

Managing Drought in Louisiana Horticulture Crops

Vegetable Gardens



Droughts are rare incidents in Louisiana for extended periods of time. Nevertheless, they do occur, and gardeners must be prepared. If adequate irrigation is available, many vegetable crops will thrive quite nicely with reduced or no rainfall. Many plants, such as watermelon and cantaloupe, flourish in drier soils. The key to managing the vegetable garden during a drought is understanding how to manage the irrigation you must now supply.

Gardeners may notice that seasons with less rainfall have reduced disease incidence and fruit rots. Rain drops spread yeasts, molds, bacteria and other nasty, minute creatures in the air from plant to plant. Without the rain, gardeners often notice fewer spots on foliage from disease. But what you may notice more during drought is insect damage. Insects need water. Droughts deplete natural puddles and reduce weeds, grass and ornamental plant growth all around our yards and neighborhoods. So, if your vegetable garden is being irrigated, it is attractive for insects that need vegetation to eat and water to drink. Be prepared to battle insects with methods such as proper plant spacing, reduction of weeds in the garden, releasing beneficial insects and the use of organic and synthetic insecticides when necessary.



Soaker hoses and drip tape are ideal watering systems to prevent excessive disease in smaller gardens. Photos by Kathryn Fontenot



Tips to maintain yield and quality:

- **Use drip irrigation.** During drought conditions, managing water is a priority. By placing the irrigation at or near the root zone, you minimize water lost to the atmosphere through evaporation.
- If possible, **water in the early mornings** before temperatures increase. If using drip irrigation or applying water only to the base of vegetable plants, you can also water in the early evenings. If you are limited to overhead irrigation, watering in the early evenings may increase the chances of disease since the sunlight can't quickly dry foliage. But remember – some water is better than no water in a drought no matter what time it is applied.
- **When applying irrigation to vegetable crops, the ideal schedule is to water daily with just enough to maintain soil moisture.** This is the opposite of perennial crops where deep infrequent irrigation is best to encourage roots to dig deeper into soils. Why do vegetables do better by simply maintaining soil moisture and not inundating plants with too much water all at once? Because applying water deeply and infrequently can damage the edible portions of vegetable crops. For example, too much irrigation all at once will split tomato skins. Going too long between irrigation events will cause bitterness in cucumbers and extreme pungency in onions. On the other hand, drought-like conditions can enhance flavors of melons, such as watermelons, cantaloupe and honeydew, and even strawberries!

These crops need water but if too much is applied, especially before harvest, the sweet flavor becomes diluted to our taste buds.

- **If you haven't been doing this and your soil is completely dried out, you must apply enough water to rewet the soil.** This will most easily be done in smaller gardens using a hose with a water breaker nozzle. As much as possible, water at the base of the plants. Avoid furrow irrigating as this can move soil-borne disease throughout the garden. If you have drip irrigation installed but haven't been using it, you may need to leave it on for hours or even overnight to rewet completely hard and dried out soils.
 - **Use mulch.** Natural mulches, such as leaves and pines needles, and synthetic mulches, such as thin plastic garden mulch and cardboard, help maintain soil moisture and temperature.
 - If your garden soil is extremely sandy, **amending it with compost** will help increase the water holding capacity of the soil.
 - **Pull your weeds.** Weeds are a major competitor to your crop during droughts. The fewer weeds in a garden the more water is available for your prized vegetable plants. Also, insects and disease like living in weeds. Reducing weed populations also helps reduce insect and disease incidence.
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If the drought is becoming too much to handle, don't worry. Pull out your crops and cover the garden with a tarp to reduce weed growth until the next season. You can also plant a cover crop and wait it out. Better times are ahead.

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