

SEED SOWING

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GROWING GUIDE

GATHER · GROWING GUIDE · SEED SOWING

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PREFACE

A beginner's guide to transforming a packet of seeds to incredible beauty.

Simply everything you ever needed to know about what to do, how to do it & when. I know, I get it. There are only so many seeds in a packet. They seem so precious and so unprepossessing. And the picture of the flowers they should become looked so good. The process of getting seed to flower seems utterly fraught with peril.

In many ways, it is. There are slugs, there are unexpected frosts. More and more there seem to be contaminated or poor quality batches of compost. I can't take every variable out of the equation, but I can give you the hope and confidence to at least rip open the seed packet and have a go. And without taking that step, you ain't ever going to get no flowers.

Let's get started.

grace x



From tiny seeds...

A guide to all you need to know

I have been sowing seeds for as long as I can remember. The move from a flower farmer to a seedmonger was a natural and a happy one, simply because I adore seeds so much. They are specks of hope, of potential, of dormant happiness, just waiting to be awoken.

I am going to make it sound easy but I have made many mistakes over the years, and had the heartache of precious seed failing to grow. To save you from the same, this guide contains everything I have learned, & everything you need to know.

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SWEET PEA

Suzy Z

Lathyrus Odoratus

01

LEARNING THE LINGO

Where on earth do I start? I feel utterly intimidated by the whole process.

I know. But look out of your window. See how many plants there are? How many 'weeds'? Almost all of these will have grown from seed and they did it all without you. Mostly without any human intervention at all. All they did was to fall from the parent plant and land on some soil, and nature did the rest.

A few things here – you will never ever ever get better germination rates or stronger plants than when the seed literally falls off a plant and grows where it lands. Lots of the flowers I grow will self sow and pop up all over the place. I grow a huge number of opium poppies (or maybe they grow themselves and I just think I'm part of the process) by just shaking the seed heads all over the place. Sometimes I don't even do that.

This gives a bit of a clue about the when of sowing. Autumn sowing is great because it is the natural time for seeds to be falling and starting their next period of growth. At least, this works in the UK for hardy annuals. The

second best time? Spring.

Wait, what? Hardy? Annuals? This is jargon.

Hardy means they can live in the winter in the UK and can tolerate frost. This means that they can be sown in the autumn and will grow slowly but surely in the colder weather and then put on a good show next year.

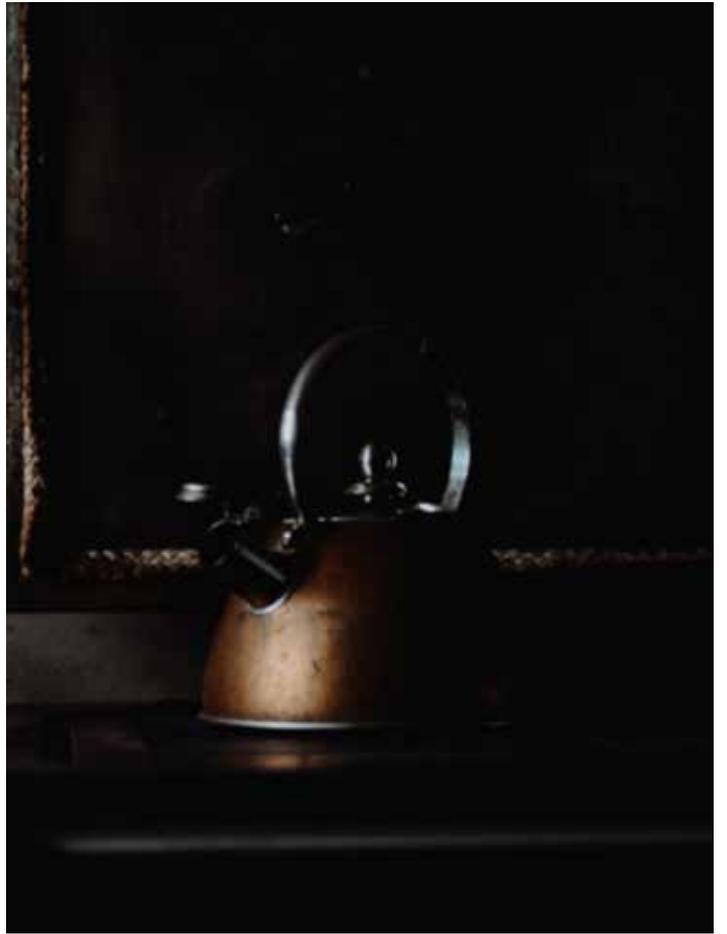
Annual plants bloom and die within a year's cycle. I know, I have just said that they will be sown in the first year and flower (and then die) in the next year, but this is a cycle completed in less than a calendar year and they can, if you choose, sow the same type of seeds in the spring as well.

If we're talking about hardy annuals, how many other sorts of seeds and I going to have to learn the names of?

Not many, I promise. The first word 'hardy' refers to the plant's resilience to cold.

Flowers that cannot tolerate the frost and will die in the ground if they are left out in the UK are called either 'half-hardy' or 'tender'.

This is not always a black or white thing; the climate here in Somerset is very mild and I can get away with leaving *Rudbeckia Sahara*



in the ground and they will (mostly) come back the next season.

Not everyone is so lucky though and I would generally not take the risk on anything precious. Half hardies are best sown in spring. Don't try and overwinter them in a greenhouse or anything, just wait until you are nearly at the last frost date in your area. (If you want to know how fast and loose you can be with this, have a read up on hardiness zones.)

So the second word is about the length of the life cycle of the plant. Biennial plants have a two-year life cycle. During the first year, they grow only the roots, stems and leaves. In the second year they come into flower, produce seeds and die.

Perennial plants are ones that flower reliably every year, usually get bigger each time. The stems can die back over winter, but the roots

live underground and then the plant grows up again the next year.

Just to be a little bit confusing, there are many flowers that have an annual variety and a perennial variety. Sunflowers, foxgloves, scabious. As I move towards regenerative horticulture here at Malus Farm, I am growing more and more perennials. Anything that leaves the soil undisturbed is good for the soil microbiome.

Ok ok, so which should I grow?

Annuals are fast and furious and super easy. Perennials are significantly less admin once they are growing away but the choices are a bit more limited and you have to plan ahead a bit more about where you want to put them and how you want to use them.

Sounds like annuals then?

Yep. I'd say annuals. But then I sell flower seed so I would say that wouldn't I?



Annuals –

A hardy annual is one you can sow outdoors in the UK, which germinates from seed, grows, flowers, disperses its seeds and dies in one growing season. All in the same year if sown in spring, or from one autumn to the next. Most cut flowers are annuals, although there are some notable exceptions, such as roses.

Biennials –

Generally speaking, biennial seeds are sown in mid-summer and the plants develop through the rest of the season; so that by the time winter sets in they will have made substantial plants. Then, in early spring, they start growing again and provide amazing colour in spring.

Digitalis lanata 'Cafe Creme', pictured above, is a biennial.

Perennials –

Plants that live for many years. The term 'perennial' is generally used for all non-woody perennial plants, including herbaceous perennials. It includes those which are evergreen or semi-evergreen such as epimedium, hellebore, and *Stipa gigantea*. Herbaceous perennials are plants where all the stems die back in late autumn and early winter. The roots then survive below ground during winter, shooting again in spring. Well known examples include delphinium, geranium, miscanthus (an ornamental grass) and sedum.



*water/moisture
the right temperature
(warmth),
& oxygen.*

The building blocks of life.

02

GERMINATION

Germination is the very first stage of the seed coming out of dormancy and putting out a shoot. It is done when the first tiny leaves emerges from the soil.

The magic of this moment never grows old by the way.

So I've got my packet of hardy annual seeds. What do I do?

Remember those seeds that are all growing without human intervention? All seeds need to germinate are:

water/moisture
the right temperature (warmth),
& oxygen

My toppest tip that I have learned in the last year or two has been from the wonderful Charles Dowding. It is worth hanging on his every word when it comes to matters growing but I have particularly intrigued by his thoughts, not on the temperature of germination, but on the *consistency* of warmth. What he says is that seeds will not germinate if the nights are cold, even if the days are warm and spring-like. Plants don't mind this (and again, it is worth really grasping

that what seeds need to germinate and what seedlings need to thrive are very different) but seeds do.

Fluctuations and drops in temperature across the day mean they don't sense that their time has arrived, and they will wait for more consistency. So use this knowledge to your advantage. Where the one place that stays relatively warm overnight? Human beings don't like wildly fluctuating temperatures or brutally cold nights any more than seeds do, so let's make the most of the coincidence. Germination in the house, growing on outside in the elements. Charles has a conservatory that he uses, but any windowsill or relatively warm spot, outside of nasty drafts, will be perfect.

Going back to the three things that seeds need to germinate, you may have noticed that I didn't say light. Seeds (generally) don't need a lot of light to germinate, but as soon as they are out of their shell and growing on, they really do. Don't hang around in getting the seedlings somewhere where there is a lot of light. If this is a windowsill, put them as close to the window as you can and turn

frequently. My husband doesn't know the reason for this but my kitchen windowsill is painted with white gloss and the walls on the inside of the window recess are also white. This is in stark contrast with the matte and muted tones in the rest of the house but I have been resisting stripping it back and replacing it with an old piece of elm. Why? Because the light bounces around on all that white, and makes all the difference to what the seedlings can capture and use.

But we are getting ahead of ourselves... Seedlings are later in this book. Back to germination. Confusingly, some seeds need some light to germinate, and some need dark. Generally it is the fine, dust like seeds (never sneeze when you are sowing nicotiana) that just need to lie on the top of the soil that need light, thus following the rule that seeds should be sown at a depth of three times their height.

SEEDS THAT NEED LIGHT

Ageratum
Aquilegia
Lettuce
Nicotiana
Poppies
Snapdragons

SEEDS THAT NEED DARKNESS

Calendula
Cornflowers
Delphiniums

So we've talked about warmth, which leaves oxygen and moisture.

With elegant simplicity, both of these things are initially provided by the growing medium that you put around the seed. Nature does this with the soil upon which the seed falls. I strongly suggest you do it with compost.

(Why not just dig up some soil? If it's good enough for Mother Nature, why not you? Because Mother Nature is loads better at this than you and it is likely that you will germinate all sorts of seeds in that soil, and you will have pots and pots of fat hen.)

You probably don't need me to tell you to go peat-free. If you do, please research the impact of this on delicate ecosystems. Many of the garden centres now stock peat-free and if they don't, ask to talk to the manager. However, I have had much better success with buying from small scale nurseries or ordering from specialist companies online. I have gone for Melcourt Sylvagrow for



the first sowing, but only because the most wonderful compost on the planet (Fertile Fibre) is a few days from ordering to delivery and I really wanted to get on.

Really good compost feels alive. Put your hands in it and if you feel a sense of warmth extend from your fingertips up your arms, it is good compost. I truly believe that identifying good growing mediums is of such evolutionary advantage that sensing them before we have invested in precious seeds and time and found them to be wasted is a skill encoded in our DNA. Smell it. Touch it. If it is claggy, wet, and cold, you won't like touching it, and seeds won't like it either.

The oxygen bit. The oxygen used by germinating seeds is not from the air, it is from the air pockets in the compost. There are a couple of ways that you can get in the way of this happening well. One is to press the compost down too hard so it is compacted. It needs to settle and be quite firm, but not hard. The texture of a really good Victoria sponge. If it's more Dundee cake, you've gone too far.

The other is to allow the compost to get waterlogged so the air pockets fill with water. If you compare seed compost with

multipurpose, it will often appear a little bit sandier; things (sand, grit, vermiculite etc) are sometimes added to increase the drainage and keep the air pockets open. One big water and then just keep the compost on the dry side of moist.

I am talking as if you are going to be sowing into pots and compost (indirect sowing), rather than putting plants straight into the soil (direct sowing). There are pros and cons for each, and a time and a place for both. So let's talk about that.

But I can't help thinking I should be growing in pots. Or seed trays? Or those trays with squares in. Like what you see Monty Don doing on Gardeners' World. All gardeners seem to put seeds into seed trays. I mean, the clue's in the name...

You can, and there are lots of reasons for why you might want to, or at least there is one decent reason why you would want to and many many reasons why you would want to just get the seeds in the ground.

So, can you tell me the one good reason why I should use seed trays?

Sowing anywhere except into the soil is called 'indirect sowing' or 'sowing undercover'. And yes, the one good reason for doing this

is that you haven't got anywhere to put them yet. I am moving some of my beds around and, at the moment, the place that I want to be filled with ammi and nigella currently has tulips in.

Oh, I've just thought of a second reason. Ammi is adored by my local rabbits. They tend not to completely destroy a solidly sized plant, but they will compulsively graze seedlings like they're Maltesers. If you have a lot of pressure from animals or slugs, you may be safer starting plants indoors with protection and then getting them a bit more robust before they are cast out to the elements. The worst thing about seedlings being munched is that you generally never know whether the seeds germinated and were spirited away overnight, or that they just never came up. All you will ever know is that you will be looking at a row of soil, and there will be absolutely nothing there.

Indirect sowing is sounding like the safe option then, I think I'll do that.

No. Please don't. There are lots of reasons to not. Firstly, let's talk about sustainability. If you put seeds in the ground at the right time, in the right conditions and they'll grow, why would you engage in the plastic, the buying of compost, the driving to the garden centre and purchasing things, when soil can do it just as well. I sense that capitalism has a hand in persuading us that if we need to buy 'stuff' to do something, it must be better. It doesn't

have to be this way.

Secondly, there is so much more faff with indirect sowing. You are going to have to make decisions about how to look after them over the winter, water them, but not too much because they are dormant, and prick them out. And then when they're too big for the pots that you put them into you'll have to get them out of the pots with their comfy and scientifically-designed compost and into your slightly more real life soil. And many plants don't like root disturbance so you are going to have to do this really carefully, and when they are tiny. Poppies, I am looking at you.

Argh. this is starting to get really complicated... Shall I just buy plug plants?

No, honestly, it's fine. Let's just do the direct sowing thing... You ready?



Do it the way nature does it.
Clear some ground. Sprinkle your
seed freely but not too thickly.
Cover lightly. Wait for rain.

putting seeds into the soil:

03

DIRECT SOWING

CLEAR YOUR GROUND

If you are sowing at a really good time (spring, or as the summer cools into autumn), the soil that you want to plant into is likely to be covered in a flush of seedlings of weeds or other self-sown plants. Just clear with a hoe. You are after a smooth, crumbly surface. If the soil is cold and wet and generally feels a bit inhospitable then the seeds are likely to not germinate and just sit there. They'll either rot or be eaten by something. If it is hard and dry, the seed won't get enough moisture to germinate or it won't be able to push through the soil and get to the light.

If your soil truly is dreadful, we may need to talk about this a lot more, but adding compost is probably the answer to whatever soil woes you have. Get any stones or roots out. Stony ground is not good for seeds.

Break up any clumps of soil. Nothing bigger than a plum.

WATER NOW

Give the row where you are going to sow a water. No, I haven't put this in the wrong order, it really is better to water before you put the seed in. Even with a rose on a watering can, it is very easy to wash everything all over the place.

DRAWING A LINE

Draw a line in the soil with a stick or a trowel. If you are feeling super net, use a piece of string to get the line straight. The bottom of the line that you have made should be damp, not just the surface you have cut through, If it isn't, give it another water.

Write a label now. I know, another one that feels that it is in the wrong order, but if you sow a row of seeds, realise that you have left the pencil and the lollipop sticks in the shed, you will be tempted to convince yourself that you couldn't *possibly* forget that this line was *digitalis parviflora*. Trust me. You will.

Get your labels in before the seeds touches the soil. It is useful to add the date as well as what seed it is.

If you are recycling plastic labels, a soft pencil is best for writing. If you are using wooden ones, a permanent marker.

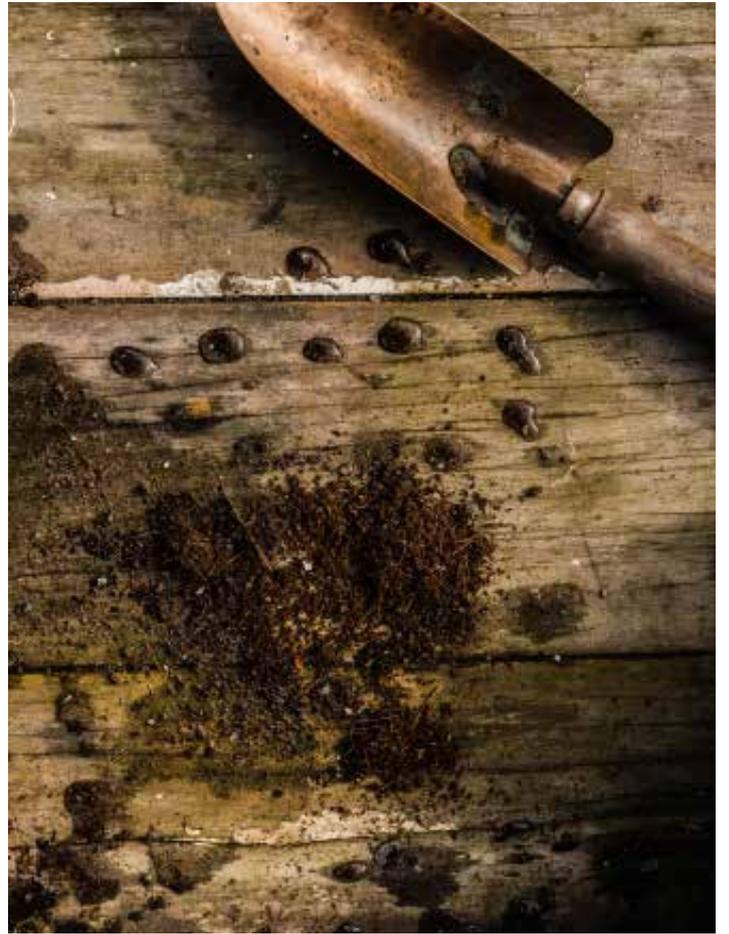
THE SEASONING SPRINKLE

Right – now you can get the seeds in. Tip them into the palm of your hand and then use your thumb and forefinger to sprinkle into the trench, like very lightly seasoning with pepper. I say very lightly because sowing too thickly is not only a waste (you'll have to pull many out because they will compete) but seeds never get away as well if they are all trying to get going at once. Don't try and count them or place them individually or anything, but one per inch is probably about right.

Cover them over. Give them a bit of a pat but don't be too firm.

Move along to another row and repeat as desired. To know how far apart to put the rows, it is worth having a look at how big the flowers are going to get.

Bronze fennel is tall but not very wide so a spacing of eight inches apart is good. *Agrostemma* is lovely and wispy and so a bit closer, six inches. Although I sort of sprinkle it in containers so that doesn't really matter. *Nigella* and cornflowers benefit from a bit of a support so you can either plant the rows a little distance apart and support them individually, or sort of corral them together and plant them about six inches apart.



Keep planting seeds.
You never know what might take
root.

Harnessing warmth:



04

INDIRECT SOWING

I knew you'd get to it eventually. I've got a windowsill and I am not afraid to use it.

The one benefit of sowing in pots in a windowsill is that you get to see them growing, and that is pretty priceless. However, you are generally not going to autumn sow on your windowsill because they'll have to sit there until April and only houseplants would enjoy that long in a heated house.

Got a greenhouse or a sheltered spot, then you're on.

Hurrah. Seed tray at the ready.

Ah, well, probably not just a seed tray. Think about it. Lots of things have quite deep roots, or they don't like being moved around a lot. Never overlook the potential of a little square pot, 9cm, or a module tray. Let's not make life difficult.

Ok, pots it is. And seed compost?

To be honest, if the seeds are going to germinate and sit in the pots for a while, you'll need a bit of nutrition in there. Sweet peas, pumpkins, tomatoes, and the hungry cup and saucer vine. Some seed composts

have enough nutrition in (I recommend Dalefoot for this) but you might want to just go for a good, light, peat-free multi-purpose. I swear by Melcourt's Sylvagrow and I know my local plant nursery starts all her seeds in it.

I promise that's all the technical stuff out of the way. Here we go.

1 .

Fill the pots all the way to the top (they'll sink when you water them) and press down a little bit, not much, you don't want them to be compacted. Sprinkle a few of the seeds onto the top. You are going to be thinning them to the one strongest so don't waste too many in each one. Can I suggest you sow only half the packet too? You'll be wanting them for some spring sowing so you can get more flowers over a longer period.

2 .

Sprinkle with a little bit of compost on top – remember the depth/height thing? Don't bury the poor things.

3 .

Fill a tray with water and put the pots in until they've had a good drink. The surface of the compost should darken.

4 .

Label. Did I remember to say label? Don't do that thing where you think that if you have a row of pots you can just put a label on the front one. I have done this so many times and by the time you have moved them for watering you absolutely won't know what is what.

If you don't have a greenhouse, a cold frame is fine. If you don't have a cold frame, just a sheltered place, but mind the slugs.

And there you go. Germination might take a week to a fortnight depending on the warmth of the soil.

Send me a photo when they're up.

A NOTE ON SWEET PEAS

I love sweet peas. Not a secret. Not a surprise. They are easy to germinate, grow like the clappers and they give more bunches of blooms per plant than I know. (Cosmos being the only possible exception.) Couple of things.

Sow earlier rather than later. I do one lot in autumn, one at Christmas, one in February and one in March. Only a few seeds at a time - think little and often. You are aiming for a couple of plants reaching peak production at a time.

Indirect sowing always because of mice. Deep pots or cardboard tubes. Multi-purpose compost (not seed). I don't soak, but one big water when they are first sown and then just keep slightly moist. As with many things, but especially for sweet peas, germinate in the warm, grow on in the cold and light.



An epilogue: Sow right

This is a magical process, and I defy anyone who has watched a seed burst into life to tell me otherwise. But when you meddle in natural processes, even as innocuously as growing some a flower from South America in your English cottage garden, there are some responsibilities that come with this.

This chapter is about respecting the earth, its resources, and its ecosystems. I will start fairly incontrovertibly pragmatic and then it might get a little bit woo.

Firstly, we need to just go back to the idea of peat. There is no reason that we need to use peat in our growing practices and anyone who says otherwise is likely to have shares in a multi-national company that profits from selling it. The implications of mining one of the world's biggest carbon sinks to fill a seed tray or a hanging basket feels like humanity at its short-sighted worst. Be mindful of some of the alternatives that on offer, such as coir, it comes with its own carbon footprint and is not entirely unproblematic...

I don't, as a general rule, make my own seed compost but when I do, it is always worth the effort. When the moles start to become active in the spring, a few scoopfuls of the fine soil from the molehills, a bit of sharp sand, and some leaf mold all sieved together work wonders. Even if you don't have moles, or leaf mold, or even sharp sand (it can be hard to buy in small quantities), then there are ways of reusing compost. When a tray has germinated and the seedlings pricked out, I tip the compost back into a trug and mix it with a little fresh and go again. Yes, it does mean that I often have mixed trays. Poppies and bells of Ireland are notorious for sulking and then bursting into life just as you have given up and upended them.

Seed compost needs few nutrients (the energy is in the seeds) so there's no need to waste your best garden compost on them. Save that for top-dressing the most intensively worked of your beds.

Talking of intensively worked, can we just think about the number of plants you want to grow? Seed packets come with a lot of seeds in, hundreds, sometimes thousands (and I am someone who has tried to count fifty nigella seeds and failed). How many plants do you want? Few people, short of a commercial flower grower will want or need over a hundred larkspur plants, or bronze fennel towers, or even more than four cosmos. Trust me, four cosmos plants will give you more flowers than you know what to do with, but I post you an envelope with about fifty seeds in, because if I sent you four, you'd ask for your money back. Also, slugs, frosts, and germination is never 100%, even under ideal conditions, and real life is rarely ideal.

Sowing and growing every seed in the packet is going to give you a lot of life that you are either going to have to extinguish, or you are going to have to find space for. Sara Venn has written and spoken eloquently about how sowing seeds that you don't need, that you are setting up to fail, that are going to go to waste, is inherently unsustainable and unethical. I agree, although there is a bit of me that also thinks that Christmas Eve is better than Christmas Day, and if you buy seeds from me because you like the packet and because the idea of sowing them brings you great joy, I am sort of ok with that.

Which brings me to a possible solution. If you have too many seeds,

send them to a seed swap. If you have too many seedlings or too many plants, put them on your doorstep with a little sign and let them have a life with someone else and they can reach their full potential. Your neighbour might even bring you round a bouquet of flowers. Connection is the lifeblood of humanity.

Ok, this is where it starts to get a little more controversial. The timing of sowing. If we subscribe to the idea that it is right to create the optimal conditions for seeds to grow, then how about timing? There is a considerable school of thought that states that seeds sown in the few days just before a full moon (waxing) germinate stronger, faster, better than those in the few days after (waning), as if they are literally being pulled out of the soil by the moon's force.

For more on this, feel free to research lunar planting (the simplest approach) or biodynamics (the most complex).

It is utterly mad but it works. And I am hooked.

