

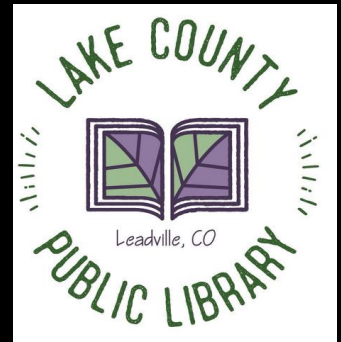
# High Altitude Vegetable Gardening



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# Garden Site Selection

## Things to consider:

- Hours of sunlight
- Soil
- Drainage
- Weather factors
- Animals
- Space and Time



# Containers



**1 PLANT FOOD/ FERTILIZER**  
Using a dry, granular fertilizer with NPK Analysis between 5-15 provides plants with essential nutrients—giving them exactly what they need, when they need it. Single application means no feeding schedule, no guessing.

**2 DOLOMITE**  
Provides essential trace elements to support overall plant health and maintain pH. With an even blend of calcium and magnesium, dolomite also helps prevent Blossom End Rot (BER) on tomatoes and other fruit.

**3 GROWING MEDIA**  
By using a high quality peat-based growing media, poor soil conditions and soil-born disease are eliminated. Acting as a wick, along with plants' thirsty roots, peat allows an ideal amount of moisture to be absorbed from the bottom up.

**4 AERATION SCREEN & WICKING CHAMBERS**  
Separating the growing media from the water reservoir, an air pocket between layers allows oxygen to access the roots of plants via small holes in the screen—which prevent root rot and mold. Integrated wicking allows growing media to make contact with the reservoir to draw water from the bottom up.

**5 WATER RESERVOIR**  
Holds nearly 3 gallons, allowing thirsty plants to draw water naturally through capillary action.

**6 OPTIONAL STAKING SYSTEM (SOLD SEPARATELY)**  
The perfect solution for tall or vining plants! The Staking System eliminates the need for awkward cages or trellises, and is designed to provide stability and support while maintaining mobility. Allows unruly crops to be kept neat and tidy, and for sprawling plants to grow vertically.

**7 MULCH COVER**  
Creates an ideal growing environment for plants, and eliminates the need for herbicides. Stops weeds from transplanting and using up plants' resources. Protects from rain or drought by protecting plants' resources from washing away during periods of heavy rain, and conserving water by minimizing evaporation. Reversible sides can be used in any climate: Black side helps stimulate growth, while the white side helps protect young seedlings from heat.

**8 SUSTAINABLE & BUILT TO LAST**  
Just add optional casters to the bottom of the system to put your garden on the move for easy portability. Food-safe, BPA-free, recyclable resin is UV-stabilized to last for years in direct sun. Reuse the same system again each growing season just by adding new fertilizer, dolomite, mulch cover, and plants.

**9 WATER FILL TUBE & OVERFLOW DRAIN**  
Easily add water to the reservoir through the fill tube. You'll know it's full when excess water flows from the overflow drain, making it impossible to overwater your garden.

A detailed diagram of the container system. It shows a cross-section of the container with a water reservoir at the bottom, a wicking chamber, and a growing media layer. A tomato plant is shown growing in the media. The diagram is annotated with numbers 1 through 9, corresponding to the text blocks. A metal staking system is also shown supporting the plant.

# Raised Beds



# Soil vs Compost

Soil is a mixture of minerals, organic matter, liquids, and gases on land surfaces that aids plants to grow.

Compost is decomposed organic matter (was once alive!) that is rich in nutrients for plants.



# Soil

- Soil is a **living ecosystem**- sustains plants, animals, & humans.
- If we view soil as a living organism we will put more effort into caring for our soils
- Soil is teeming with **billions of bacteria, fungi, and other microbes** that are necessary to maintain the ecosystem.
- **Healthy soil gives us clean air and water, bountiful crops, and beautiful landscapes.**



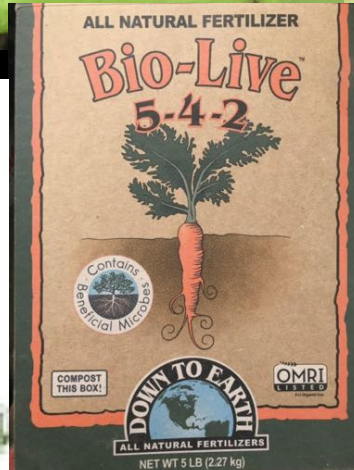
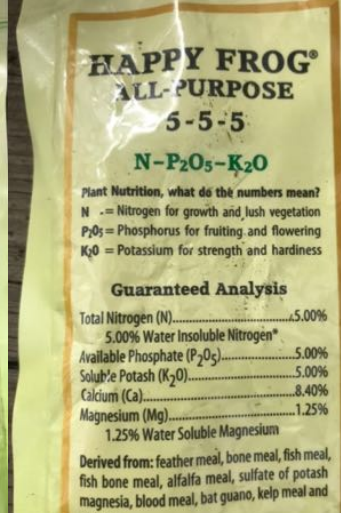
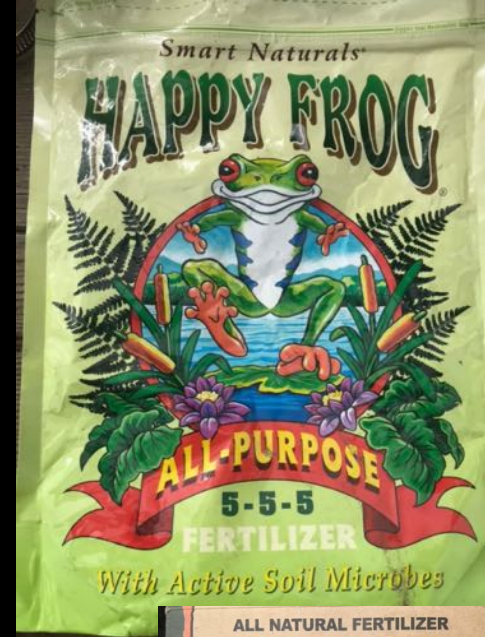
# Basics of Composting

- Browns=carbon ~70%
- Greens=nitrogen ~30%
- Moisture: not too wet; not too dry
- Air: turning compost
- Heat: bigger piles hold heat



# Compost vs Fertilizers

- Soil testing
- Compost
  - Different kinds: Animal vs Vegetative
  - Worm casting
  - How and when to use
    - 1-3" added spring or fall
    - No more than 40% to begin if using non-animal compost
- Fertilizers
  - Organic vs Conventional
  - Granular vs liquid
  - How and when to use
    - Transplant production
    - At planting
    - When you see deficiencies





# Plant Selection

- Hardiness Zone 4b
- Cool season fruits and vegetables that can tolerate cooler night temperatures
- Short “days to harvest” or “days to maturity”
- Seeds for high altitude specific
  - Colorado seed companies
- For seed collecting look for open pollinated or heirloom seeds



# Garden Calendar

**Jan/Feb: Ordering**

**March/April: Indoor seeding; seed parsnip**

**May: Prep garden beds; Peas; Potatoes; Memorial weekend**

**June: Transplanting and direct seeding**

**July: Harvesting!!! July direct seeding**

**Aug/Sept: Harvesting!!! Horseradish harvest/replant**

**Oct: Garlic Planting; Add compost or mulch**

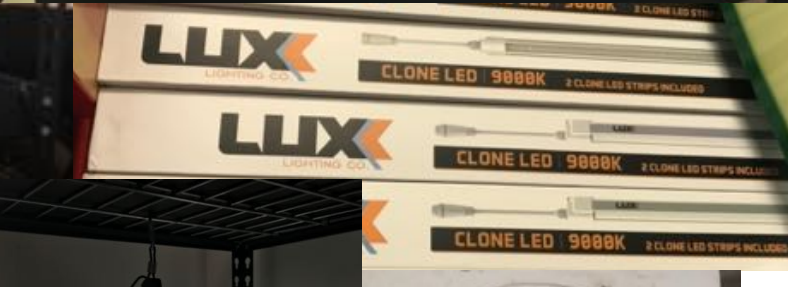
**Nov/Dec: Rest and eat**



# Seed Starting Inside

- Potting soil: seeding mix
- container/tray
- Temperature
- Heating Mat- thermostat
- Humidity domes
- Top/bottom watering
- Air movement
- Light
- Fertilizer





# Transplanting

- Transferring to larger pots
- Soil with fertilizer (or use liquid)
- Break up roots
- Plant deep for long stems
- Water right away
- Planting into garden or moving to new environment
- Hardening off/Acclimation
  - Protect from weather
  - Takes time



# Seed Starting Outside

- Soil temperature
- Depth and space
- Germination days (seed to sprout)
- Thinning
- Pre-soak: legumes
- Worm casting/fertilizer
- Inoculant: legumes (peas/beans)
- Single hole vs furrow/rows
- Soil moisture
- Reseed

**NASTURTIUM**  
*Black Velvet*



Seedling

**Days to Emerge:**  
7 - 14 Days

**Seed Depth:**  
1/2" - 1"

**Seed Spacing:**  
A group of 3 seeds every 8" - 12"

**Thinning:**  
When 2" tall, thin to 1 every 8" - 12"

**Date Seed Sown**

cut out for plant tag

**OPEN POLLINATED AND UNTREATED**



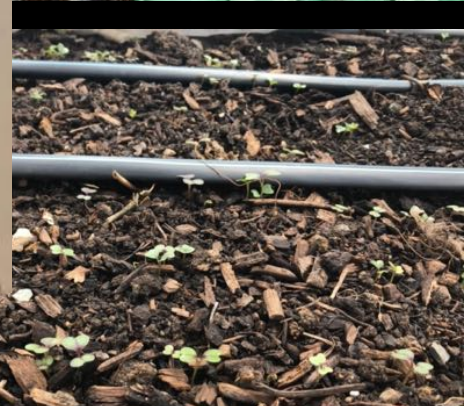
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Impressive 'Black Velvet' will have the other garden flowers whispering in amazement! These edible beauties add glamorous, ruby-black color to salads and cheese plates, as well as creating eye-catching displays in gardens. Usually grown as an annual, although perennial in USDA zones 10 and warmer. Fairly drought tolerant once established. Attracts pollinators. **Rabbit and deer resistant.**

**When to sow outside:** RECOMMENDED. 1 to 2 weeks after your average last frost date. *Mild Climates:* Sow in fall for winter bloom. Ideal soil temperature for germination is 55°-65°F.

**When to start inside:** Not recommended. 2 to 4 weeks before your average last frost date. Roots sensitive to transplant disturbance; sow in biodegradable pots that can be directly planted in the ground.

**Special germination instructions:** Soak seed in water for 12 to 24 hours before sowing. Darkness aids germination; sow at the recommended depth.



# Plant Protection

- Fabric
  - 1 oz; 1.5 oz; 2 oz;
  - Agribond 30; 50; 70
- Plastic
  - vent / take off during day
  - Transfer cold if touching
  - Greenhouse plastic
- Shade
  - 30%-50% shade
  - Fabric
  - Shade cloth
- Hoops
  - Wire; pvc; bend metal railing
- Greenhouse
  - So many options! Venting is important!
- PESTS!!!
  - cat/dogs!!!
  - ¼" wire under raised bed
  - Repellants but must reapply
  - fabric



Questions???

