



By growing your own seedlings, you can plant the varieties you prefer and have them ready for your garden in prime transplanting condition when you want them. The Research Department at Johnny's Selected Seeds designed this kit of professionally-approved flats and trays for maximum versatility and long life.

## KIT CONTENTS

- **One (1) 20-Row Seed Flat**

This tray makes it easy to keep varieties separate. Further, you can remove small seedlings from the tray without disturbing adjacent rows. The drain holes prevent over watering and the flat fits inside one of the Leakproof Trays.

- **Four (4) Pro-Trays Cell Flats**

- One (1) 24-cell
- One (1) 72-cell
- Two (2) 38-cell

Different cells sizes accommodate a wide variety of seedlings, and allow for bumping up small seedlings or for seeding directly into the cells. The rims of the individual cells are "slot-connected", which aids in watering evenly and drainage holes prevent overwatering. Pro-Trays fit into the Leakproof Trays. You have a total of 172 cells between the 4 Pro-Trays.

- **Five (5) Leakproof Trays**

The standard 1020, all-purpose trays used in commercial greenhouse operations, except these trays are free of drain holes. This leakproof feature allows you to use them worry free in your home. You can fill the flats with Johnny's 512 Mix and plant directly into them or use as a drip pan and carrier for the 20-Row Seed Flat and the Pro-Trays.

- **One (1) Clear Acrylic Dome**

The dome fits over the 20-Row Seed Flat, Pro-Trays, or Leakproof Flats to help maintain consistent moisture and retain warmth. Covered flats may overheat if placed in direct sunlight. To avoid overheating after germination, prop one end of the Acrylic Dome slightly to allow air circulation.

- **One (1) 20-Quart Bag of Johnny's 512 Mix**

Johnny's 512 Mix is an organic blend of mature compost, blond sphagnum, fish meal, and perlite. This rich compost should sustain plant growth for several weeks.

## PREPARING TRAYS, PLANTING, AND TRANSPLANTING

1. Prepare the Johnny's 512 Mix by following the instructions on the front of the bag.

**2. Filling the flats and trays:** Fill the flat or tray with Johnny's 512 Mix. Even it out and level it by scraping mix sideways and gently shaking the container to settle the mix. The flat or tray should be filled to the brim with mix. The mix will settle slightly after planting and watering.

**3. Planting considerations:**

- **Temperature:**

Provide the right temperature for the variety you are growing; 75-80°F/24-29°C is a workable range for most vegetables, flowers, and herbs. The most common cause of germination failure is overly cool temperatures. Refer to the cultural instructions on your seed packet or in the Johnny's catalog for specific germination and growing temperatures.

- **Water:**  
The Johnny's 512 Mix should be moist, but not so wet that it drips if a handful is squeezed. Be sure to mist or lightly sprinkle to keep the surface of the mix moist until germination. Then, water as needed when mix is almost dry without allowing plants to wilt. As a plant grows larger, it uses more water and requires watering more frequently.
- **Fertilizer:**  
The nutrients in the Johnny's 512 Mix are normally adequate for at least 4 weeks. Begin using a soluble fertilizer such as Liquid Seaweed/Fish Fertilizer, as necessary.
- **Light:**  
Seedlings require as much light as possible. Seedlings that do not get adequate light quickly become spindly and weak as they stretch towards the light source. Supplement natural light with fluorescent lights suspended close to the plants for maximum light. If you use lights, attach them so the height is adjustable. When using a window for light — south-facing windows work best — the plants will lean toward the window. Turn the flats or trays daily.
- **Hardening-Off:**  
When your seedlings are almost ready to be transplanted into your garden, reduce water and decrease temperature slightly for about a week. This helps transition the plants from the protected indoor environment to the outdoors. In addition, it is a good idea to expose ready-to-transplant seedlings to partial, but daily increased periods of outdoor sunlight before transplanting. A properly tended cold frame is excellent for hardening plants.
- **Transplanting:**  
Removing plants from Pro-Trays is easy. Moisten the cells, press the bottom of an individual Pro-Tray cell gently, and lift the plant by its leaves; do not squeeze the plant's stem. By hand or with a trowel or dibble, make a small hole in the garden soil and set the plant into the hole. Gently press soil around the plant, with the surface of the Johnny's 512 Mix slightly below the leveled garden soil surface. Water after transplanting, preferably using a water-soluble fertilizer solution such as Liquid Seaweed/Fish Fertilizer. This will help your plants grow until their roots can extend out into the garden soil. Above all, transplant out only when weather and soil are warm enough. This varies for different types of plants. Please refer to the latest Johnny's catalog for proper outdoor planting conditions.

## EQUIPMENT CLEANUP AND STORAGE

After use, wash the flats and trays with water or ½ cup of ordinary liquid bleach per gallon of warm water. The bleach mixture helps disinfect, eliminating any fungi or bacteria which could infect your next crop of seedlings. Follow this bleach wash with a clear water rinse before drying. Allow them to dry and store them in the original box or out of direct sunlight. Flats and Pro-Trays “nest” together to save storage space. They should last for several seasons.