

# **Transplanting**

## **(Field Topic)**

*The purpose of this field topic is to gain a solid understanding of proper transplanting techniques, and in doing so create the best environment for transplanted starts to thrive.*

### **Transition from greenhouse to field**

- Starts grown in a greenhouse are accustomed to a controlled environment. Air temperature, humidity, wind, soil temperature, and exposure to direct sunlight are all controlled factors in the greenhouse.
- Starts must have transition time from greenhouse to field. This process is called “hardening off.”
- Hardening off reduces amount of stress for start by gradually increasing amount of exposure to outside elements.
- Hardening off should start at least 15 days prior to acceptable field transplant date.
- This process can be done several ways: One good way is the use of a cold frame. A cold frame is a mini-greenhouse that is constructed using a wooden box with either a glass or plastic lid cover.
- Plants can ease out of a controlled greenhouse using the following schedule:
  - First, the plants are moved to the cold frame two weeks before they are ready to enter the field.
  - The plants should spend these two weeks with the cover off the cold frame during the day and protected with the cover on at night.
  - Leave the starts exposed to the elements for a half hour to an hour longer each consecutive day.
  - Finally, leave them exposed all day and all night the final three days.
  - The transition is complete. They are ready to go to the field.

### **Transplanting Starts**

- Starts should be thoroughly watered before being transplanted. This greatly reduces shock. Using a weak fish emulsion solution just prior to transplant will also encourage plants to take off quickly.
- Keep starts in shaded area until they enter the ground.
- When pulling apart individual soil blocks or removing starts from trays, carefully separate the intertwined root growth, causing as little trauma as possible, while still remaining efficient.
- Do not expose tender root systems to direct sunlight (as little as fifteen seconds of exposure can kill off roots).
- Using your hand or a planting tool create the right depth and size hole in the bed or row being planted.
- Some farmers will sprinkle a little organic fertilizer in the hole just prior to planting. This should be done only if the quality of the soil requires that extra boost.
- Gently tease the roots before planting the start; this encourages new outward growth of the roots.
- Take special care to insure the top of the soil block or cell being planted is covered with native field soil; this greatly reduces the natural drying out process during the beginning of the plants field life.
- Some farmers apply a gentle amount of pressure to the base of transplants after planting; others allow the natural “watering-in” process to settle the soil around the new transplant. What works for one may not work for another, and much of that has to do with the style of irrigation being used. An overhead irrigation system is going settle the soil around the plant much better than a drip system. Using our drip system at Boones Farm we’ve found applying a gentle amount of pressure encourages the pooling of water around the base of the start.
- Always water in a new start. This is the highest preventative measure you can take against shock.
- The best time to transplant any start is in the cool of the evening. This allows the plant a nice buffer to become acquainted with its new surroundings before dealing with a hot sun.