Transplanting

Transplanting is the shifting of plants from one soil or growing medium to another

Why use transplants?

- You can more closely control depth of planting
  - Important for small-seeded plants like basil
- Make best use of expensive or only a few available seed
- Seeds germinate under ideal conditions

Why use transplants?

- Improves the earliness of the vegetables
  - You can gain 3 to 4 weeks head start
  - Important for large tomatoes or melons that would not mature until late Sept. otherwise
- Avoids problems of seed emerging through soil crusts or in cold soils
  - Soil crusts are a hard layer formed on the soil surface after a rain

Figure 1. Soybeans emerging through crusted soil (left); Corn leafing out under crusted soil conditions (right).

Vegetables Traditionally Transplanted

- Warm season vegetables (gives them a head start)
  - Tomato, pepper, & eggplant
  - Cucumbers, squash, cantaloupe, & watermelon
    - Must avoid damaging their roots
- Early spring vegetables (small seed & allows earlier planting)
  - Cabbage, broccoli, & cauliflower

Commercially Grown Transplants

Advantages
- They are easy
- Inexpensive if you only need a few plants
- They do not require that you commit time and space
- Better (ideal?) growing conditions and care

Commercially Grown Transplants

Disadvantages

- It can be difficult to find good quality transplants

  – Depends on how handled and when purchased

- You may not be able to find transplants of a specific cultivar

  – Especially true of heirloom or unique cultivars

- The transplants may introduce diseases, insects, and weeds into your garden

- You do not know what medium or fertilizers were used

Commercially Grown Transplants

To select quality transplants look for:

- Healthy plants
  - Free of insects or diseases

- Vigorously growing
  - Avoid transplants that already have flowers or small fruit – a sign of stress

- True to type
  - All the plants are actually the vegetable and cultivar that the label indicates

- Properly handled

- Transplants that are not leggy or spindly
  - Leggy refers to transplants that are mostly weak-stemmed with a few leaves

- Purchase transplants early in the season before they are picked over

Producing Your Own Transplants

- Key factor in determining success
  - Having an adequate amount of protected growing space to produce transplants
- Environmental conditions
  - Light
  - Temperature
  - Moisture

- May need:
  - Specialized structure
    - Small greenhouse
  - Supplemental lights
    - Turn area growing transplants into a "mini greenhouse"

Producing Your Own Transplants

Advantages

- Can ensure disease-free transplants
  - Any problem introduced by you
- Transplants available when needed
  - Especially important when needed at unusual time
- Best use of expensive seed
- Produces cultivars that you desire
- Gives you a good feeling
  - See something green at end of winter

Hardening-off Transplants

Hardening-off is the process whereby transplants stop growth and develop greater tolerance to stress so they can survive being planted into a garden

- A slowing of growth
- Greater cuticle and waxes on leaves
- Build-up of sugars and starch

Steps:
1. Place plants outdoors in a shady spot
2. Bring them back inside at night
3. Continue for 3 or 4 days (keep an eye on the temp)
4. Day 4, introduce to a bit of sunshine
5. Day 7, leave outside full time
6. After about a week they are ready to plant

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Transplanting suggestions

- When cloudy or late afternoon
- How to transplant
  - Dig into soil
  - Water + fertilize in hole
  - Set transplant in hole
  - Cover completely with soil
  - Water newly transplanted area
- Do not compress the soil around the roots

Starting vegetables from transplants

- Thought questions
  - What is transplanting?
  - Why use transplants?
  - What vegetables are traditionally transplanted?
  - Why purchase your transplants?
  - How do you select good quality transplants?
  - Why grow your own transplants?
  - What factors should you consider when growing transplants?
  - What is hardening off? What are the steps?