



# **How to Direct Seed**

**Calvary Gardening Ministry**  
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# WHY DIRECT SEED?

## Pro's

- It's easy
- There's really no mess associated with it as opposed to growing transplants.
- When direct sowing the resulting plants will generally have a healthier root system because they remain undisturbed in the soil as opposed to transplanting where you uproot the plant out of the pot.
- It's cheaper than buying a nursery plant.

## Cons

- You must make sure you are seeding the right plants at the right time of year.
- In spring you have to wait until the soil warms to put seed in, in the fall you must direct seed early (Aug/Sept) in order to give your veggies enough time to grow to maturity before the frost comes to kill your plants.
- Some of our most beloved garden plants don't do well direct seeded because of their germination needs, like tomatoes, eggplant and peppers. They need to be started indoors in the warmth in early Spring to give them time to grow large enough to transplant outdoors when the ground has warmed.

# Revisiting planting needs of vegetables

## DIRECT SEED

Carrots  
Corn  
Dill  
Fava  
Garlic  
Parsnip  
Potato  
Radish



## TRANSPLANT

Broccoli  
Brussels sprouts  
Cabbage  
Cauliflower  
Eggplant  
Leek  
Onion  
Parsley  
Pepper  
Tomato



# HOW TO READ A SEED PACKET

## Front of the seed packet

The image shows the front of a seed packet for 'TOMATO POLE San Marzano' tomatoes. The packet features a central illustration of a cluster of ripe, red, oblong tomatoes hanging from a vine. The text on the packet includes the name 'TOMATO POLE San Marzano' with the Latin name 'Lycopersicon lycopersicum' below it. A 'USDA ORGANIC' seal is visible on the right side. The price '\$2.39' and '30 seeds' are listed. The 'WARM SEASON' section indicates '80 DAYS from transplanting after last chance of spring frost' and identifies it as an 'Indeterminate type'. The 'HEIRLOOM' section describes it as a 'Classic Italian paste tomato considered by many to be the world's best. So high-yielding, plant will be dripping with fruit.' The 'Botanical INTERESTS' logo is at the bottom.

**name**  
(common & Latin)

**TOMATO POLE**  
*San Marzano*  
*Lycopersicon lycopersicum*

**USDA ORGANIC**

\$2.39  
30 seeds

**WARM SEASON**  
80 DAYS from transplanting after last chance of spring frost  
Indeterminate type

**HEIRLOOM**  
Classic Italian paste tomato considered by many to be the world's best. So high-yielding, plant will be dripping with fruit.

*Botanical INTERESTS*

**Handwritten Annotations:**

- name (common & Latin) → TOMATO POLE
- how long before you can eat 'em! → 80 DAYS from transplanting
- indeterminate produces fruit for a longer period of time → Indeterminate type
- heirloom a variety at least 50 years old, not genetically modified, and open-pollinated (good stuff!) → HEIRLOOM
- this means it's a vine, not a bush (you'll need poles to support it) → TOMATO POLE
- this means these are organic! (NO toxic pesticides or inorganic fertilizers) → USDA ORGANIC
- (pretty illustration) → Tomato illustration



# HOW TO READ A SEED PACKET

## Back of the seed packet

**TOMATO POLE**  
**San Marzano**  
*Lycopersicon lycopersicum*

This low sugar, low-acid tomato has high solids content, excellent flavor and makes the best sauce. Ask any true Italian! Also called the "sausage" tomato, it's delicious on sandwiches. Used by gourmet chefs who slice diagonally and top with parmesan slices and pesto for an appetizer. Provide support for vigorous vines that reach 6 feet or more. *This packet plants approximately 24 plants when started indoors.*

**Days to Emerge:** 5 - 10 Days  
**Seed Depth:** 1/8"  
**Seed Spacing:** A group of 3 seeds every 24"  
**Row Spacing:** 3'  
**Thinning:** When 2" tall, thin to 1 every 24"

**When to sow outside:** Recommended for mild winter climates only: 1 to 2 weeks before average last frost and when soil temperatures are at least 60° F.  
**When to start inside:** RECOMMENDED, 6 to 8 weeks before average last frost.

**\* ALL OUR SEEDS ARE UNTREATED**  
**NO GMOs** **USDA ORGANIC** 100% Certified Organic by the Colorado Dept. of Agriculture

*Illustrated by Susie Hyer*

*cut out for plant tag*

*Handwritten notes:*  
 - "how long till sprouts come up after you plant seeds" points to Days to Emerge.  
 - "how deep to plant seeds" points to Seed Depth.  
 - "(we don't do rows) (we also don't thin)" points to Seed Spacing and Thinning.  
 - "how far apart to plant them" points to Row Spacing.  
 - "cooking & plant care summary" points to the descriptive paragraph.  
 - "when & where to plant them (inside or out)" points to the sowing instructions.  
 - "(you could cut this out and use it as a plant tag, but be careful not to cut into all of the info inside the packet.) (and it would turn soggy when wet)" points to the bottom section.  
 - "(no GMOs: no genetically modified organisms)" points to the NO GMOs logo.

# CONVENTIONAL ROW PLANTING

SEEDS PLANTED ON TOP OF THE ROW



FURROW

Row spacing is the distance  
Between two rows of vegetables

# OTHER METHODS OF PLANTING

French intensive gardening



Keyhole gardening



Square foot gardening





# QUESTIONS to ask yourself when preparing to direct seed?

What season is it?

What do I want to eat?

How much of it do I want to eat?

How much space do I have?

What seeds do I have?





# ABOUT SEED

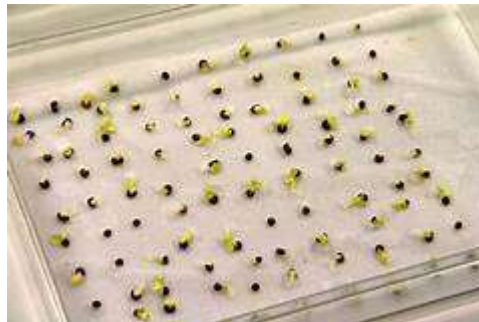
Germination rates on “fresh” seed

What is fresh seed?

What is the shelf life of seeds?

How do I keep my seeds once I open the packet?

Can I use my seeds once they get “old”?



# HOW TO DISPENSE SEED

- Seed can be dispensed using your hands
- Or making a crease in the packet and allowing the seed to dispense one by one as You shake the packet across your sowing area.
- You can use a seed dispenser



## REVIEW: WHAT IS THE RULE FOR SEEDING?

We learned the rule during our container seeding class

Seed is planted 2x the depth of it's width.



# WATERING-IN YOUR SEEDS



- 1) You must water in your seed after seeding.  
Better to seed into soil that has been moistened rather than a bone dry soil
- 2) Use a gentle spray, either a watering can with

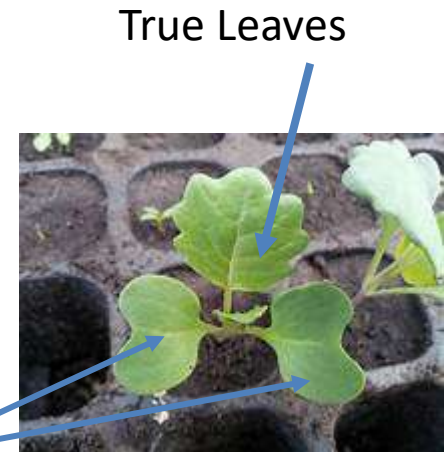
a rose tip or a spray nozzle with the shower setting.

- 3) Your seeds must be kept moist during the entire germination process or they will die in mid germination



# THINNING YOUR SEEDLINGS

Once your seeds have developed true leaves, you can begin thinning them out to the spacing designated on the packet of seed.



Seed Leaves

Either prick out or clip

Seedling after being clipped

Final spacing



**I NEED VOLUNTEERS TO DIRECT SEED INTO THE GARDEN DURING CLASS.  
PLEASE RAISE YOUR HAND IF YOU WANT TO DIRECT SEED**



**TAKE ADVANTAGE OF THE OPPORTUNITY TO LEARN DURING A HANDS-ON CLASS WITH TEACHERS PRESENT TO HELP.**

# WHAT ARE WE DOING IN THE GARDEN?

- 1) 5 GROUPS OF 5 PEOPLE WILL SEED A PLOT
- 2) EACH PLOT HAS AN ASSIGNED TEACHER TO HELP
- 3) I WILL DEMONSTRATE HOW TO SEED AND THEN YOU WILL GO AND SEED YOUR PLOT WITH YOUR TEAM.
- 4) EACH PERSON ON THE TEAM WILL CHOOSE ONE SEED AND WILL SEED IT. 5 PEOPLE WILL PLANT A TOTAL OF 5 DIFFERENT VEGETABLES IN ONE PLOT.
  - 1) YOUR MISSION, SHOULD YOU CHOOSE TO ACCEPT IT, WILL BE TO (AS A TEAM) SEED YOUR PLOT. YOU WILL NEED TO TAKE INTO CONSIDERATION HOW MUCH SPACE YOU NEED FOR THE VEGETABLE YOU ARE GOING TO PLANT AND TAKE INTO CONSIDERATION SPACING FOR EVERYONE ELSE ON THE TEAM IN YOUR PLOT AS WELL.
  - 2) YOU HAVE BEEN GIVEN A “FUN HANDOUT” THAT HAS A GRID FOR YOU TO FIGURE OUT SPACING, AND YOU HAVE THE WARM AND COOL SEASON CHARACTERISTICS HANDOUTS THAT WILL GIVE YOU SPACING FOR EACH VEGETABLE AND YOU HAVE TEACHERS TO HELP YOU WITH SPACING. ONCE SEEDED, MAKE A MARKER FOR YOUR VEGGIES AND WATER THEM IN.
  - 3) LETS GO HAVE FUN! REMEMBER, THERE IS NO ONE WAY TO SEED A GARDEN.

EVERYONE IS WELCOMED TO THE GARDEN TO WATCH AND LEARN