



# GROWING HEALTHY TRANSPLANTS FOR EFFICIENCY AND PROFITABILITY

By John Dysinger, AdAgrA 2023

“The cultivation of the soil, the sowing of the seed, the care bestowed on the seed by the sower, represent different stages of Christ’s work for the soul. First appears the blade, then the ear, then the full corn in the ear.”

—YI August 16, 1900

# WHY USE TRANSPLANTS?



- Lengthen your growing season.
- Ensure a full bed (no skips)
- Helps you use your garden space more efficiently
- A strong, healthy transplant is better able to withstand pests and disease (compared to direct seeding)
- Gives you a huge jump on weeds!

# WHY GROW YOUR OWN TRANSPLANTS?

- Save money
- More variety
- Better quality
- Grow and plant on your schedule — not when the box stores have the plants.
- It's fun!



# BIGGEST CHALLENGES:



- Spindly (Leggy) Starts
- Damping Off
- Lack of Balanced Fertility

# LEGGY STARTS

- Results from a lack of light (or too much heat).
- Windowsills **never** produce enough light!
- Use fluorescent shop lights just inches above the plants.
- Once seeds have germinated, cut back on temperature.
- Petting the plants can also help to stiffen their stems.

650 × 359



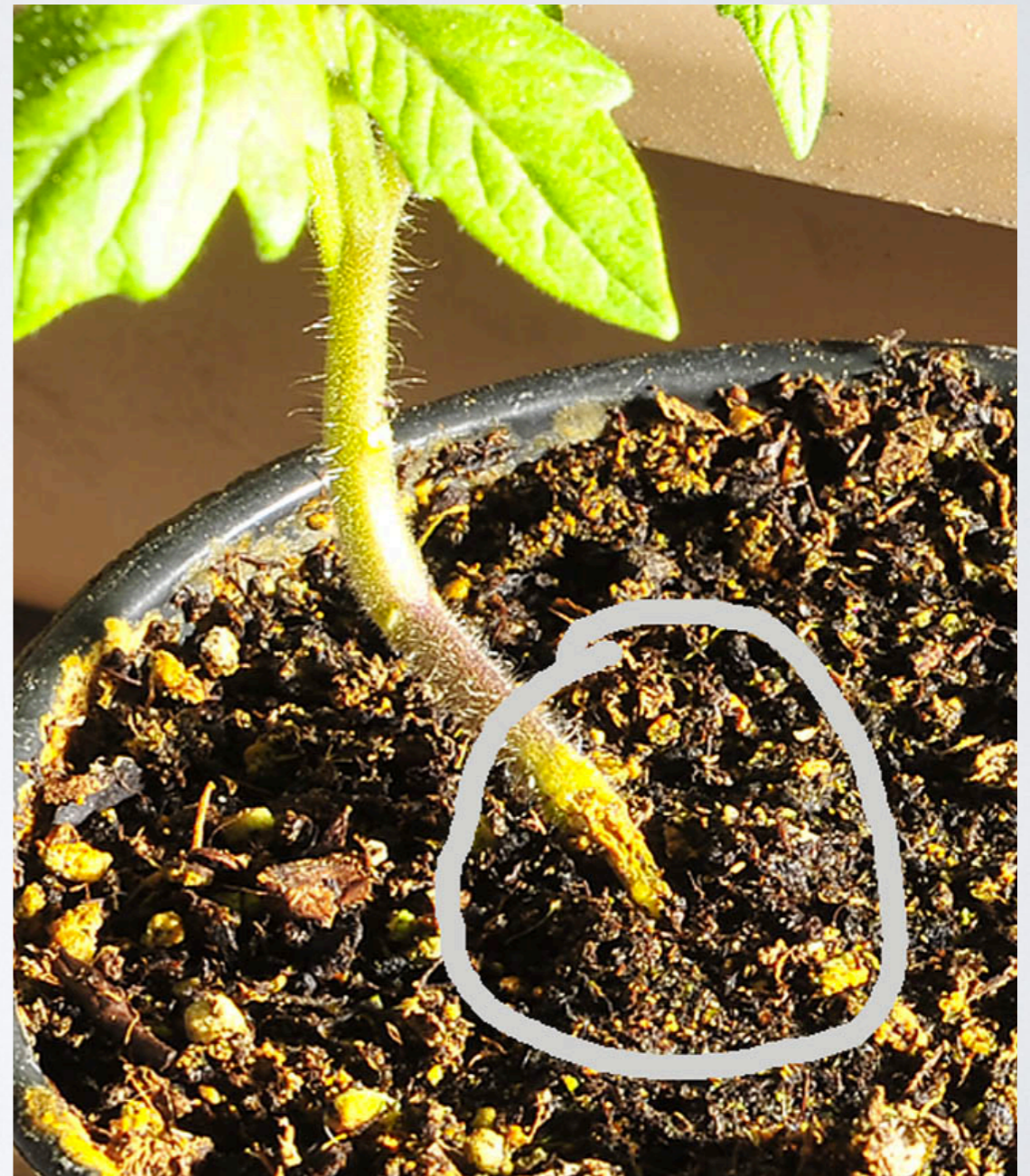
# DAMPING OFF — CAUSES



- A number of soil-borne fungal species
- Overwatering and/or lack of proper air circulation.
- Poor soil drainage
- Cool soil temperatures
- Can effect both seeds and seedlings.

# DAMPING OFF — SOLUTIONS

- Use a soilless, peat or coir-based potting mix.
- Let soil dry out some between waterings.
- Keep plants and water warm (these disease organisms thrive under 50°).
- Use a small fan for air circulation.
- Actinovate





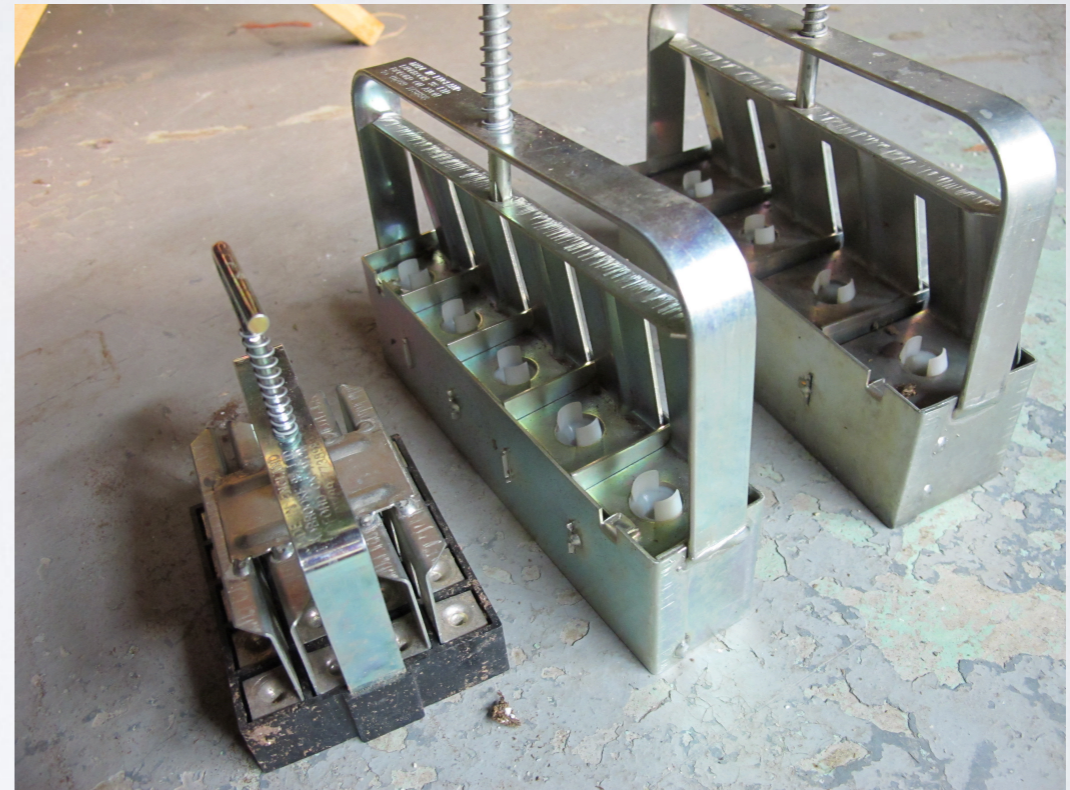
# LACK OF BALANCED FERTILITY



- Use a professional potting mix (We use Berger OM-1 or OM-6 and like it).
- Never skimp on container size.
- Don't overwater.
- Pot-on or transplant at the ideal size/time.
- With experience you may decide you need to supplement with some additional fertility. We put on a sprinkling of soybean meal after seeds have germinated and come up.

# WHAT'S WORKED BEST FOR US...

- We still use Soil Blocks
  - Highest quality transplants
  - Have more soil volume
  - Less root shock
  - Modular — easy to pot on 3/4" → 2" → 4" (or 5.5" pot)
  - Simple and Sustainable
  - Market gardeners will want to use the stand-up models
- <https://soilblockers.co.uk>

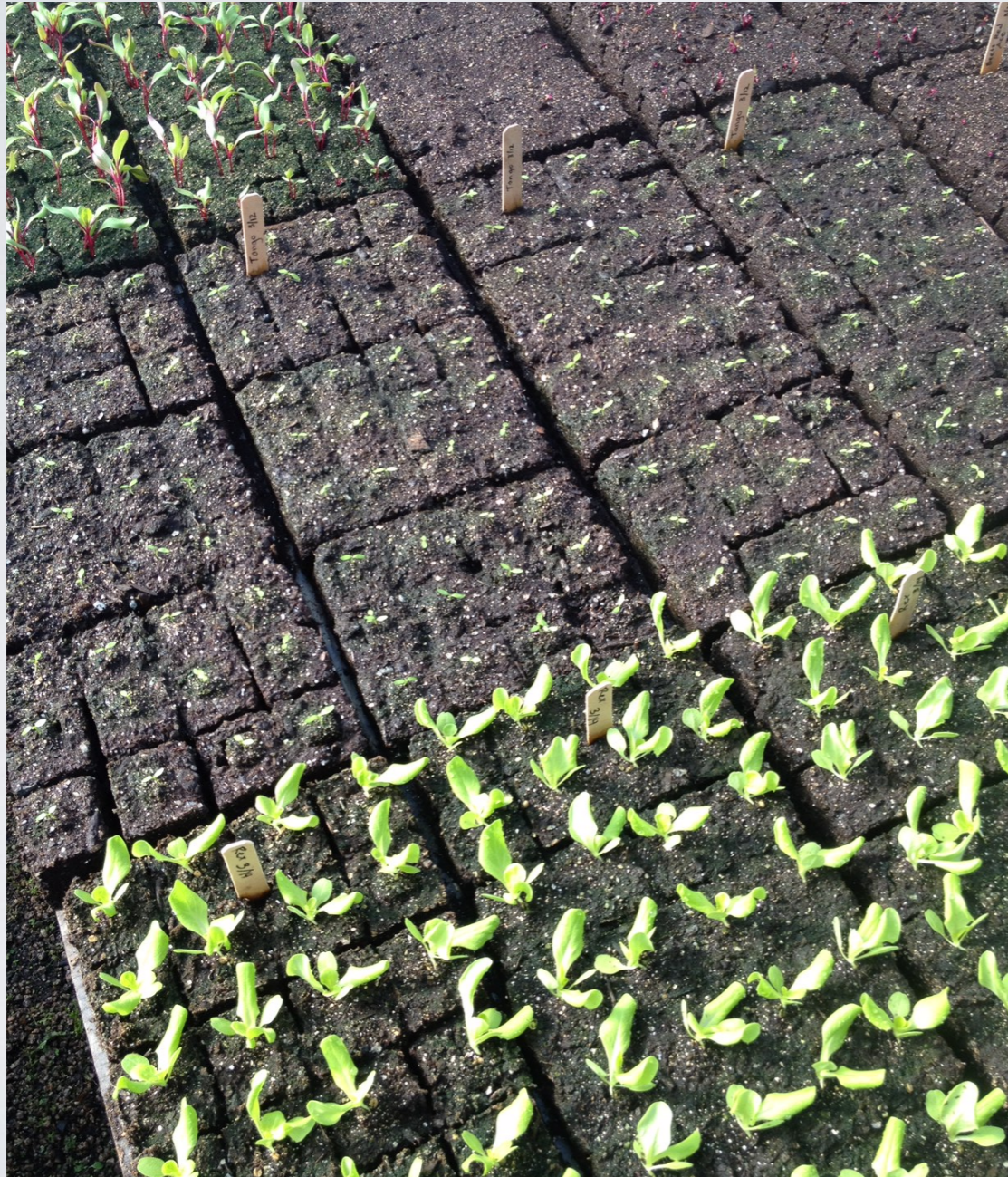


# 3/4" BLOCKS (MINI BLOCKER)



- Grow lots of plants in a small space.
- Use a heat mat for starting tomatoes, peppers, & eggplant.
- Cover seeds or push into blocks (I differ with Eliot on this).
- Pot-on as soon as they germinate.

# 1 1/2" BLOCKS



- Lettuce & chicories
- Scallions
- kale & collards
- beets
- kohlrabi
- spinach

# 2'' BLOCKS

- Brassicas (except kale & collards)
- Potting-on tomatoes, peppers, eggplant, celery, parsley
- Starting cucumbers & squash (with 3/4'' insert)
- Fennel



# 5.5" POTS

- Tomatoes
- Peppers
- Eggplant
- Cucumbers
- Squash



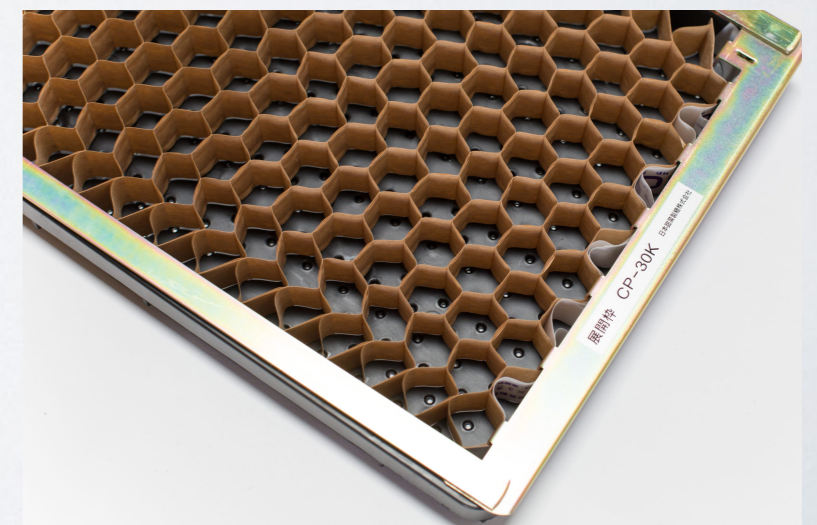
# DON'T FORGET TO “HARDEN OFF” YOUR TRANSPLANTS

- Introduce your babies to the harsh, cold world, slowly and deliberately.
- They can't handle the shock of going straight from a sheltered environment to the “real world”



# OTHER SEED-STARTING OPTIONS FOR MARKET GARDENERS:

- **Winstrip Trays** — The closest thing to soil blocks that can be mechanized.
- **Standard Plug Trays** — Used by the majority of nurseries and market gardeners.
- **Paperpot Trays** — Super efficient for seeding and planting, but have some drawbacks.







# SELLING TRANSPLANTS

# SOME STATISTICS:

1. The Covid pandemic created 18.3 million new gardeners, most of whom are millennials.
2. 42% of gardeners spent more time gardening during the Covid pandemic.
3. Global online sales of gardening goods doubled during the Covid pandemic.
4. 55% of American households engage in gardening activities.
5. Millennials make up 29% of gardener demographics.
6. Millennials have an increasing interest in cannabis cultivation.
7. American adults spend \$48 billion on lawn and gardening equipment each year.
8. Average garden yields \$600 of produce in a year.
9. 35% of U.S. households grow vegetables, fruits, and other food.
10. Children involved in growing vegetables are more willing to eat them.

Statistics from [gardenpals.com](https://www.gardenpals.com)

# STATISTICS (CONT.)

Top 10 homegrown vegetables:

- 86% Tomatoes
- 47% Cucumbers
- 46% Sweet Peppers
- 39% Beans
- 34% Carrots
- 32% Summer Squash
- 32% Onions
- 31% Hot Peppers
- 28% Lettuce
- 24% Peas

(Underlined vegetables are ones usually grown from transplant)



IF YOU ARE STARTING PLANTS FOR YOUR  
MARKET GARDEN ANYWAY.....

**Why not plant some extra for re-sale?**

MANY MARKET  
GARDENS ARE  
EARNING A  
SIGNIFICANT PORTION  
OF THEIR REVENUE  
FROM PLANT SALES!

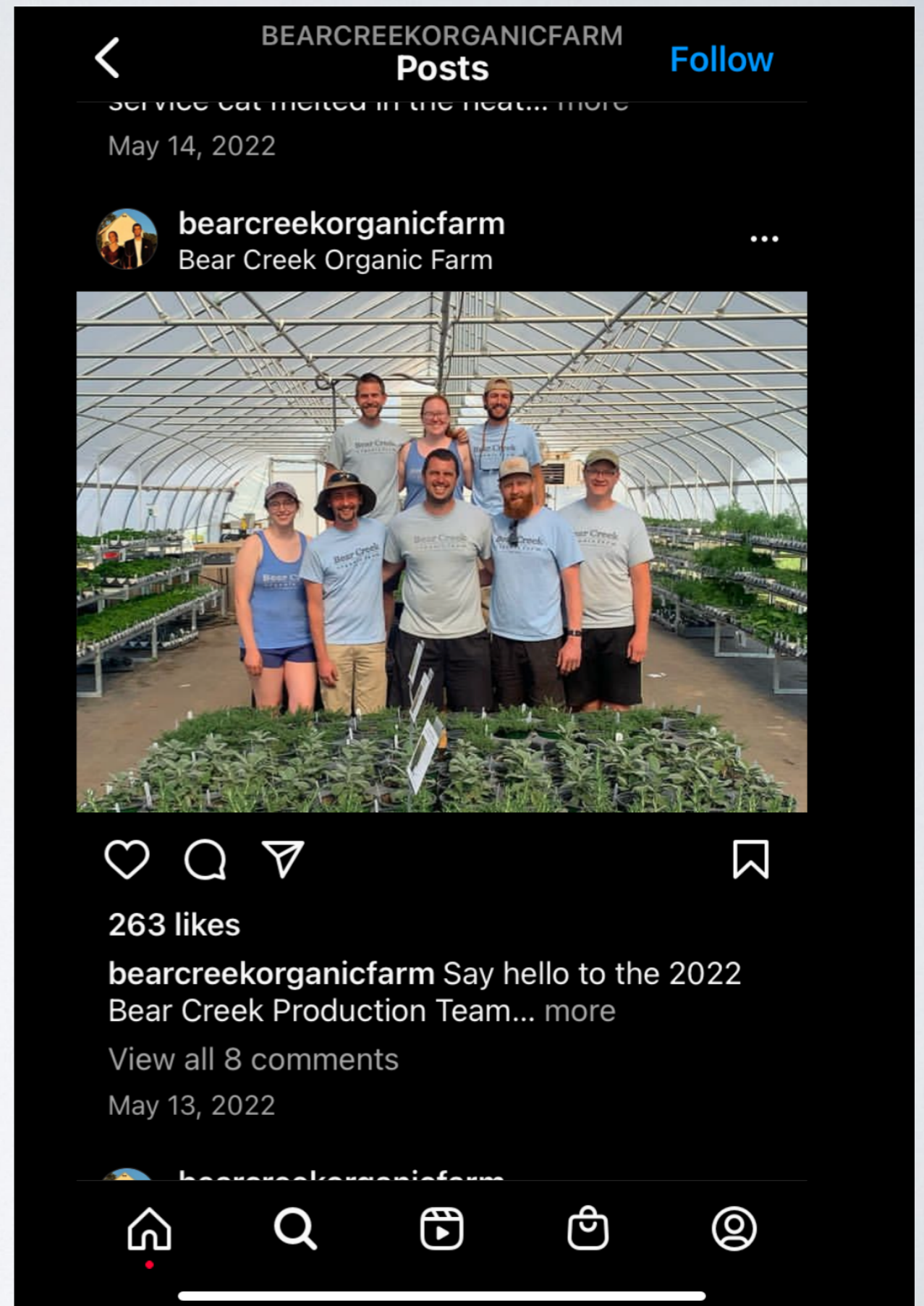
One example:

Bear Creek Organics

Petosky, MI

\$1,000,000 gross sales

\$250,000 spring plant sales



# THINGS TO CONSIDER:

- How close are you to your customer base?
- How much greenhouse space do you have?
- Do you have the manpower to surround another enterprise?
- How can you “level the load”? Plant sales happen mainly in April/May. What else are you doing then? (Could work great for a farm focused on winter growing!)
- Do customers come to you or will you take plants to a central location?

# TIPS FROM OUR EXPERIENCE:

- Grow what people ask for — not what you think they would like (example: Green Pepper plants).
- Establish “pull,” don’t “push.” (a lean concept). Start small and expand as demand grows.
- Focus on quality. Make your transplants stand out from the rest.
- Give them an experience they won’t get with the “big guys.”

“He who gave the parable of the tiny mustard seed is the Sovereign of heaven, and the same laws that govern earthly seed-sowing and reaping govern the sowing of the seeds of truth.... In the gospel seed-sowing, the Word of God is to be communicated as truth; it is to be interwoven with the whole practical life.”

—Lt55-1897