

Master Community Gardener Seed Starting Curriculum
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Learning Objectives:

1. To recognize appropriate planting seasons for different crops.
2. To successfully germinate seeds and transplant out to the garden.
3. To be able to choose appropriate seeds for the Colorado Front Range climate.
4. To be able to adjust to variable weather conditions to ensure success of transplants, and to successfully extend the planting season for a better chance at crop maturity.

Introduction (10 minutes)

- Modern societies began ~9000 years ago with the successful saving of seeds and planting them out to a successful harvest – domesticating plants.
- Almost every food eaten today on the planet is a result of saving plant seeds and selecting for preferred traits.
 - Animal fodder too, so meat is also dependent upon seeds.
 - Seed is a means of controlling the food supply – ConAgra, Monsanto, as well as heirloom seeds.
 - Saving seed and planting our own keeps cultural memory of how to grow food alive for others and for the future.

I Seasons and Crops (15 minutes)

- Cool-season
 - Spring AND Fall, some overwinter with protection.
 - Spinach and leaf crops, some root crops
- Warm-season
 - Summer- and fall-maturing
- Planting charts and counting backward from first frost date (~Mother's Day)
- What is started indoors and what is started outdoors
 - Why is it started indoors or outdoors?
 - Is it always either-or?

II Colorado Front Range Climate and Weather and Crops (5 minutes)

- Growing season = ~135 -150 days (May 15-Oct 1-15). Often can go close to Halloween with protection
- Semi-arid climate: ~17.5 inches of water equivalent precipitation (~13.5 inches liquid precip in summer)
- Alkaline native soils

III Soil Medium, Germination, Growing Environment (25 minutes)

- Starting inside
 - Temperature
 - Light
 - Soil
 - Sterile, perlite and reuse in the yard
 - Pots, flats, cells, peat pots, paper pots, other containers
 - Always start with clean containers!!!!
 - Pros & cons of peat and paper containers
 - Watering
 - Bottom watering best
 - Fertilizer
 - Weekly, weakly
 - Critters
 - Fungus gnats
 - Damping off
 - Rots
 - Fans
 - Hardening off
 - Drying/watering
 - Fungus gnats
 - Hardening off
- Starting outside
 - Prepare your soil in the fall
 - Soil must be proper temp for germination (check seed packet)
 - Warming the soil (see also 'Garden Preparation' below)
 - Black mulch
 - Clear mulch
 - Bubble (blister) packaging
- Winter Sowing
 - Background
 - Materials
 - Appropriate plants
 - Transplanting
 - <http://wintersown.org/wse01/FAQs.html>

BREAK (10 minutes)

IV Garden Preparation (20 minutes)

- Soil preparation
 - Best done in fall
 - Tilling-turning vs forking & Soil Food Web
 - Appropriate fertilizer
 - Top-dress
 - Side-dress
 - Turning in
 - Soil temperature increase
 - Black mulch
 - Clear mulch
 - Bubble (blister) packaging
 - Cold frames – hoops – Gro-Therm-type products
 - Soil temperature moderation
 - Mulches
 - Straw/hay/grass clippings/seed blankets/compost
 - Prepared consumer products: paper/petroleum

V Transplanting (10 minutes)

- Cell packs to 2” pots
- 2” pots to garden/container

VI Protection (10 minutes)

- Critters
 - Row covers
 - NEEM
 - Colored mulch
 - Soapy water
- Shade
 - % transmission and temperature vs PAR
- Hail

VII Season Extension Introduction (10 minutes)

- Cloches
- Low tunnels
 - Row cover
 - Plastic, greenhouse film
 - Hoop material
 - EMT (electrical conduit)

- PVC
- Black poly tubing (3/4")
- Cold frames
- Hot beds
 - Price/sq ft. high for soil cable

For Further Reference

CSU Extension pub 722 Frost Protection and Extending the Growing Season
<http://cmg.colostate.edu/gardennotes/722.pdf> (Viewed 1/9/2010)

CSU Extension pub 720 Vegetable Planting Guide
<http://cmg.colostate.edu/gardennotes/720.pdf> (Viewed 1/9/2010)

Territorial Seed Company: <http://www.territorialseed.com/>

Johnny's Selected Seeds: <http://www.johnnyseeds.com/>