

Soil and Land Preparation

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CONTROL WEEDS

- **Do not allow weeds to go to seed!** One weed can make thousands of seeds.
- Spray perennial weeds in May if possible, but no later than 2 weeks before disking. Important perennial weeds include field bindweed and nutsedge.
- Roundup kills field bindweed but not nutsedge; remove nutsedge with a hoe before they reach the 5-leaf stage to prevent formation of tubers (“nuts” below ground).



Nutsedge (left) and field bindweed (right) are perennials that should be controlled before planting.



Sow thistle weed going to seed.



Curly dock weed going to seed.

TEST YOUR SOIL

- Take soil samples to a testing lab to determine your soil texture and what nutrients are lacking. Have the lab analyze for pH, salts, soil texture, nitrate, phosphorus, calcium, magnesium, and sulfur. Keep records.



Take several samples.



Core of soil for testing.

CONSIDER RIPPING YOUR FIELD

- Disking for several years causes soil to become compacted, which causes drainage problems.
- Poor drainage in high rainfall years causes plants to be stunted.
- Try to have someone rip your field with a deep shank every 2 or 3 years. This will help water drain through the soil better.

CONSIDER APPLYING COMPOST

- Compost adds nutrients to the soil, makes healthier plants, and helps the soil drain better. Apply 5 to 10 tons per acre. It costs about \$20 per ton plus delivery charge, and then it needs to be spread on the field using a manure spreader pulled by a tractor.

RIPPER



Three-shank deep ripper for breaking up compacted soil to improve drainage.

COMPOST



Spreading compost (in an orchard).

DISKING THE SOIL & PREPARING THE BEDS

- Disk or rototill the soil to kill weeds and break up clods.
- Disk when the soil is moist but; disking soil when it is too dry or too wet creates large clods.
- Remove any trash that might tear plastic.



Disk the soil when it still has some moisture.



Create furrows for beds.



Disk to create the beds.



Use bed shaper and lay T tape.



Nice beds - Disked when soil was moist.



Too many clods - disked when soil was dry.

FUMIGATE, SOLARIZE, OR ROTATE YOUR FIELD

- If possible, fumigate the soil with Vapam or solarize the soil with clear plastic to kill weed seeds and help the plants grow better. Otherwise, plant on ground that had no strawberries the year before to help plants grow better.

BE SURE TO DRAIN YOUR FIELD

- Be sure to provide a way for water to leave the furrows during heavy rains.
- Make a ditch at both ends of the rows to remove excess storm water. Water sitting in the furrows for more than a few hours will stunt plants or kill them.



Standing water in a low spot caused plants to be smaller than usual.

RESOURCES

1. Lab soil test: Sunland Analytical Lab, Rancho Cordova, CA: Soil test # STP1.
2. Compost: Sources include Lopez Ag. Service, on Florin Rd. near Sunrise Blvd., (916) 682-5450, and Grover Landscapes in Modesto, (209) 545-4401.
3. Solarization material: UV-protected solarization plastic, MIP-Co, San Luis Obispo, CA (805) 549-9540.
4. Vapam contact: Bill Clark, Western Farm Service, Stockton (209) (209) 547-2600.

KNOWLEDGE ASSESSMENT QUESTIONS:

1. When should soil be prepared for best results? Why?
2. Why should you test your soil? By understanding your soil type, pH and nutrient levels, you avoid purchasing unnecessary products and prevent water pollution caused by over fertilization. (http://www.garden-ville.com/4376856_36600.htm) You can find out whether there is lead contamination (for health reasons).
3. Why do you want to avoid storm water pooling in your fields?
4. How do weeds spread?
5. When should you spray for weeds? Why?
6. Do you know or have problems with bindweed? Nutsedge?
7. What herbicide do you use to kill bind weed?
8. Do you rotate where you plant your field? If yes, why? If no, why not?
9. Do you know why you should rotate your field?
10. Should the soil be wet or dry when you disk? Why?
11. Why should you avoid big clods?
12. How can you avoid big clods?
13. Do you use compost? Why? Why Not?
14. What benefit does compost provide?
15. Do you know how to apply compost?