



Diversified, Year-Round, Microgreens and Shoots

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Lovin' Mama Farm

10 acre organic farm

Year round,
diversified crops:
microgreens, veg,
and cut flowers

We use regenerative
practices including
no-till, straw mulch,
perennial plantings,
beneficial habitat,
and living wages



Microgreens - cotyledons



Quick crop, 10 to 21 days from seed to harvest

Can be grown year round (low light needs)

Nutrient dense, phytochemicals

seed + soil + water + light

Microgreens are not sprouts!

Sprouts are grown in water and air.

Micros are grown in soil.

Both are nutrient dense! But sprouts have more food safety concerns due to their humid growing environment.

Tip: Do not refer to your microgreens as sprouts...especially to a regulatory agency!



Shoots - larger seeded micros

Sunflower

Pea

Buckwheat

Popcorn



Microgreens - the perfect crop for startup farms

- No land required - just greenhouse or indoor grow room
- Low infrastructure needs - no tractor
- Quick seed to harvest time means crops to sell immediately for cash flow while you build out your farm
- Foot in the door to farmers markets seeking growers with unique products, plus year round production



Year round growing....

Keeps your core group of employees on year round

Year round cash flow

Year round presence at markets = loyal customers

Gain acceptance to competitive markets in the winter

If the heated greenhouse is running...keep it full to maximize ROI



Tip: consider turning an insulated space into an incubation chamber. We stick a heater in one of our walk in coolers and set temp to 70.

Easily programmable crop

Seed	Rate/tray	Total trays
Daikon radish	3 Tbs	3
Rambo radish	3 Tbs	2
Mizuna	1.5 Tbs	2
Tokyo bekana	1.5 tbs	2
Broccoli	2 Tbs	6
Purple kohlrabi	1.5 Tbs	1
Red cabbage	2 Tbs	5
Red Russian kale	2 Tbs	1
Cilantro	3 Tbs	3
Arugula	1 Tbs	4
Amaranath	1 Tbs	3

CREATE SPREADSHEETS FOR
YOUR FARM!!!

Pass off to an employee

Share the spreadsheet

Adjust total trays seasonally

Passive income - (haha)

Growing spaces



Utilize any available space on your farm!

Sun room

Unheated cat tunnel (use heat mats to protect from cold)

Heated propagation house

Indoor grow room with lights

100 square feet of micros can easily yield \$1,000 in weekly sales!

PROFESSIONAL PLANTING TRAYS



10 row seeder tray



1020 seed starting tray



Paper Pot Tray



6 tray insert

Suppliers: Nolts, Bootstrap Farmer, and Paperpot Co

Paper Pot Trays = \$9+ each

Organic compost based potting soils vs. pro mix



You get what you pay for...

My yields tripled when I switched from pro-mix to Fort Vee mix.

Save money by using pro mix for large seeds - peas and sunnies



Fill your trays

Fill trays, stack, and lightly press

Pay attention to the edges and corners!



Planting



Spread your trays out on the planting bench.

Measure seed into a dixie cup.

Sprinkle evenly over each tray.



Carefully water in so as not to disturb the seeds.

(we use the Redhead Dramm wand - ultra soft)

Stacking



Cement pavers

Organize your stacks by fast/slow growers



*Put stacks in incubation chamber in the winter months to speed up germination.

Soaking and Sprouting Shoots



Soak overnight, then drain. Plant immediately, or rinse 2x per day till they sprout.

Peas, sunflowers, wheatgrass, buckwheat, popcorn

Important! Promix is extremely hydrophobic.

Heavily pre water trays of pro mix *before* spreading out the seed.

Heavily water *again* after planting



Planting rates:

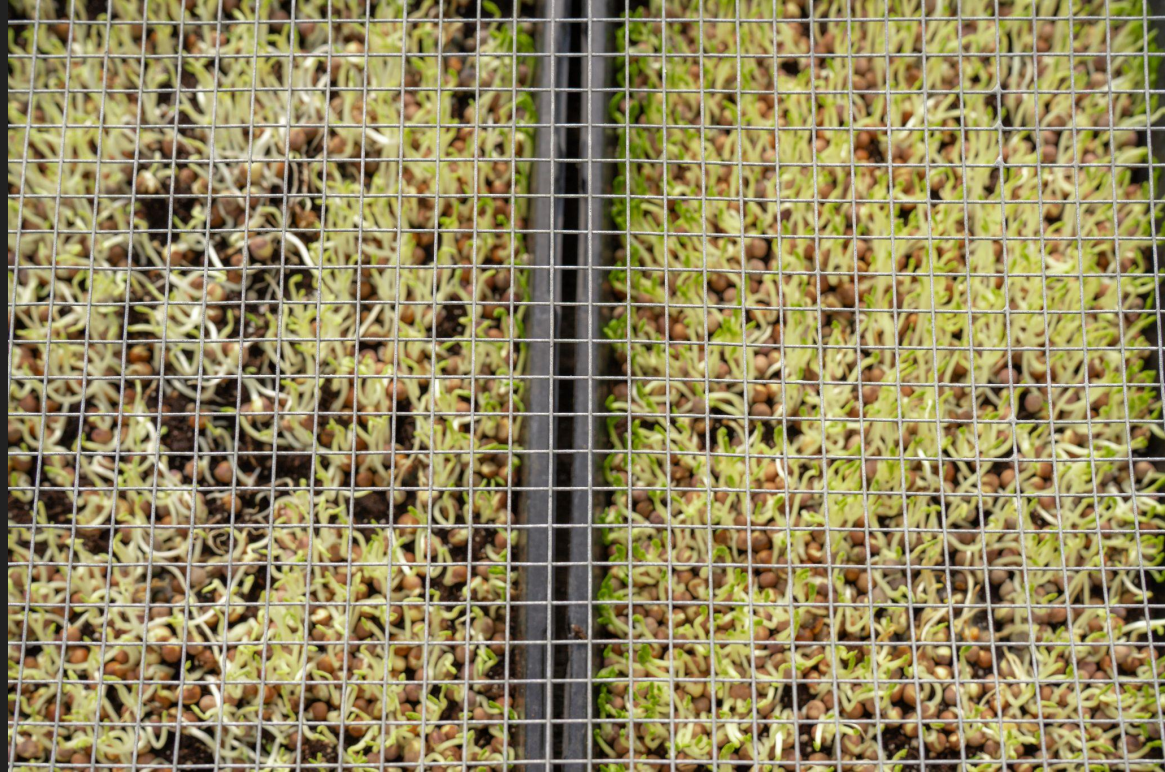
Peas - 3 cups
per 1020 tray

Sunnies - 2
cups per 1020
tray



Rodent Protection

Germinate stacked trays under cages...then grow out under cages.



Time to unstack



- Germination times vary depending on temps...3-5 days in summer and longer in winter
- If you wait too long the roots will grow through to the tray below
- If you unstack too early before the root hairs have buried themselves they can get sunburned and die
- Also, mold can move in if you don't unstack in time

A note about mold...



This is NOT mold! These are the root hairs.

Mold most common in the cold months and in the hot and humid months.

Mold remedy:

- ¼ cup food grade hydrogen peroxide
- ¼ cup white vinegar
- approximately 1 L water

Mix in a spray bottle or foliar sprayer and generously mist mold area. Use as a preventative for mold prone varieties such as sunflower shoots.

Seed strategies...best bang for your buck

Lowest organic cost seeds - the base for most of my mixes

- Broccoli (\$23 per pound organic)
- Cilantro (\$20 per pound organic)
- Daikon Radish (\$13 per pound organic)

Mid priced seeds

- Mizuna (\$35 per pound conventional)
- Purple Kohlrabi (\$35 per pound organic, \$13 per pound conventional)
- Red Cabbage (\$40 per pound organic, \$21 per pound conventional)
- Red Rambo Radish (\$38 per pound organic)
- Red Russian Kale (\$42 per pound organic, \$21 per pound conventional)

High cost seed (use sparingly to add a pop of color/flavor):

- Basil (\$60 per pound organic, \$25 per pound conventional)
- Lemon Basil (\$182 per pound organic, \$37 per pound conventional)
- Red Garnet Amaranth (\$56 per pound organic, \$28 per pound conventional)
- Tokyo Bekana (\$91 per pound organic \$38 per pound conventional)



Seed sources:

- Albert Lea Seeds (4010 Pea)
- Johnny's Selected Seeds
- High Mowing

Fast Growers (10 + days)

Pea shoots
Sunflower shoots
Buckwheat shoots

Amaranth
Arugula
Broccoli
Cress
Mizuna
Radishes

Slow Growers (14+ days)

Purple cabbage
Purple kohlrabi
Kale
Chard
Beets
Mustards

Dill (3 weeks)
Chervil (3 weeks)
Parsley (3-4 weeks)
Cilantro (3-4 weeks)
Scallions (3 weeks)
Basil (3 weeks)



Harvest

Chef's knife (I got for under \$20 at a restaurant supply store)

Keep it sharp!

Hand held hedge trimmers

Marketing

Custom blends

Labels = branding

Walk your talk with
biodegradable
packaging -

Clearbags.com

Eco gusseted
bags (CSG-4, 5, 6)



Pricing

Microgreens:

\$5 per 1.5 ounce

\$10 per 3 ounce

= \$53 per pound!!

Shoots:

\$5 per 3 ounce bag

= \$26 per pound!!

Eat!

Salads

Avocado toast

Eggs

Floated in soup

Smoothies

Garnish anything and
everything (tacos,
potatoes, protein...)



Most nutrient dense micros:

Top 4

Daikon radish

Red Cabbage

Amaranth

Cilantro

Broccoli

Has 40 times the B vitamins
in sprout form

High Bioavailable Protein

Peas and Sunflowers

Creating value with leftovers

Feed leftovers/spent trays to layer hens for incredible eggs that your customers will go gaga for

Dehydrate leftovers for super greens powder - a shelf stable product you can sell year round AND online

* Challenge yourself to eat several ounces per day...and see how good you feel



Clean up

Spent trays are perfect for the compost pile.

Be careful not to break your trays when dumping

Dump into wheelbarrow or bin that can be easily transported to compost pile



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