

The Growing Process

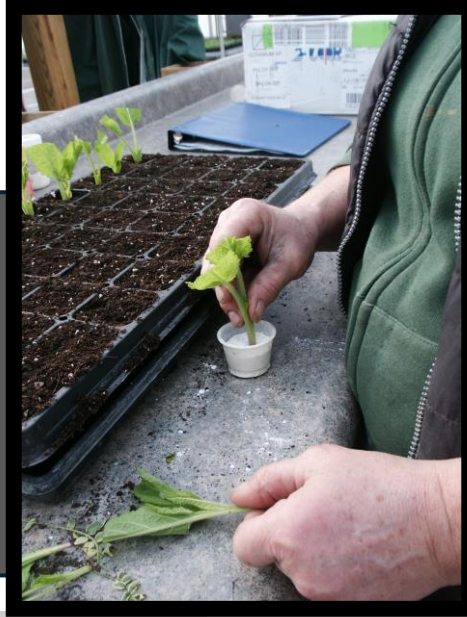




- Growing plants seems like a pretty simple process. Put a seed in the ground, water it, and watch it grow. That's what we all learned in pre-school and kindergarten, right? For certain types of plants, usually annuals like most veggies, marigolds, sunflowers and the like, that is fairly accurate.

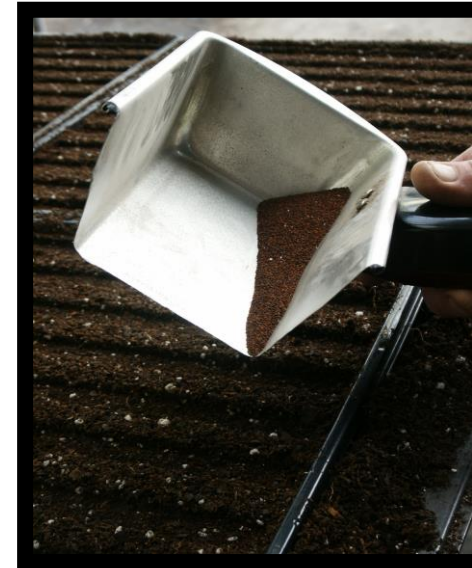
However, growing **perennials** can be done in several different ways. Sometimes more than one method can be used, depending on the result a grower is looking for or the requirements of the plant.

CUTTINGS



TISSUE CULTURE

DIVISION



SEEDING

SEEDING

- Let's start by looking at seeds. There are several categories of germination requirements.
- Some require the seed to be fresh, with best germination occurring soon after the seed has ripened.
- If the window is missed, it may require a period of cool or cold/freezing temps that mimic what would occur in the wild.
- Depending on the plant, this period could be from 30 to 90 days or longer!
- We may seed them in open trays or in plugs depending on germination and moisture requirements.



CUTTINGS



- The second technique is to “take cuttings” and is the same for almost all cuttings – cut a length of stem without flowers, about the length of a pencil. Trim it neatly just below a node (the point where the leaves branch from the stem) and cut off the lower leaves to give you a bare stem. Dip the stem in rooting hormone (for some varieties). Put it into soil, usually a flat with small “plugs” and keep it moist until roots grow to the bottom of the plug.
- Each variety has different soil, light and moisture requirements. And each variety may be grown in more than one plug size, depending on the ultimate pot size they will be sold in. Some varieties stay in a 2.5” plug and are sold in that size. Others are “potted up” into either a pint, quart, half-gallon or gallon pot.







MULTIPLICATION BY DIVISION

- Starting with 1 Gallon and 1 Quart.
- How many divisions can we get?



Divisions with crowns are evident
in this Gallon.



Nice Division from the Quart pot.



How many will we find?!

We got 12 divisions
from the Gallon pot



We got 5 divisions
from the Quart pot



The divisions from the Gallon pot were a bit small, so we put 2 in each pot to make 6.



The divisions from the Quart pot were larger, so we put one in each pot to make 4.



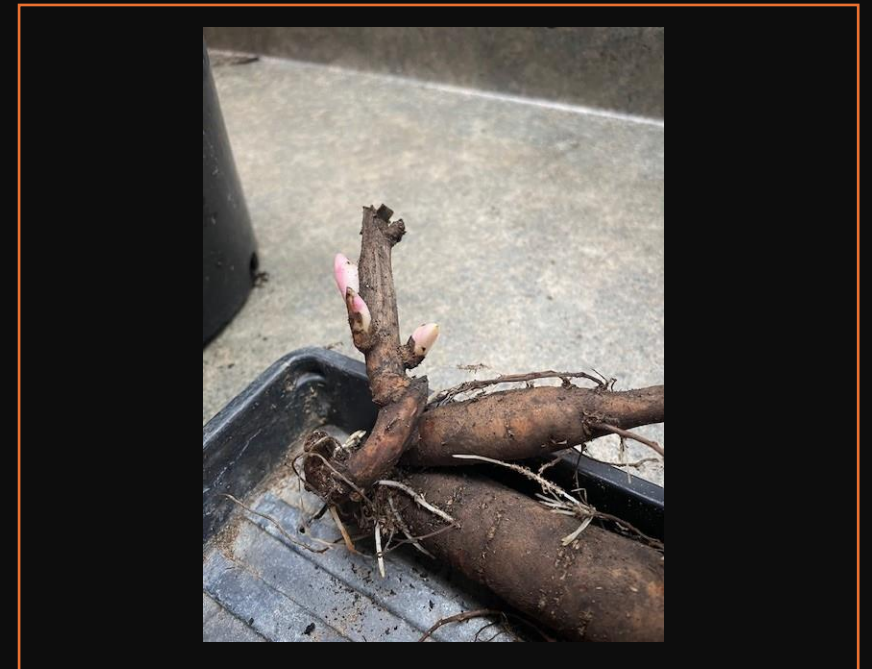
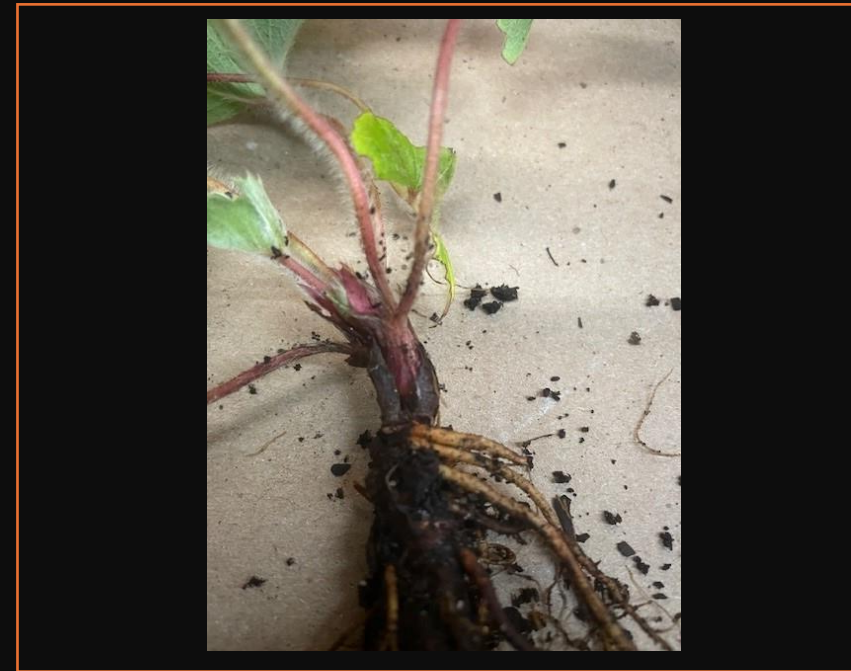
That is how we do multiplication by division here at the nursery.

THE CROWN, the guts of the plant

- Let's talk about the crown for a moment. The crown is where the plant stems meet the root and is where the energy and nutrients from the root are transferred to the stem and eventually to the flowers. Having a healthy crown is the key to growing perennials successfully.

Here we have the crown of two perennials: *Fragaria* (Strawberry, top) and *Paeonia* (Peony, bottom) .

Can you tell where the crown is located?





Two things we do to ensure a healthy crown are:

- Use well-draining soil which prevents root and crown rot.
 - Apply Mycorrhizae which acts like vitamins or probiotics to promote a healthy exchange of energy from the root to the stems.

- So...once our perennials are planted, many of them are grown on in a greenhouse, where they are watered, fertilized, scouted for pests and, if needed, treated with an appropriate sustainable product.

- As the roots reach the bottom of the pot, they are moved to an outside location, where wind and mother nature act as a natural growth regulator. This helps to produce a plant that can handle the weather and outdoor conditions when it is planted in the landscape. Slower growth also equals a better crown and root.

- The foliage and flowers fade, but in the world of perennials a healthy crown and root system allow these plants to thrive for many years to come.



DETERMINING POT SIZE



There are lots of factors in deciding what size pot a plant goes into. The price of the plant itself is a HUGE factor. Did it come from seed? (Often, but not always, the least expensive) Were the cuttings produced here at the nursery? (Less expensive) Or were the cuttings bought in? (Usually, the case for more expensive patented plants). How about transportation costs? (Plants from the east or west coast tend to be more expensive because of transportation costs)



- The decision to produce a plant in more than one size is often determined by demand.
- Both 2.5" and quart size, are often used for prairie restoration work.
- Gallons, at one time, were reserved for larger plants, but today are in demand for a more finished look on landscape projects.

We continue to believe very strongly that the quart and half gallon sizes is the best value for most perennials. Here's why:

- 1) Quarts and half-gallons are easier to plant.
- 2) Plants for quart and half-gallon containers catch on and fill in quickly for more even coverage. They will generally catch up to plants from a Gallon container before the end of one growing season.
- 3) When comparing the soil volume and container measurements, a #1 container may give you more roots, but you are not getting twice the plant.
- 4) #1 containers are not a guaranteed "older" crop. Quarts and #1 containers of the same product may be planted in the same week.



KEEPING THOSE PLANTS LOOKING FRESH



In order to keep perennials looking fresh all season long we rely on planting multiple crops. You see, we try to pull the best-looking plants available on the farm. A crop produced in early Spring can look a little weary and sparse at the end of Spring after all the best plants have been removed to go to their new homes. If we plant multiple crops over the season there is a better chance of having nice plants to sell all season long.



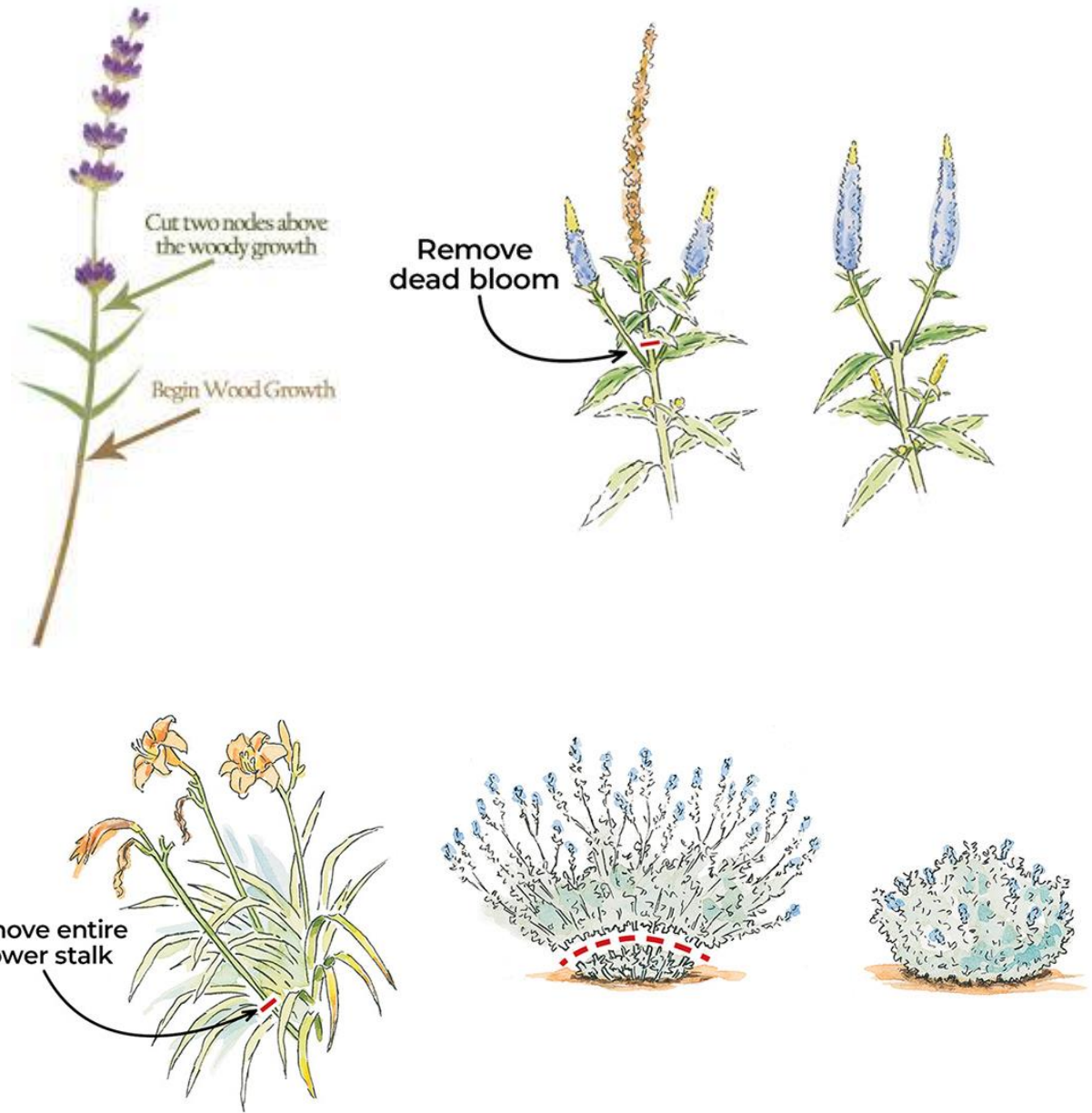
That doesn't mean our crystal ball doesn't break from time to time, or that a customer may order a large number of plants, and a substantial portion of a crop may be taken. Or that a crop that was looking fantastic 2-3 weeks ago may be sold out, just when a customer needs "a few more plants" to finish a job. But for the most part this system has been working.



We also have a regular program of fertilization and maintenance. Fertilization is fairly easy to understand. A plant in a pot has only a certain area from which to draw nutrients and at a certain point those nutrients are pretty much used up. Fertilization helps plants live in a pot until it is planted in its new location.

- **Deadheading and cutting back** designate two essential garden chores, i.e. maintenance, that keep perennials looking their best.
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- Deadheading (or the removal of spent flowerheads) has several purposes. Once a perennial is done flowering many times deadheading is required make the plant look tidy again.
- Deadheading delays the setting of seeds and promotes longer bloom. Some perennials seed prolifically and so the deadheads are removed, or if it is in the home garden they may remain to produce new plants.
- Cutting back is in order when a plant is done blooming, and the foliage is looking tattered and worn, or it is overgrown. A new flush of foliage becomes apparent in just a few weeks.





In Conclusion

- There are lots of moving parts involved in the growing process. Everything we do is geared to growing the best plants and working with mother nature to walk softly on the earth.



Thank you

Questions? Comments?
Please contact us!
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