

How To Grow Nutrient Dense Food

For those on a mission to reclaim their health...

With help from Grant Paton, CEO of Environmental Fertilisers, Kay Baxter, from the Koanga Institute, has worked out the following 'recipe' for establishing a vegetable garden, using Environmental Fertiliser's fertiliser, which in all of our years of trialing is the most cost effective, and the only fertiliser that actually improved our brix measurement (nutrient density) consistently.

We understand it is only the first step, and our efforts are now going towards finding more regenerative and local ways to do this, however if you are serious about growing soil and nutrient dense food this is the best start we know of. If you're keen to know more and move on after making this beginning we recommend our *Art of Composting Booklet*, *How To Grow Nutrient Dense Food Booklet* and our *How To Grow Nutrient Dense Food* workshops, which are always on the leading edge of our research and learning. See www.koanga.org.nz for more information.

The recipe we use is as follows per square metre of garden bed, forked into the top 5-10cm before planting seedlings:

1. EF BAS 50 (Paramagnetic Rock Dust) 400 gms (once only) certified organic.
2. Activated Carbon (Biochar) 400gms (once only) certified organic.
3. EF Natures Garden Fertiliser 400gms (way the most effective of these two) or EF Nature's Organic Fertiliser certified organic 400 gms.
4. EF Nano-Cal 200gms certified organic.

After seedlings are planted we sprinkle 100 gms of Natures Garden Fertiliser over each square metre, then we water the seedlings in with a watering can or two containing EF Fish Plus at 100 mls per 10 litres of water. This form of liquid fish is complexed with a carbon source, so does not burn up soil carbon or wash away fast like other forms of liquid fish.

If our crop is a heavy feeder (tomatoes, pumpkins, all cucurbits, corn, brassicas etc) we will apply 100 gms of Natures Garden Fertiliser per sq m each month for the following 3 months. If your crop is tomatoes, or you have very poor soil we also soil drench with EF Cal-Phos a few days before we reach full moon.

We will then apply a weekly foliar spray of EF Vegetative Foliar for a month or so then switch to EF Reproductive Foliar until harvest, unless the crop is a heavy feeding leaf crop and then we just continue with the EF Vegetative Foliar.

This level of applying nutrients will mean you are sequestering carbon, growing Nutrient Dense food and you don't have to keep doing it forever. The higher brix 'waste' vegetable material generated can also be added to your compost heap, and you will continue to improve the quality of your food as you build up your soil.

Repeat Planting

Each repeat planting season follow the same instructions without the paramagnetic rock dust and activated carbon, and after two years omit the EF Nano Cal as well. Using a refractometer will give you more feedback about how things are going and help you make appropriate decisions about what works best for you.

Please Note – These instructions being generic are designed for average NZ soil conditions, which is over 90% of us. If you know you have unusual conditions then we recommend you get a soil test and advice from Bio Services.

All of the fertiliser listed here is available from www.ef.co.nz

**For more information visit
www.koanga.org.nz**



RD 5, Wairoa, 4195, New Zealand
Tel: (06) 838 6269 Fax: (06) 929 9824
Email: contact@koanga.org.nz



Growing Plants From Seed

How to grow high quality seedlings
using the Biointensive Method

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Growing Plants From Seed

How to grow high quality seedlings using the Biointensive Method

1. Use a specific organic seed raising mix or a home-made one. All other seed raising mixes contain fungicide which will kill all the beneficial microorganisms. These micro-organisms are vital for healthy, high Brix* plants.
2. Use a seedling tray that is a minimum of 6–7 cm deep. Shallow trays do not provide enough depth to grow the best roots.
3. Check seed packets or *Master Chart* in *Koanga Garden Planner* or *Koanga Garden Guide* to ensure you plant the seeds at the optimum time for their germination, and you understand the best way to plant them. Some can be planted close together and then pricked out at 2.5cm diagonal spacings, others are best scatter sown in trays, and then transplanted directly in the garden, others best direct sown in the garden. This information is on all Koanga Seed packets, the *Koanga Garden Guide* and the *Koanga Garden Planner*.
4. Plant seeds of a similar size in a tray together, so you can easily cover them with the correct amount of seed raising mix. Cover with the same soil depth as the seeds are deep. Too much soil will prevent seeds from germinating.
5. Label seeds carefully. Use waterproof pen on strips of plastic or wooden sticks.
6. Keep your seeds evenly moist but not too wet. Tiny seeds are particularly sensitive to too much moisture as they germinate. Use a watering can or sprinkler head that allows water to fall like soft rain.
7. Once the seeds begin germinating they must have full light conditions or they will grow leggy very fast.
8. Once your seedlings have germinated, with their first two leaves above ground, if they are seedlings that need pricking out, they must be pricked out into another tray at the optimal diagonal spacing for that seedling. (See Koanga seed packets for details, or *Koanga Garden Guide*). Use the same soil mix as for seed.

9. Handle the seedlings very carefully by their leaf tips only when transplanting. We use a 'widger' or a teaspoon handle to lift them out of the seed tray to transplant them. Plant the seedlings so that the leaves are just above the surface of the soil, bury them up to their shoulders, so that the stem is covered.
10. All seedlings will need to be protected from wind and rain until they are almost ready to plant into the garden. Check the seed packets for details on when to plant into your garden and at what spacing.
11. Continue to water your seedlings in the way that most resembles gentle falling rain.
12. You can use a foliar feed to encourage healthy growth and raise the Brix* levels of your plants. EF Nano-Cal or EF Bio-Cal, or EF Growth Foliar spray, EF Cal Phos or something you have made yourself with vermicast or seaweed. You can use a refractometer to test what is working.
13. Hardening off your seedlings before transplanting into the garden is very important. Place your tray of seedlings on an outside but sheltered bench where the birds or chickens can't scratch them out, for 3 days prior to transplanting to avoid transplanting shock.
14. Storing your seeds: Seeds are alive and need to be stored with care to ensure their viability. It is important to store your seeds in a dry cool environment, away from sunlight and moisture.

Seed Raising Mix: Seed raising mix should be of a fine consistency, with no large lumps or pieces in it. This is especially important for fine seeds. Adding 1 teaspoon of EF Nano-Cal or lime per tray and a pinch of seedling inoculant will be beneficial to all seed raising mixes. We add a handful of EF Nature's Garden if we use commercial mix, even organic mixes. The seedlings grow far better.

Make your own: To make your own high quality seed raising mix you need 1/3 high quality mineralised compost, 1/3 sieved free draining aerobic garden soil, and 1/3 sand. If you have no high quality compost use half soil, half sand and add 1 cup of vermicast per tray, mixed in well. If you're just getting started, or your compost is lacking in minerals or biological activity, you can add a handful of EF Nature's Garden to each tray as well.

*** Brix Readings (Using a Refractometer):** If you're serious about growing high quality, Nutrient Dense food, then the best tool to help you understand what is happening in your garden is a Refractometer. This is a simple tool that measures the 'brix' of the plant, which is an indication of nutrient density of the plant. This has a direct relationship with our own health. Refractometers are available from the Koanga website shop www.koanga.org.nz.

