

Seedbed Preparation for a Kitchen Garden

A seedbed refers to soil where desired plants can be seeded or transplanted. A good seedbed 1) provides good seed-soil (or soil-root) contact, 2) helps plants better get nutrients and water and 3) has enough air space for proper germination and root growth.

Steps to prepare a garden seedbed.

- 1. Location:** choose a relatively level site, close to home, with easy access to water, at least 6 hours of sunlight and few weed problems. The site should be free of rocks and other debris that can physically prevent plants from growing. Remove debris and rocks as needed.



Figure 1: Tilling the soil

- 2. Land preparation:** Dig the soil 15 to 30 cm deep using a spade or shovel (Fig. 1). Dig deeper, if necessary, to loosen compacted soil. Dig the soil when moist. If soil is dug too wet or too dry, the seedbed will have a lot of large clods. After digging, break up any big clods. Do not walk on the area after it has been tilled.

To test for the right soil moisture - Before digging, squeeze some soil in your hand. If the soil forms a ball and doesn't break apart easily when bounced or leaves watermarks, the soil is likely too wet. If it doesn't even form a ball, the soil is too dry (Fig. 2). See Fact Sheet "Soil Moisture by Feel" for more information.



Figure 2: If soil doesn't form a ball when squeezed, the soil is too dry

- 3. Add compost (if available):** Spread about 5 cm of compost over the seedbed area and incorporate. If transplanting, also add a handful of compost into each planting hole. Compost helps retain water, improves soil structure, and increases soil fertility.

- 4. Test soil pH (if possible):** Test the soil pH level with litmus paper or an inexpensive pH tester. Most crops like a slightly acidic soil with a pH between 6 to 7 (Fig. 3). If the soil pH is too low, add some lime. If the soil pH is too high, add some sulfur.

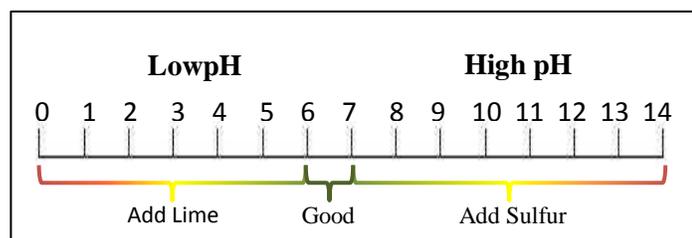


Figure 3: pH scale

- 5. Raised beds (optional):** Shape the soil into raised beds with furrows in between each bed (Fig. 4). Raised beds are generally 10 to 20 cm high and spaced according to the crops grown. For example, tomato beds should be 90 to 150 cm apart, from center to center. Raised beds will warm up quicker in the spring and help improve water drainage.

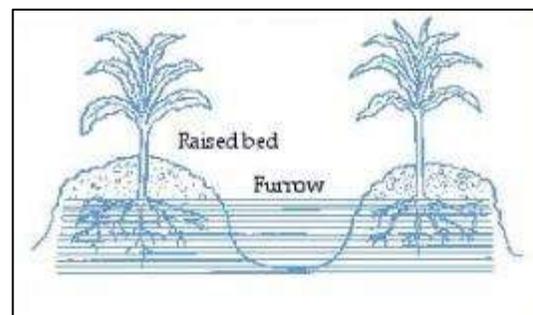


Figure 4: Raised bed and furrow system (UC Davis)

- 6. Mulch (optional):** Add a 5-10 cm layer of mulch (such as wood chips, straw, cardboard or plastic – see Fig. 5) to a weed-free seedbed after crop germination or transplanting. Mulches keep the soil cool in summer, prevent water loss and help control weeds. Important tips:

- Mulch can slow soil warming in the spring; pull mulch away from the plants in early spring for faster growth.
- Wet mulch piled against the stems of crops can cause them to rot; keep mulch about 3 cm away from stems.
- Mulches can harbor slugs and snails, which will eat young plants; watch for snail/slug damage.
- As plant mulches like straw decay, nitrogen can be temporarily taken from the soil. Fertilize first with nitrogen to boost soil nitrogen levels.



Figure 5: Different types of mulches