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Anna Butterfield

www.loveplantlife.com

www.gardenkapiti.co.nz



How to grow from seed workshop notes

What I hope to show you is how to get the best results quickly and easily, so that you'll continue to grow from seed. The actual seed growth may seem like magic but successful seed-raising isn't. Often you see instructions that are overly complicated and need equipment or expensive inputs which turn more people off growing from seed. None of that here! I give you practical, easy advice that won't cost a lot. There is a lot in here, so that you can really understand the process. But the actual doing, is straightforward.

Two key things to remember:

- The number one cause of all seed fatalities is neglect / lack of water;
- It's a skill. It'll take practice. You are bringing new life into the world, respect it as such.

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Why do it?

- Price
 - your punnet of plants is about \$4. A packet of seeds around \$3.50 If you collect your own seeds from your garden and swap them with others, you won't need to spend anything at all.
- Huge variety of different seeds
 - not just the 6 tomato types you can get at the local store. For instance there are over 100 different varieties of tomato seeds available in NZ
- Control
 - enhanced and uninterrupted seed growth by planting at different intervals. Transplanted seedlings make better use of bed space. Seeds can take 6 days to 6 weeks to be ready for transfer, in the meantime something else can be growing there. Better control of numbers and spacings.

Sourcing seed

- When you are starting out buy commercial seed. Get the basics down and your confidence up.
- Trust your supplier to provide you with high-quality seed that has been grown, harvested and stored properly and is still within its best before date. And if they can't provide you with good details about the variety and how to grow it, go elsewhere.
- Would you buy food or medicine from some guy on a street corner or the cheapest deal you can find on the internet? Well you shouldn't buy your seeds that way either.
- Start off simply and work your way up

Good easy to grow varieties for first-time seeders

Radish, beans, zucchini, pumpkin, lettuce, beets, mesclun, rocket, kale, sunflowers, nasturtiums, marigolds, chives, coriander

Pretreatment

Your well-labelled seeds should include info on any pretreatment needed. In nature all of this would have been done by the weather or going through the digestive tracts of animals. And this weathering takes a long time. So in the interests of speeding things up there are three things to watch for:

Soak

- asparagus, beans, beets, carrots, corn, parsley, peas, spinach
- warm water for at least 24 hours

Scarify

- sweet peas, lupins, soap nuts,
- Cut a shallow notch to one side of the hilum (where the seed was attached to the pod) being careful not to cut into the embryo.
- Smaller seeds rub with some sandpaper.

Stratify

- asters, bellflowers, clematis, columbines, coneflowers, coreopsis, pansy, snapdragons
- chilling mainly for perennials and woody plants. Chill them before planting out, not before you put them into storage. Store thoroughly dry seeds in fridge in envelopes

What to grow those seeds in

Containers

You can start seeds in almost any kind of container, but you don't want to. You need something that will both hold enough water that your plants won't dry out but also has enough drainage so they aren't waterlogged.

Let's get serious – you want to give your seeds the best possible chance and not have to check on them every five minutes. The best way to plant your seeds is in 3 inch (8cm) seed raising trays 14 inch by 23 inch (internal dimensions) 35x58 cms. The reasons:

- roomy
- hold water better
- root development - roots get stunted if they hit the bottom
- drainage
- gives you flexibility. keep them in there for longer. If you can't plant them until a week later it probably won't hurt them
- you'll look and feel like a pro.

Downside is they're heavy. (45 pounds = 20kgs). Half sized flats are 35 x 30

Of course you can plant in lots of other things. Just ask whether it meets all the criteria above. If you plant in smaller things you'll have to check them much more often.

If you are starting plants that may be difficult to transplant eg cucumbers, squash, eggplants. then you can use toilet rolls can be a good option. I haven't had any luck with peat pots. They are expensive and the ones I have used stunted root growth, probably because of the binding agents.

Seed raising mix

Needs to be:

- lightweight, airy;
- able to absorb water;
- disease free.

A good, simple recipe: 1 part sifted compost, 1 part bed soil.

Other seed-raising ingredients (the good, the bad and the indifferent):

- Rock dust - sprinkle. Seeds have the nutrients they need for initial growth but if they will be in trays for more than two weeks, add a sprinkle of Roksolid to keep them going. Especially in those 2nd flats.
- Peat moss. Large-scale peat harvesting is not sustainable, as it takes thousands of years to form the peat that can be harvested in just a week.
- Water Gel Crystals. Water-absorbing polymer that expands over 400%. Some people may be teetchy about the methylparaben in them.
- Perlite - volcanic rock added to a lot of mixes - small, crunchy white pebbles. Not highly absorbent but lightens and separates mixes.
- Vermiculite - mica, shiny and scaly holds moisture and nutrients and lightens the mix.

Sterilising? Well, ya could. But it's messy and smelly and takes forever and generally of questionable worth. I've not had a problem. Use common sense, is it a suitable growing medium for your seeds? Don't use soil that's been festering, has been waterlogged or looks diseased. If it smells off, don't use it.

How to sterilise? Put the soil in black plastic pots, put each in a clear plastic bag and put in the sunniest spot you can find and leave it there for two weeks. I won't tell you how to do it in the oven because you don't want your house to reek. You could douse the soil in Jeyes fluid like your grandparents probably did--I'm kidding, don't do that!

However, it is a good idea to sprout it first. Put your mix in a seed tray, leave it in a sunny place and water it for a week. Pull out anything that sprouts. Then you are ready to sow your seeds without weeds popping through.

Remember to work clean...tidy your area, keep leaf debris, extra soil and containers of water out. Wash tools and containers in diluted bleach or vinegar when you've finished with them.

How to sow a seed tray.

1. Get your mix together. Moisten. You should not be able to squeeze any water out of a handful of soil.
2. Fill your tray to the top with soil (you want to give the roots as much room as you can. Gently tamp it down. Even it out.
3. Use a dibble/pencil/stick/finger to make little indents for larger seed or furrows for smaller seed. Smallest seeds can be scattered over the surface.
4. Cover seeds adequately. Don't plant too deeply. Sow at a depth equal to their thickness.
5. Mist with more water.
6. Label.
7. Place in a sunny position that gets at least 6.5 hours of direct light a day.
8. Check your seed tray twice a day. Make sure it has consistent, even moisture.

Light

Seedlings need at least 6.5 hours of direct sunlight, 8 is excellent, 11 even better. Best place is on a north facing windowsill.

Water

- Give them some water every day. Every day. Every day. Every day.
- Keep checking them though, they may need to be watered 2 or 3 times.
- When the leaves grow closer together the tray will need less water.
- Looking for a 15 second shine. When you first begin to water you get a shine that disappears immediately. You want the shine to last 15 seconds.
- Misting is good, or you can put containers into a tray of water. Leave them for an hour and then tip out excess water. Don't keep adding water to the bottom of the tray and leaving it.
- Covering with a plastic bag or cling film helps to keep up humidity levels. But make sure they can breathe!
- Watering seedlings -- cabbage family like having leaves watered. Tomatoes, peas, squash, cucumbers and melons don't - wilt and mildew, only water the soil around them.
- Best time of the day to water is 2 hours before sunset. Plants have more time to absorb water.

Thinning

Thin excess plants that are too close together. Survival of the fittest. Won't compete for nutrients, water, room and will allow better air circulation and reduce damage to the stalk. Simply snip them off.

Pricking out

When the seeds have two or more sets of true leaves, it's time for them to move on. Add that rock dust like icing sugar to their next home.

The technique -- **lift, open space, place, sweep.**

- Hold by the leaves not the stems.
- Make sure they are evenly spaced in the tray in offset spacings to optimise space and mini climate
- Plant it all the way up to the seed leaves.
- Can fertilise at half-strength. Some people use rescue remedy to help with transplant shock.

Some causes of seed failure

- not enough water.
- too much water.
- not enough light.
- soil temp needs to be right.
- using old seed.
- using seeds collected from hybrids or not grown stored properly.
- growing in the wrong season.
- forgetting to pretreat.

Hardening off

This is something that people forget when they bring home seedlings from the garden centre. Your plants won't do well if thrust from warm, comfy, nurtured couch potatoes to cold hard outdoors-men. The cell walls need to toughen up. A week before you are ready to plant them out in the garden, leave them outside for half a day. Gradually increase that over the course of the week.

Transplanting

- Cloudy days are best for transplanting, cool evenings are also good, never out into full sun. Make sure the soil is moist beforehand.
- Touch the plant as little as possible - leaves or soil around roots. Keep as much soil around roots as possible.
- Plant roots need firm contact with the soil to do their work. If the soil is too loose water and air will concentrate around the roots causing root burn and decay.

Spotting

Some of your new transplants won't take. So keep some in the tray for up to 10 days to fill in holes.

Sowing seed outdoors

Best for peas, beetroot, carrot, radish, rocket, parsnip, mustard, Asian greens

Caution: don't work fertiliser into a seed bed before you plant.

1. Scratch up the area. You want to give the seeds enough area to take hold and get air.
2. Sow your seeds following the same guidelines as tray sowing.
3. Gently spray to water them down.
4. Remember to keep thinning and watch for weed growth.

Planting by the moon

Is it for real? Don't know. Growers who are far more experienced than I swear by it and it certainly hasn't done me wrong. Cosmic powerplays are beyond my field of comprehension but the main reason I stick to it is timing. It is the easiest method I know to keep track of what to do when.

The theory:

First 7 days = balanced increase in the rate of root and leaf growth

Second 7 days = increased leaf growth

Third 7 days = increased root growth

Fourth 7 days = balanced decrease in the rate of root and leaf growth (resting period).

The practical:

3 days before new moon = sow seeds

Full moon = transplant seedlings from flats

I use this as a best practice. But don't let this stop you from getting things done. Your plants will still grow ok but as you gain experience it's something else you can try.

Record keeping

Keep records because even if you have super memory powers, you're going to forget.

Plant, variety, where you got the seed from and when you planted it and what you're going to do with it.

What to plant when

From Kath Irvine's Organic Garden Calendar

October for Kapiti

Lots of basil, parsley and chives, lettuce and spinach.

Globe artichokes, leeks for next winter, onions, celery, cucumber, zucchini, corn, peas, beans, tomato, capsicum, eggplant, silverbeet, pumpkin

Direct sow carrot, beetroot, rocket

Sunflowers, gaillardia, zinnias, rudbeckia, poppies, nigella,

November for Kapiti

Lettuces and salad greens

Beans, cucumber, corn, zucchini, celery, peas, pumpkin, kale, silverbeet, tomato, capsicum, aubergine,

Direct sow carrot, radish, beetroot and parsnip

For summer colour - sunflowers, zinnias, marigold, mignonette, nasturtium, alyssum, cornflowers

For autumn/winter colour - geum, delphinium, larkspur, lupin, oriental poppies, wallflowers

December for Kapiti

Salad crops

Zucchini, cucumber, corn, beans, red onion, peas, silverbeet

Direct sow carrot, beetroot, radish

Flowers - Zinnia, gaillardia, cosmos, mignonette, late sunflowers, marigolds

Resources and more info

I swear by the following books:

Organic Garden Calendar - Kath Irvine for Levin branch, NZ Soil and Health

Available from Commonsense Organics

How to Grow More Vegetables - John Jeavons

Buy here: (affiliate link: if you do buy this I get a percentage of the sale)

http://www.bookdepository.com/How-Grow-More-Vegetables-John-Jeavons/9781607741893/?a_aid=octimedia

I also recommend:

Gardenate www.gardenate.com They will send you planting reminders and they have apps.

And of course, **LovePlantLife Seeds** store.loveplantlife.com Delicious seeds for your food-growing needs. Varieties specifically suitable for Kapiti gardens. Guaranteed seed with awesome customer support.



Delicious seeds for your
food-growing needs
*The finest kitchen garden seeds
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www.loveplantlife.com