



SEED STARTING



Garden 101
Week 4

FUTURE RESOURCES

- This presentation and handouts will go up on our resource page!

Garden 101 Series:

- Transplanting
- Garden Maintenance
- Companion Planting
- Successional Planting
- Container/Small Space Gardening
- Pests in the Garden

Growing Summit:

- March 15th at Main Branch Library

Orchard 101:

- Mondays, 5:45-7pm

Wild Ones Conservation series:

- March 19th - April 9th Wednesdays 1-2pm

Birding for Beginners:

- April 12th, 9-11am

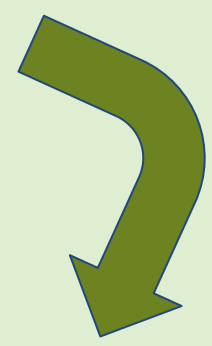
Birds and Plants:

- May 6th, 12-1pm

WHY SEED START?

- Allows for more control of the growing environment
- Receive more bountiful harvest/higher production rate
- Extend our harvest time on others
- Gives you more control over variety in your garden

Golden Carolina
Reaper



Bullseye
Spilanthus



Thunder Mountain
Longhorn Pepper



WHAT TO START INSIDE

Anything with long days to harvest or long days to germinate!

- Tomatoes
- Peppers
- Eggplants
- Woody, slow-growing herbs (rosemary, lavender, sage, oregano, thyme, etc.)

Anything you'd like a head start on

Anything that doesn't mind being transplanted

- (don't start carrots, parsnips, radishes, beets indoors!)



READING A SEED PACKET

- Days to Germination
- Direct Sow/Start Indoors
- Maturity/Days to Harvest
- Planting Depth
- Packed For date

Every brand will present this information a little differently!

EXAMPLE SEED PACKETS

LOT# 110M **PACKED FOR 2014** SELL BY 12/14

DARK STAR ZUCCHINI ZUCCHINI DARK STAR

Tender annual 4' bush, 6-8" fruit. A Seeds of Change® Original, this exciting new zucchini requires less water than other varieties. Open plants with smooth, spineless stalks yield classy dark green fruits all summer.

Arbusto anual de verano de 1,20 m (4') con frutos de 15-20 cm (6-8"). Este nuevo y estupendo zucchini original de Seeds of Change® necesita menos agua que otras variedades. Plantas abiertas con tallos lisos y sin espinas que producen excelentes frutos de color verde oscuro todo el verano.



Planting Time (meses para plantar)

May - June
May - July
Apr (Abr) - Aug (Ago)
Mar - Aug (Ago)

Full Moderate **1/2" Depth** 36" Spacing 50 Day Harvest

Sol Completo Moderada **1/2" Profundidad** Espacio de 36" 50 Dias Para Cosechar

This hermetically sealed packet contains moisture conditioned seed.
Este paquete herméticamente sellado contiene humedad de la semilla acondicionado.

To learn more, visit us at:
Para aprender mas visite:
www.seedsofchange.com

Seeds of Change
P.O. Box 4908
Rancho Dominguez, CA 90220
Certified Organic by Oregon Tilth



Chamomile

'German'

fragrant, white flowers great for tea, essential oils, or potpourris

Grow Guide

Plant outdoors after last frost. If densely planted, thin to 12" apart when seedlings grow a 2nd set of leaves.

Sun to Part Shade

1/4" Planting Depth

8-12" Spacing

14-21 Days to Germination

Transplant Outdoors



- May-Jun
- May
- Apr-May
- Feb-Mar

90-120 Days to Maturity

Great for 12" Containers!

NO GREEN THUMB? NO PROBLEM!

Access our step-by-step planting guide by texting* SEEDS to 55490 or scanning the QR code with a phone camera.



Share a pic of your garden & we'll donate seeds to a school of your choice!
f @ #growonegiveone @backtotheroots

QUESTIONS? BACKTOTHEROOTS.COM/SEEDINFO

C46013v4 *Standard msg & data rates apply to text. View our Privacy Policy and Terms of Service online.

Back to the Roots • 100 Webster Street, Ste 200 • Oakland, CA 94607
Certified Organic by EOCERT SA
www.ecocert.com



LOT X | Packed for 20XX
Sell by 12/20XX | AMS 5060

SEED VIABILITY

- Vegetable seeds are typically viable for up to 5 years
- Storage helps a ton
 - dry
 - cool
 - dark
 - airtight
- Every year after the initial pack date, germination rate potentially lowers

MATERIALS NEEDED

- **Seeds**
- **Seed Trays**
 - Celled tray (with drainage)
 - Bottom tray (no drainage)
- **Growing Medium**
- **Heating Mats**
- **Humidity dome**
- **Light source**
- **Airflow**
- **Water**



WHAT TO GROW IN

- Plastic seeding trays

- Many options for sizes
- User-friendly
- Re-usable

- If reusing, sterilize



- Peat pots

- Great for fast-growing plants
- May inhibit root growth

- Egg cartons

- Difficult to control humidity levels



GROWING MEDIUM



- Potting mix or seed starting mix
 - Promix, Jiffy seed starting mix
- Needs to be sterile
- Usually includes something to retain moisture, nutrients, and aeration
- May need to be rehydrated (hydrophobic)



- **Optional mix ratio:**
 - 3 parts compost
 - 2 parts coco coir
 - 1 part perlite or vermiculite



- **Note on Peat moss**

HEAT



- Seeds germinate more reliably with warmth!
 - (exception being spinach and brassicas)
- You can simulate this with heating mats, or by placing seedlings in a warm area of your house (not a windowsill)
- Water with hot water to speed up germination
- Once germinated, you can remove from heating mats

HUMIDITY DOME

- Retains moisture before seeds have germinated
- Remove once seeds have sprouted
- Often included in seed starting kits, but can be simulated with any clear plastic (such as cut water bottles)



LIGHTING

- Seeds require light once they've germinated
 - Some require light to germinate (dill, lettuce, savory, poppies, many flowers)
 - Surface sow
- Red/Blue light most important wavelength, but not necessary
 - Fluorescent shop lights (4000 lumens) more cost efficient
- Can get lights with timers (12-16 hours of light per day)
- Low light causes leggy seedlings



Air Flow

- Add a fan!
- This prevents mold and insects
- Mimics wind, introduces resistance, causing plant to grow a sturdier stem
- Can also add vermiculite to seeds with long germination times or ones that require light



PLANTING DEPTH

- Check the seed packet
- Smaller seeds should be closer to the surface, bigger seeds can be further down
- If planted too deep, seedlings will die before reaching the surface of the soil



WATERING

- Check on seedlings twice a day if you can
- Before and immediately after germination, soil should always be a little moist
- **After germination**, allow the top of the soil to dry out slightly between waterings
- Seedlings drying out or being over watered is one of the most common causes of failed seed starting

DAMPING OFF

- Sudden death of seedlings caused by fungal pathogens
- Usually see symptoms at the soil line
- **Prevention:**
 - Sanitation
 - Humidity dome removal
 - Planting less densely/thinning seedlings
 - Airflow
 - Not overwatering



BOTTOM WATERING



- Water all seedlings from the bottom tray
 - This encourages the roots to grow deeper, looking for water
- Only mist the top when you've underwatered and need to rescue your baby plants

CHECKING ON MOISTURE

- Color of soil
- Weight of the tray
- If the previous watering had been sucked up
- Touch

UNDERWATERED?

- Mist the top, re-saturate the growing medium, maybe recover with humidity dome

OVERWATERED?

- Remove bottom tray to allow the whole thing to aerate/dry out, increase air flow



LABEL YOUR STARTS!

- Label all trays and pots with variety
- Can keep a seed starting journal for next year's garden planning



- One tray per variety of seed
- This is so you can adjust the planting conditions in accordance to what's germinated (removing dome, removing from heat, adding light, etc)



THANK YOU!

Please fill out a feedback form

Next Topic: Transplanting!

