

## Seeds for Summer

By Mark S. Brunell, Master Gardener

It might be hard to believe, but it is time to plan your summer vegetable garden, and even do some planting. In fact, if you have space to grow plants indoors, you could have started a few weeks ago.



A group of four-week old tomato seedlings grown in the greenhouse with true leaves apparent.

Unlike cool-season crops, where we eat the roots, leaves, stems, or immature flowers or fruits, in summer crops the mature fruit is usually what we want. To make their fruits and seeds, summer crops need frost-free, warm days. However, you can expand your summer crop season by starting plants indoors very early and placing them into the garden beds early, provided the plants don't get

exposed to frost. True, plants will grow slowly in cool weather, but during that period they will establish their root systems, and for some plants, like tomatoes, the chilling will allow them to flower earlier and more fully.

Some crops like squash, cucumber, and beans are best grown from seed sown directly in the garden beds because their roots are sensitive to the transplanting process. Direct-seeding should take place after the soil has warmed to at least 70°F; if cooler, the seeds could rot.

Other crops such as tomatoes, peppers, and eggplant can be started indoors, a fun and easy project. All that is required is seed, seedling mix, containers, water, light, and warmth. For seeds, visit any garden center for a wide selection, or shop online.

For soil, a fine-textured seedling mix is best. Regular potting soil is usable but its coarse texture reduces the soil-to-seed contact and it dries out faster.

Containers can be anything that will hold soil and drain well. Seeds can be sown in their own individual pots, and later the rooted plant is popped out of its container and transplanted into the garden. Or, a continuous flat of seedling mix can be used, with many seeds planted into the surface. In this case, the plants will mingle together, and must later be "pricked" out bare root, and either repotted or placed into the garden bed. If you are planting just a few plants, individual pots are preferred.

A sunny windowsill or artificial lighting can provide light. Cool-white fluorescent lamps work very well, and should be hung a few inches above the growing plants. Strong light is important, because under low-light conditions the seedlings will be tall and spindly, making them vulnerable to damage.

To plant, thoroughly wet the seedling mix, and flush it with water several times. Fill the containers, and place the seeds no deeper than twice their thickness (shallower is better than deeper). Sow at least two seeds per pot. If the room is not heated, consider providing supplemental heat with a seedling heat mat; most seeds germinate quickly at temperatures above 70°F. Keep the soil moist and germination should occur within a week or two. Thin the plants to the single strongest seedling. Once the first set of true leaves appear, fertilize lightly. After the plant has grown for 4 to 6 weeks, it is ready for transplanting. Expose the plants to cool temperatures and sunlight gradually for a few days to harden them before transplanting into a sunny, well-drained location.

When is a good time to start plants? In Oakland, for example, by January 17 there is only a 10 percent chance of freezing temperatures, whereas in inland Livermore that date is April 7. Near the bay, plants could have been started in December or January and set out now. If a late frost is in the forecast, cover plants with a blanket or row cover for protection. For inland areas, seeds can be started now to be set out in April.

Most standard varieties of tomato require nighttime temperatures of at least 50°F before fruit will set. In some early heirloom varieties, however, fruit set can occur at lower temperatures. If the goal is to get the first ripe tomatoes in your neighborhood, planting early, with proper frost protection, will pay red-juicy dividends.