About the Species

**Physalis pruinosa** (groundcherry):
Groundcherry is believed to be native to North America. The species was popularized by the Pennsylvania Dutch in the early 1800s where it was cultivated for use in pies and jams. Although the species grows in northern regions of the United States, it does not tolerate freezing temperatures and is therefore grown as an annual. The fruit develop inside an inflated husk and drop to the ground near maturity. Ripe fruit are dime-sized, yellow in color, and the husk becomes papery as they reach maturity.

*Seeds provided: Pineapple (PI) and ZL05*  
*Germination: High, takes about 1 week*

**Physalis peruviana** (goldenberry):
Goldenberry originated in the Andes Mountains of South America and has since grown wild around the world in temperate and tropical regions. It is commercially produced in Colombia, where it is the second most exported crop (after banana!). The plant produces a fruit with a diameter roughly the size of a quarter that can be picked off of the plant upon ripening (when the husk becomes papery). The fruit has a unique taste that has been described as both sweet and tart.

*Seeds provided: Goldenberry (GB) and Schoenbrunn Gold (SG)*  
*Germination: High, takes 1-2 weeks*

**Physalis ixocarpa** (tomatillo):
Tomatillo is native to Mexico, where it is still widely produced. Depending on the variety, tomatillo fruit are either green or purple and range in size from 1-3 inches in diameter. Having an acidic flavor, tomatillo is prominently featured in Mexican cuisine, and is commonly used in cooking sauces, where its color is highly valued. A popular dish where you may find tomatillo is salsa verde, where tomatillo is the main ingredient! Differing from groundcherry and goldenberry, this species is self-incompatible (a single plant is unable to pollinate itself), meaning you **must grow at least two plants of each variety** for fruit to set.

*Seeds provided: Purple De Milpa and Toma Verde*  
*Germination: 50-70%, 7-10 days*

*We are unsure of how compatible these two varieties are with each other*

Trellising

We do recommend that as plants get larger you provide some sort of support for them. In the greenhouse, where we grow them in large containers, we stake them. Past participants have also used tomato cages and horizontal string trellises. Keep in mind that groundcherries have a low sprawling growth habit, while goldenberry and tomatillo grow more upright and need quite a bit of support.
### Getting Started

#### March
- **Recommended Seed Start Dates:**
  - **March 1st**: goldenberry seeds
  - **April 1st**: groundcherry and tomatillo seeds

  **Note:** Tomatillos are self-incompatible (pollen from another tomatillo plant is needed to produce fruit); we recommend planting at least two of any type you wish to grow. We do not know if they will cross between types.

  We use soilless potting mix and start our seeds in 6-pack market packs. A good home alternative is plant starter pellets, such as these by Jiffy. You can get them from Amazon, Home Depot, Walmart etc.

#### April
- **Recommended Transplant Dates:**
  - Varies on growing conditions, ~4-8 weeks
  - We transplant to a 4 inch pot after the plants are 2-3 inches tall (left), generally 4 weeks after seeding in the greenhouse

#### May
- **Recommended Planting Dates:**
  - Mid to late May
  - The recommended planting distance is 3 feet between plants and 3 – 4 feet between rows.

  **It is recommended that you “harden off” your plants for 1 week before planting in the ground. To do this, gradually increase the amount of the sunlight they receive in the days before planting. You can leave them out overnight as long as frost is not predicted.**

#### June
Known Insect Pests

Three-lined potato beetle (*Lema daturaphila*), found at multiple sites last year

- Appear at the end of June/ early July
- Remove eggs if you find any
- Larvae cause the most damage
- Squish/remove the larvae
- Plants recover quite well

Heliothis straw moth (*Heliothis subflexa*), reported at one site in Poughkeepsie, NY last year

- Lay eggs on fruit husk
- Larvae burrow into immature fruit
- Remove any eggs or larvae you see

Flea Beetle, reported at one site in Essex County NY

- Damaged the leaves of young groundcherry plants
- Plants fully recovered from damage
As part of the project we ask that you record some of your observation that you have while growing these species.

<table>
<thead>
<tr>
<th>Goldenberry (P. peruviana)</th>
<th>Groundcherry (P. pruinosa)</th>
<th>Tomatillo (P. ixocarpa)</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Goldenberry (GB)”</td>
<td>“Pineapple (PI)” “ZL05”</td>
<td>“Toma Verde” “Purple De Milpa”</td>
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<tr>
<td>“Schoenbrunn Gold (SG)”</td>
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</tbody>
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Other Comments (pests, disease, growth habit, fruit ripening, flavor, shape, size, color, etc.):