Microgreens Grow Kit

Instructions

Everything you need
to successfully grow your own microgreens at home.

And know that 50% of the profits from your purchase
will help us place a free kit in an elementary or middle school classroom.

Jackie's ...Naturally
P.O. Box 133
Bakersville, NC 28705
E-mail: jackie@jackiesnaturally.com
Website: www.jackiesnaturally.com

Congratulations-- *and thank you*-- on the purchase of your Microgreens Grow Kit! We're excited to help you grow your own nutrient dense microgreens. We're passionate about good nutrition and, because you have purchased this kit, we suspect you are too!

Your Purchase Will Help Teach Kids About Nutrition

We want to especially thank you, because you are the driving force behind our effort to make fresh microgreens available to young school age children-- and to help them understand where their food comes from.

> For every Microgreens Grow Kit sold, Jackie's ...Naturally will donate fifty percent of the profit toward placing a free kit in an elementary or middle school classroom. Together, you and I will give kids a chance to learn about good nutrition at that critical stage of their lives-- before they become prisoners of the fast food world.

Thank you for supporting this important mission - you're giving a child a chance at appreciating healthy foods -
Jackie Wall

Before You Begin...

Before you plunge into a new adventure (I'm one of you! I know you!), please read this disclaimer. Learning to grow microgreens can be difficult and may result in a few failed trays. Some varieties can be fussy and will demand special attention. I made plenty of mistakes myself when I first started. But if you pay attention to a few readily noticeable complaints your little plants are signaling, you will soon be enjoying beautiful, fresh microgreens at your table! We'll cover all this in our easy, step-by-step instructions.

Want Even More Information?

You can find resources and continually updated information on our Website, in the password-protected "Growers Only" section. And if you have questions you can ask Jackie and receive a reply there.

- Go to www.jackiesnaturally.com
- Hover your cursor over the "Grow Kits" tab in the overhead menu and select "Growers Only" from the drop down menu.
- Your password is **d@ikon**

Contents of Kit

Your Microgreens Grow Kit contains everything you need to get started-- except for light and water of course! Your kit contains the following:

3 Grow trays
2 Bags of organic potting soil, 8 cups each
1 Food quality spray bottle
6 Seed packs – one each of Black Oil sunflower, Daikon radish, Dwarf Gray pea shoots, Red Russian kale, broccoli and Garnet amaranth. Each pack contains enough seed to raise two crops of microgreens.

And, speaking of light and water, those are the two parts of this process that are critical. Judging the amount of water your seeds and plants need will become obvious if you observe your trays of microgreens closely. If you don't have a location in your home that receives plenty of light (avoid direct sunlight) that's not a problem! Refer to the "Not Enough Sunlight?" section below.

Your packs of seed are all certified organic. Additional seed may be purchased from us online at www.jackiesnaturally.com or from our booth at the local farmers markets that we participate in. You may also purchase seed directly from any reputable dealer online but we urge you to **use only certified organic seed.**

Note: Don't sprinkle out all the seeds in a packet at once! Use only half each time. Each packet contains enough seeds for two growing cycles.

Now Let's Get Started!

You're ready to put your Microgreens Grow Kit to work! Here's your simple, step by step growing guide:

Because your kale, broccoli and amaranth take longer to grow than the other varieties, we've crafted our instructions so that all six varieties are timed to be ready for harvesting at the same time. They will combine to give you my "Balanced Blend" microgreens that we started growing for our own health issues-- and which are so popular at our local farmer's markets.

1. **Seeding Your Kale, Broccoli and Amaranth.**
   Pour ½ of one bag of the organic potting soil (included with your kit) into a tray. Spread the potting soil evenly over the surface of the tray and pat the soil down with your hand so the small seeds will stay *on top* of the potting soil. Now visually divide the tray into thirds. Remember, your seed packets contain enough seed to raise two separate crops of microgreens so only use half of each packet or you will overcrowd the trays. In the first section, sprinkle half the broccoli seed from your seed packet over the compressed soil. In the second section, sprinkle half of your kale seed. In the last section, sprinkle half of your amaranth seed. Note: your broccoli, kale and amaranth seeds do not need to be covered with soil and they do *not* need to be pre-soaked. But **y**ou *do* need to wet the seed. Use your food quality sprayer to gently wet the seeds you've just put in the tray. The potting soil needs to be damp on the surface-- but not

soaked-- or your seeds will rot before germinating.

2. **Adding Weight Makes Your Seeds Stronger.**
   Cover your filled tray of seeds with a second tray and pour the remaining half of the bag of organic potting soil into this tray. Spread the soil evenly and again pat the surface down just as you did for the first tray. This will be the tray that holds your sunflower, pea shoots and Daikon radish. But wait, don't them plant yet! For now, just cover the tray of bare potting soil with your third and final tray. Place an average size book (or other similar weight) on the top of the empty tray. The weight of the soil in the middle tray, along with the book in the top empty tray, helps activate the germination process for the bottom, planted tray. This also keeps the unseeded tray of potting soil from drying out. Your broccoli, kale and amaranth will push to grow up against the weight.

3. **Babysitting Your Kale, Broccoli and Amaranth.**
   Now wait four days. No peeking! On the fourth day, remove the empty cover tray and book. Also GENTLY remove the middle tray with the potting soil. Voila! You should see tiny broccoli, kale and amaranth sprouting up out of the bottom tray's potting soil. The amaranth will probably be the tallest because it germinates faster than the other two. It will also be white or nearly white and will only gain its beautiful magenta color as it grows in light. The broccoli and kale will be smaller. Water the tray with your sprayer and put it in a draft free area where it will get lots of light but no direct sunlight. Now you're ready to start the sunflower, pea shoots and radish so that all of your microgreens mature at the same time.

4. **Time to Prep Your Sunflower and Pea Shoots for Germinating.**
   Place ½ of your sunflower seed into a plastic bowl or paper cup and cover with cool water. Do a second bowl or paper cup with ½ of your pea seed (remember, there is enough seed for growing two batches of microgreens-- so only use half). Let the seeds stand in the water at room temperature for 12 to 24 hours. Do NOT pre-soak the radish.

5. **Prepping the Sunflower and Pea Shoots, Phase Two.**
   After 12 to 24 hours, drain the water from the two containers of seed. This process is easy when you use paper cups because you can simply punch a couple of small holes in the bottom of the cup after the seed has gone through the soaking period. Tuck a damp paper towel down on top of each cup of soaked and drained seed. Let the covered seed stand for 24 hours (keeping the paper towel damp). Rinse once or twice with cool water during this process to prohibit mold from growing. Allow the water to drain off after each rinse. After 24 hours the sunflower and peas should have little “tails.” They are ready to plant when the tails are small but don't let them grow more than ¼ inch or so. The longer you wait to plant, and the longer the tails grow, the poorer the final growth.

6. **Planting your Prepped Sunflower and Pea Shoots and your Daikon Radish.**
   In the tray that has the potting soil but no seed, visualize three equal sections. Sprinkle the soaked and drained sunflower seed evenly in the first section. Sprinkle the soaked and drained pea seed in the second one-third section. In the last one-third section, sprinkle half of the Daikon radish seed packet. You should now have the tray covered with equal sections of sunflower, pea and radish seed. This tray is now ready to be watered and covered. Spray gently with your food quality sprayer and then use the empty tray once again to cover the seeded tray. Weight the tray of sunflower, pea shoots and radish with a book or other equal weight. Wait three days. Again, no peeking!

7. **With Some Daily Maintenance, Your Crop of Microgreens Will Be Ready to Harvest!** After three days, uncover your tray. You should now have a tray of just germinated sunflower, pea shoots and radish. Spray them using your food quality sprayer. Now put the tray in an area where they will get lots of light but no direct sunlight. Keep them away from drafty locations and spray daily to keep the potting soil moist. Except for daily watering and gently swishing seed heads off the sunflower, you simply wait until they are ready to be clipped and eaten!

Not Enough Sunlight? Use T8 Fluorescent Lighting As I Do

If you live somewhere that just doesn't get good light coming through a window (avoid direct sunlight!), then supplemental light might be necessary. You can go out and spend a fortune on true grow lights but that's not necessary (we don't even use true grow lights). Here's what we do: we purchase inexpensive florescent shop lights from a home improvement store. Get the T8 version. We use the 4 ft length, but the 2 ft size will work for your smaller trays. We pair a cool tube and a warm tube (it's marked on the bulb's packaging) and, between the two types of lights, our microgreens get enough of the full spectrum of light needed to produce healthy plants.

A Few Important Notes

- Use only your food quality spray bottle to gently spray the microgreens. Be careful not to over water. This is the tricky part of growing microgreens and it may take a couple of tries to get it right. Seeds need just enough moisture to start the germination process and the growing plants need just enough water to grow healthy and strong. If you're unsure, you can GENTLY grasp your plants at one corner of the tray after they're reached 2 inches in height. Pulling up slowly, you should see a white root mass mixed with the potting soil. This root mass should always be damp. If it looks or feels dry, you're not giving the microgreens enough water each day.
- Harvest your microgreens using scissors. Simply grasp a handful of microgreens (gently!) and clip them off at the bottom of the stems where they meet the potting soil and drop them into a bowl. A gentle rinse in a strainer will remove any potting soil that clings to the bottom of the plants.
- You do not have to harvest all at once. The microgreens are viable from their tiny 2” tall stage all the way up to the “true leaf” 4 – 5” stage. The first set of leaves that microgreens produce are called cotyledons. The second set of leaves are the true leaves. Sunflowers should be harvested before the true leaves are more than 1/4” long or they may taste bitter.
- After harvesting all your microgreens you can start all over again! Empty the root mass into your compost pile or in your yard and your trays are ready to grow the next cycle. Every few growing cycles you should sanitize your trays with a solution of one part chlorine bleach to ten parts water and then rinse them and let them dry thoroughly.
- To prevent mold from growing in your food quality sprayer, empty the bottle after each growing cycle and pull the nozzle trigger until all water is expelled. Every four growing cycles (assuming you are growing every two weeks) sanitize the bottle by adding one part bleach to ten parts water. Pull the nozzle trigger until the solution has sprayed through the nozzle for several seconds. Rinse thoroughly, remembering to repeatedly expel the clean rinse water through the nozzle to remove any bleach solution in the nozzle.
- Last, but certainly not least, enjoy your nutrient packed, fresh microgreens! You have

successfully done it!

Troubleshooting Guide

My microgreens didn't germinate or the germination rate was much less than 80%:

The microgreens probably didn't get enough water before they were covered for the germination period. Or, they got too much water and rotted. The potting soil needs to be wet on top but not saturated at the bottom of the trays.

My microgreens started off well but then they got limp and fell over:

The microgreens probably didn't get enough water once the covers were removed and the growing process began. This is the difficult part of growing microgreens. Once you've killed a few trays, you will get a feel for how much moisture microgreens need (the kale and broccoli don't require as much as the sunflower, pea and radish). The taller the microgreens grow, the more likely they are to start falling over. I generally harvest the sunflower, peas and radish when they're 4 – 5” tall. The broccoli, kale and amaranth are generally clipped when they are 2 1/2” to 3” tall.

I always joke that growing microgreens is like having a two year old in the house again! Like a little toddler, microgreens need constant monitoring. Are they getting too much or too little moisture? Is there sufficient air flow near and around them? Is it too humid or too dry where they are growing? Are they getting sufficient light or are they growing in direct sunlight which is too bright?

My microgreens had a funny smell when I uncovered the trays:

It might be too much moisture or it might be that you haven't sanitized your trays often enough between growing batches of microgreens. Most crops will recover from too much water at the germination stage if they get plenty of light and air flow once they have been uncovered.

My microgreens had a bitter taste:

That's usually a sign that they weren't harvested early enough. Be aware that broccoli microgreens have a naturally light bitter flavor but all of your microgreens will taste bitter if left too long before harvesting. Here's a general rule of thumb of when to harvest:

Sunflowers
Harvest when the stems are 4 – 5” long and the first set of “true leaves” are less than ¼ inch.

Pea shoots
Harvest anytime from 4” tall to 7” tall. Peas are very forgiving and very easy to grow in comparison with other microgreens. They taste best when the top leaves have fully branched out but before they start growing “tendrils.”
Radish
Harvest anytime from 4” tall to 5” tall. Radish are fairly forgiving as well.

My sunflower microgreens still have the seed heads attached:

While the seed hulls from the radish, broccoli and kale are edible and will not hurt you, the seed hulls from the sunflower should be removed before consuming the plant. The easiest way to remove the black seed hulls is to wait until the sunflowers have been uncovered for three days and they are about 2 1/2" tall. After watering them on the third day (and every day afterward) gently swish your hand back and forth over the sunflowers about fifteen minutes after watering. The water loosens the seed hulls and most of them will come off easily. Those that don't can be hand picked off.

Your Next Crop of Microgreens

Sourcing Your Seed
A word of caution about buying replacement seed: you can always buy additional certified organic seed through Jackie's ...Naturally. *Go to www.jackiesnaturally.com and log into the password protected Growers Only section. The password is d@ikon*. But if you decide to purchase seed elsewhere, *please please* use only certified organic seed. It only makes sense that, if each tiny seed is packed with the nutrients it needs to become a successful adult plant, *then if the parent plant was treated with pesticides and inorganic fertilizers the seed will also contain the pesticides or inorganic fertilizers that were used on the plant as it grew and produced those seeds. And GMO seeds by definition contain pesticides!*

Your Grow Trays are reusable.
We recommend a gentle cleanse between each growing cycle to deter bacteria and mold.

1. Simply mix one part chlorine bleach to ten parts water in your kitchen sink.
2. Swish your grow trays in the mix (it isn't necessary to remove all dirt or root particles beforehand – the chlorine will kill any bacteria that might cling to the trays).
3. Rinse thoroughly in cool water and allow the trays to dry completely before reusing.

If you want to buy your own organic potting soil mix, you can find sources on our Website. Go to www.jackiesnaturally.com and log into the password protected Growers Only section. The password is d@ikon.

Appendix

Get more information, hints, ask questions, community
You can find resources and continually updated information on our Website, in the password-protected "Growers Only" section. And if you have questions you can ask Jackie and receive a reply there.

- Go to www.jackiesnaturally.com
- Hover your cursor over the "Grow Kits" tab in the overhead menu and select "Growers Only" from the drop down menu.
- Your password is **d@ikon**

Or drop in on our forums and find more hints, shared experiences and get your questions answered. Hover over the Grow Kits tab and select "Forum Entrance." The password is **d@ikon**.