry umbels hold flat aromatic fruits that gardeners call seeds.

Carrot: mature seed head



Mature dry umbels carry the bristly fruits gardeners call carrot seeds.

Parsnip seeds



WHERE TO LOOK

Parsnips are biennials; seed forms in the second year.

Keep selected parent roots alive over winter.

Harvest mature dry fruits from the umbels.

Parsnips typically flower and set seeds after overwintering.

Other umbels in Québec gardens

Dill

Usually seeds in its first growing season.

Parsley and parsnip

Typically flower after overwintering.

Celery and celeriac

Also often require vernalization to produce seed.

Biennial roots may need protection or cool storage through winter.

Seed heads and stalks

Other crops form seeds in composite heads, flower spikes or branching stalks.

LETTUCE · BASIL · SUNFLOWER · SPINACH · ONION · GARLIC

Lettuce



Lettuce produces small yellow flowers, followed by fluffy seed heads.

ANNUAL

Lettuce: mature seed heads





Feathery white pappus appears after the small yellow flowers.

Basil



Small seeds develop within the dry calyces along flower spikes.

Sunflower



Hundreds of fruits form in a large mature flower head.

Spinach



Tiny female flowers develop along stalks and later form the seed fruits.

Spinach: seed fruits

ANNUAL



Once female flowers mature, collect the firm fruits along the stalk.

Onion & Leeks









A second-year umbel forms capsules that release true black seeds.

Garlic scapes and bulbils



Bulbils are not true seeds: they grow into garlic clones.

Beets and Swiss chard





WHERE TO LOOK

Beets and Swiss chard are the same species: Beta vulgaris.

Second-year stalks produce small greenish flowers.

Both forms can cross if flowering together.

Beet and Swiss chard are Beta vulgaris; both form tiny flowers on second-year stalks.

Corn



WHERE TO LOOK

The seeds are the kernels on a mature cob.

Allow chosen ears to ripen and dry on the plant.

Corn is wind-pollinated, so isolation matters.

Photo credit / source

Each kernel is a fruit with a seed. Corn is wind-pollinated.

Save dry and wet seeds differently

Dry seed crops

Let pods and heads mature; thresh, shell or rub when dry.

Wet seed crops

Extract from mature fruits, rinse and remove pulp.

Finish drying

Dry seeds thoroughly before sealing and storing.

Save traits and maintain diversity

Choose your goals

Flavour, health, productivity, earliness, and resilience.

Keep genetic breadth

Save from multiple healthy parent plants when practical.

Record your sources

Write crop, variety, source, observations and harvest year.

Cool, dry and labelled

Dry completely

Moisture left in seeds can cause mould or loss of viability.

Store carefully

Cool, dark and dry; airtight only when thoroughly dry.

Test germination

Try ten seeds: eight that sprout means about 80% in this small test.

Make a list of 10 plants and tell us how you would save the seeds from them.

Explain their seed structures and life cycles.



Questions?