

Drip Irrigation for Landscape Beds



Drip line in a landscape.

Fall is a great time to install a new landscape bed, and while new plants are going in the ground, it is a good time to think about setting up an irrigation system. Supplemental irrigation is oftentimes critical for the success of your new plantings as they establish in the landscape. When it comes to choosing what type of irrigation delivery method to use for your landscape beds, drip irrigation should be strongly considered.

Drip irrigation applies water precisely where you want it and away from unwanted areas. Applying water with drip irrigation systems reduces the total amount of water used and can minimize the risk of overwatering and generating runoff. Compared to typical overhead sprinkler or sprayer systems, which apply water to large areas in a not-so-discreet manner, drip irrigation systems maintain a lower profile and are typically unnoticeable. While this is certainly a benefit in some regards, it makes it more difficult to ensure that your system is working properly. After all, if your



Drip line with an emitter installed.

irrigation system isn't applying water correctly, by the time you realize something is wrong your plantings may well be wilted or even dead.

Drip irrigation systems in the landscape use a flexible pipe (typically 1/2 inch or 3/4 inch in diameter), allowing the shape to be uniquely aligned around plantings. Using a hole puncher specific to the flexible pipe, one can select exactly where they want water to drip from. At each punched hole, an emitter needs to be installed. If holes are simply punched in the line without installing an emitter, flow rates will vary between holes and could very well lead to over or underwatering different sections of the landscape bed, particularly in areas with uneven terrain. Emitters are rated for a certain flow rate and have a barbed end that can be inserted into the hole in the flexible tube and provides a tight seal. Emitters may either be pressure compensating or non-pressure compensating. Pressure compensating emitters allow water flow rates to be even across a drip line, regardless of differences in water pressure, terrain or elevation across the span of the irrigation system. Non-pressure compensating emitters are subject to greater variations in flow rates, particularly in uneven terrain. However, these emitters do not require minimum inlet pressure (like pressure compensating emitters do) and can be used in most gravity-fed drip systems provided the

terrain is level enough. There are also variable flow rate emitters available. These can be regulated to apply more or less water at each individual location. Variable emitters allow for individual plant needs to be met, rather than standardizing the entire irrigation system and over or underwatering different plants.



Pressure compensating emitters (top 4) and a variable flow rate emitter (bottom).

Once installed, it is a good practice to inspect the system on a regular basis. With the amount of exposed plumbing, there is a risk that pests may chew through some of the lines. If this happens, the entire water flow will be disrupted.

Another issue that may arise is clogging of lines and emitters, which may be a result of algae and/or mineral buildup. To prevent clogging, remove emitters periodically and soak them in a light acid. Vinegar works well for this purpose. An overnight soak will typically be sufficient. For adjustable emitters, turn them to the highest flow rates to flush out the interior with water or also soak in vinegar. For the flex pipe itself, remove the cap at the end of the line and run water through at a high pressure to flush the pipe clear. Routine inspection of each emitter during an irrigation cycle will also go a long way towards ensuring that the irrigation system is running properly and that no planting areas are dehydrated.

Drip irrigation systems can help make the most out of a landscape. Installing a drip system will save time and water and keep your plants hydrated all while remaining discreet within the landscape. With periodic maintenance and upkeep, you will be able to enjoy your landscape for years to come.

*Damon E. Abdi
Assistant Professor
Extension Specialist, Hammond Research Station*

A promotional banner for the Hammond Research Station Fall Fest & Plant Sale. The background is a close-up photograph of a plant with dark, glossy leaves and several bright orange and yellow peppers. Overlaid on this is a white rectangular box with a green border. Inside the box, the text "SAVE THE DATE" is in green, followed by "Hammond Research Station" in black, "FALL FEST & PLANT SALE" in large green letters, and "Saturday, October 8" in black. Below the text is the LSU AgCenter logo, which consists of the letters "LSU" in purple and yellow, and "AgCenter" in green, with the tagline "Research · Extension · Teaching" below it. At the bottom of the box is the website "LSUAgCenter.com/Hammond". Below the white box, there are two circular logos: one for "LSU AgCenter Recommended Louisiana SUPER Plants" and another for "CERTIFIED LOUISIANA A LOUISIANA PRODUCT".



Checklist for September, October, November

September

In the vegetable garden: It is transition time from summer to fall. Incorporate preplant fertilizer into fall beds for new plantings. Use 1 cup of general-purpose fertilizer per 30 square feet. You can also side dress remaining summer plantings to encourage one last good harvest. You may continue to plant cool season vegetables, tomatoes, eggplant, peppers and squash.



Sod webworm damage appears as yellowing to brown patches in the lawn.

In the lawn: Sod webworm has been bad for the past two years. Scout the lawn often for signs of chewed grass blades. Apply pesticides with the active ingredient lambda-cyhalothrin and follow the label for application recommendations. Stop applying nitrogen-containing fertilizers in your lawn as the high nitrogen promotes fungal diseases such as large patch that are common in the fall.

In the landscape beds: This month is a great time to plan. Take a soil sample to have the fertility and pH tested. Fall is also a great time to plant! Consider what cool season plants you will install and decide what warm-season plants are still going strong into the fall and keep those around!

Trees and shrubs: Summer storms and hurricanes can damage trees and shrubs. Hurricane season is still active through the end of November. Remove damaged limbs. Prune ever-blooming roses this month.

Fruit: Water, water, water when rain is scarce. Avoid pruning pears and apples to help prevent fire blight. Harvest early satsuma varieties, persimmons, fig, kumquats, apple, pomegranate, pear and muscadine.

October

In the vegetable garden: It's pumpkin harvest time. Side dress at the beginning of the month to help support additional growth. If you plan to skip the fall garden this year, consider cover cropping your bed. Good choices are crimson clover, oats, vetch, rye and Austrian winter pea.



Pumpkins.

In the lawn: Fungal disease is prevalent in the fall. Treat your lawn with a granular fungicide containing one or more of the following active ingredients: maneb, myclobutanil, PCNB, propiconazole, thiophanate-methyl or triadimefon. Follow label instructions.

In the landscape beds: Chill your tulip and hyacinth bulbs for spring in your refrigerator at 40 F for about eight weeks. Collect seeds from warm-season annuals and perennials for planting next year. This is a good month to dig up and divide caladium bulbs for next year.

Trees and shrubs: Water plants this month as October is traditionally the driest month of the year in Louisiana. Use horticultural oil spray on camellias, magnolias, gardenia and citrus to help control scale and whiteflies.

Fruit: Purchase and plant strawberries plants. Some recommended varieties are Sea Scape, Camarosa, Eversweet and Chandler. Fertilize them with one-third pound of 10-10-10 per 100 feet before plants are mowed.

November

In the vegetable garden: Direct-seed root crops in your vegetable garden. Some great selections are beets, carrots, radishes and turnips. You can continue to transplant broccoli, cabbage and cauliflower this month in addition to lettuces and greens. Scout for caterpillars and slugs with traps, barriers and baits.

In the lawn: Large patch can reoccur in the fall, so reapply fungicides as needed to eliminate. Rake up fallen leaves and use them for mulch in your landscape beds or compost them. Final cuts to the lawn can be made before storing mowers for the winter.

In the landscape beds: Divide and transplant hardy perennials this month. It is a good time to plant cool-

season bedding plants that will perform well over the next few months as the weather cools down such as poppy, columbine, snapdragons, pansy, viola, dianthus, larkspur, lupine, delphinium, hollyhock and phlox.

Trees and shrubs: Spray evergreen trees and shrubs that have scale and white flies with a horticulture oil this month. Camellias, sweet bay magnolias, banana shrub, hollies, gardenias, privets and sasanquas are often affected.

Fruit: Bare-root fruit trees can be planted at any time during the dormant season, usually from about mid-November through February in Louisiana. Avoid planting tender citrus and fig trees this month. Wait until spring to plant. Many citrus fruit types are ready for harvest.

*Heather Kirk-Ballard, Ph.D.
Consumer Horticulture Specialist*

Vegetable Gardening



Brussels Sprouts.

If you are new to vegetable gardening, you've decided to join at the right time of year. Typically, we have less disease and insect pressure in the fall as compared to the spring and summer seasons. This is especially true if you wait until mid- to late September to start planting. But don't hesitate to set seed and transplants out early in the month. There is nothing wrong with getting a head start. Fall vegetable gardening is fun because there are many options to plant in September, October and November. Check out the month-by-month options below.

September crop options

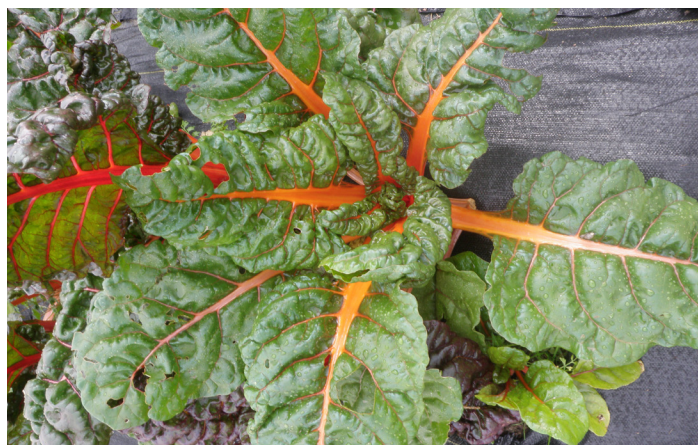
Plant as transplants (or start seed to transplant into the garden for November):

Broccoli, Brussels sprouts, cabbage, Chinese cabbage, cauliflower, collards, lettuce, kohlrabi, kale and Swiss chard.

Plant as direct seed:

Beets, endive, carrots, English peas, snow peas, mustard, onions (mid- to late September), parsley, snap beans (early September), radishes, rutabaga, spinach and turnips.

Garlic toes are planted mid- to late September. Do not wait until late in the month. These need a full nine months of growth to form new bulbs that are divided. If you wait too late to plant, our naturally rainy springs will turn your bulbs to mush before they have a chance to divide into individual toes. Shallot sets can be planted all month long.



Swiss Chard.

October crop options

Plant as transplants:

Broccoli, Brussels sprouts, cabbage, Chinese cabbage, cauliflower, kale, lettuce, greens (turnip, mustard or collard) and Swiss chard. (I always just direct seed greens because it's cheaper.)

Plant as direct seed:

Beets, carrots, celery, endive, kale, leaf lettuce, greens (mustard, collard or turnip), radishes, onions (early to mid-October to create sets for a December planting), parsley and spinach.



Mustard Greens.

November crop options

Plant as transplants:

Broccoli, cabbage, cauliflower, broccoli, kale and Swiss chard. If possible, try to plant these early to mid-November. Any later than that and you risk a freeze taking out small plants.

Plant as direct seed:

Beets, carrots, kale, mustard greens, spinach, Swiss chard and turnips.

Continue to plant:

Shallot sets and garlic toes in the first part of the month.



Broccoli.

Final thoughts....

The complaints I often hear about fall gardening include “I don’t like the taste of many of the cruciferous crops.” Specific comments, such as “They taste and smell sour,” are often reasons people do not grow a fall garden. If this sounds like you, I feel like you just haven’t found the correct recipes yet. Try planting these crops and look for new recipes. As you are planting seeds, also begin the search for your new dishes. My ideas for your internet search words are “cabbage for street tacos,” “roasted Brussels sprouts with herbs,” “broccolini with steak,” and “cauliflower pizza crust.” Try it before you decide if you like it. A small “no, thank you” bite never hurt anyone.

*Kathryn “Kiki” Fontenot, Ph.D.
Vegetable Gardening Specialist
LSU AgCenter School of Plant,
Environmental and Soil Sciences*

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Fall Lawn Care in Louisiana

Should you fertilize your lawn during fall?

Louisiana usually stays warm well into the fall, and lawns continue to grow until nighttime temperatures dip into the 50s. So be sure to mow and water your lawn, as needed, to keep it healthy.

If the fall feels more like summer, keep an eye out for armyworms in bermudagrass. Sod webworms and chinch bugs may still be active in St. Augustinegrass well into the fall. Chinch bugs are most active in hot and dry weather. Insecticides, such as carbaryl, bifenthrin, and chlorantraniliprole, are effective for killing chinch bugs and moth larvae, such as armyworms.



Armyworm feeding on bermudagrass. Photograph by David Sexton.

When summer is over, it is time for your fertilizer spreader to hibernate until next year. Fertilizing warm-season lawn grasses during the fall with summer-type fertilizers or winterizing fertilizers containing high levels of nitrogen is not recommended for Deep South lawns. Stimulating fall growth of St. Augustinegrass, centipedegrass and zoysiagrass with nitrogen leads to increased large (brown) patch disease and winter kill. Bermudagrass may be fertilized into September, but I would not make any more applications of high percentage nitrogen-containing fertilizers after late August on St. Augustinegrass, centipedegrass or zoysiagrass.

If you would like to extend the green color in home lawns this fall, apply foliar iron spray or spreadable iron granules. This will give you a nice flush of green color without increased growth.

Winterize the lawn?

I am sure that you have heard of winterizer fertilizers. Potassium (the last number in the analysis on a fertilizer bag) is the nutrient associated with winter hardiness and

increased disease resistance with turfgrass. There is an advantage to having the correct amount of potassium in the soil when it comes to dealing with environmental stress. Get a soil test before applying high potassium fertilizer, however, since there is no advantage to applying excessive amounts of this nutrient. If a soil test indicates that potash is lacking, choose a fertilizer containing potassium but with zero or a very low percentage of nitrogen (the first number on a fertilizer bag) and apply during the late summer or early fall while the lawn is still growing. Very slow growth still occurs even though day lengths get shorter by late September and October. I am sure that you have probably noticed before that you do not have to mow your lawn as often as we move into October.

An important fact to consider if you bag your lawn clippings — **the removal of grass clippings from lawns can severely deplete the soil of potassium.** Grass leaves and stems contain very high levels of potassium. Keep in mind that when a lawn is mowed appropriately, it is better to leave clippings to decompose on the lawn as a good source of turf nutrients, including potassium. Clippings from a lawn that is mowed regularly have only a small role in the overall buildup of thatch in turfgrass.

Speaking of soil tests...

Fall is the best time of the year to get your soil tested by the LSU AgCenter Soil Testing Lab. Soil testing really is the first step to a beautiful lawn next spring and is the best way to determine exactly what your lawn needs to become thick and healthy. If you have not tested your soil in the past several years, do it now.

To do the test, submit a pint of soil to the LSU AgCenter Extension Service office in your parish. The pint should be a composite of soil samples collected from several different areas in the lawn. You only need to go about 4 inches deep. Also, to simplify the soil sampling and submission process, there are pre-addressed submission boxes with sampling instructions at several garden centers throughout the state. There is a small fee for testing.

The sample results will be sent to your home mailbox and email in less than two weeks. An LSU AgCenter extension agent can help you interpret the results from the soil sample. The results may indicate that lime is needed to increase soil pH. If so, fall and winter are good times to apply lime, since it takes several months to activate in the soil. Elemental sulfur may be recommended to reduce soil pH in alkaline soils.

Weed control

The best way to cut down on winter weed problems is to get your lawn thick and healthy during spring and summer months. If your lawn struggled during the growing months, inevitably it will be full of winter weeds next spring. Late

summer/early fall is your first opportunity to reduce winter weed infestations with pre-emergence herbicides. Pre-emergence herbicides, such as prodiamine, pendimethalin, dithiopyr, isoxaben and indaziflam, may be applied in mid- to late September to help manage the first flush of winter weeds such as annual bluegrass, chickweed, and lawn burweed. Consider reapplication in early November. These herbicides work prior to the emergence of the weeds, so timing the application before the weeds germinate is critical. Atrazine can be applied in October on most southern lawns except bermudagrass to control annual bluegrass and broadleaf weeds. However, atrazine could be applied on bermudagrass after it is dormant. MSM



Wild geranium is a common winter broadleaf infesting fall lawns.

(metsulfuron) can be highly effective postemergence on broadleaf weeds, such as white clover and lawn burweed. Lawn burweed or “sticker weed” is a winter annual that germinates in October and grows all winter long. Next April, lawn burweed produces the burs that are capsules that contain burweed seed. To avoid the stickers in the spring, you must treat lawn burweed during fall and winter.



Lawn burweed germinates in the fall and produces painful stickers by the spring.

Ron Strahan, Ph.D.
Weed Scientist and Turfgrass Specialist
LSU AgCenter

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Southern Blight of Vegetables

Southern blight is caused by the soil-borne fungus *Sclerotium rolfsii*. The pathogen has a wide host range and is known to cause disease on various economically important vegetable (cucurbits, eggplants, peppers, potatoes, tomatoes) and bedding ornamental plants. The fungus attacks the lower stem of plants at or near the soil line during warm and wet conditions. Initial symptoms appear as wilting and yellowing of leaves. The lower stem becomes necrotic, and the whole plant eventually turns brown and dies. Closer examination of the base of a diseased plant reveals a lesion that girdles the stem. As the disease progresses, white fungal growth (mycelium) and small, mustard seed-like, tan colored sclerotia appear at the base of infected plants. Sclerotia turn reddish to dark brown as they age. The mycelium and sclerotia extend on the soil surface around the infected plant.

The fungus survives as mycelia or sclerotia on the plant as well as sclerotia in the soil where they can persist for several years. The disease is favored by hot and humid weather, which is common in Louisiana. The pathogen may spread by several means including planting of diseased transplants, movement of infested soil, equipment, tools and plant debris. Running irrigation water may also aid in dispersal of sclerotia.

Management of southern blight starts with avoiding planting susceptible crops in areas known to be infested with the pathogen for two or more years. Turn the soil to bury the sclerotia as deeply as possible (8 to 12 inches is recommended). For small plantings, aluminum foil may be wrapped around the lower part of the stem (from just below the soil line to approximately 2 inches above the soil). This provides a physical barrier that prevents the pathogen from reaching the plant. Remove infected plants and discard them properly. Do not compost the diseased plants. Movement of infested soils should be minimized to prevent pathogen spread. Cleaning farm equipment to remove dirt is recommended. For information on fungicides recommended for commercial and home vegetable gardens to manage southern blight, please consult the LSU AgCenter Plant Disease Management Guide.

Raj Singh, D.P.M.

*Associate Professor/Horticulture Pathology Extension Specialist
Director, Plant Diagnostic Center*



Initial symptoms of southern blight appear as wilting and yellowing of leaves.



As the disease progresses, white fungal growth (mycelium) and small, mustard seed-like, tan colored sclerotia appear at the base of infected plants.

School of Plant, Environmental and Soil Sciences

Horticulture Division

155 J. C. Miller Hall - LSU

Baton Rouge, Louisiana 70803



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School of Plant, Environmental and Soil Sciences
155 J. C. Miller Hall - LSU, Baton Rouge, Louisiana 70803
225-578-4070; Fax: 225-578-1068

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Matt Lee, Interim LSU Vice President for Agriculture
Louisiana State University Agricultural Center
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