Cool-Season Bedding Plants for Fall Planting

Many bedding plants prefer to grow during the lower temperatures of Louisiana’s winter and tolerate the freezes that occasionally occur. These plants provide color in the season that runs from October/November to April/May.

Low-growing flowers generally grow to about 4 to 8 inches and should be planted in the front of beds. They include sweet alyssum, lobelia,* diascia, nemisia, pansy, Johnny-jump-up, viola, primrose,* cyclamen,* petunia* and dwarf stock. Medium-height plants that reach 8 to 15 inches include dwarf snapdragons, dwarf toadflax,* candytuft, calendula,* annual phlox, bluebonnet, dianthus, sweet William, ornamental kale and cabbage and California poppy*. Cool-season bedding plants that grow 15 inches or taller include Iceland poppy, Shirley poppy, peony-flowered poppy, toadflax,* stock, nicotiana,* snapdragons, statice, larkspur, delphinium, hollyhock and sweet peas.*

*These plants are more reliably hardy in South Louisiana.

Cool-season Color Schemes

When you decide it’s time to pull out the warm-season bedding plants and re-plant your flowerbeds and containers, lots of wonderful cool-season bedding plants are available. Excellent choices include pansy, viola, dianthus, sweet alyssum, calendula, snapdragon, petunia, forget-me-not, sweet William, nicotiana, hollyhock, poppies, annual phlox, stock, statice, ornamental kale and cabbage and dusty miller, to name a few.

These plants provide color, which is an extremely important factor in how we perceive and appreciate our landscapes. What colors to plant or how you combine them is mostly a matter of taste. But, you should at least think about your color scheme and what you are trying to accomplish with color. Here are some quick tips to get you started.

Combine cool colors together or warm colors together for reliably harmonious results. The colors within each group naturally combine well and look good together. Cool colors include reds with a blue tint, burgundy, rose, pink, magenta, purple, violet, lavender, blue, navy and any variations of those colors. Warm colors include reds with an orange tint, orange, gold, yellow, rust, peach and any variations on these colors. White combines equally well with either group, and true-blue flowers also look good with just about any other color.

Use color where you want to focus attention. Never use color to beautify an unattractive feature in your landscape such as a fire hydrant, storage shed or trash can area. You will simply make sure everyone notices it.

Use color where you can enjoy it. Don’t forget to include plantings of colorful cool-season bedding plants in beds, containers and hanging baskets around the patio and other outdoor living areas. Fragrant plants such as alyssum, stock and nicotiana are especially nice.

Generally, reduce the number of colors you use for best results. In other words, use the colors you like in combinations that you like, but don’t use every color you like at the same time in the same bed.

It is also important to plant individual colors in masses or groups, especially if the bed will be viewed from a distance (as in a front bed being viewed from the street). This allows each color to be noticed.

Creating an attractive, colorful look is easier than ever. But do a little thinking and planning before you go to the nursery, and you will generally be more pleased with the results.

Perennials

Many perennials can be dug and transplanted over the next couple of months in the fall and all through the winter as well. This provides the opportunity to correct problems you noticed this summer with plants in the wrong location. Do not move or divide perennials that are in bloom now or later on this fall. Most perennials can be dug and divided during the fall and winter. This is especially important for fast-growing or rampant perennials to keep them under control.
Amaryllis

Dormant amaryllis bulbs are readily available in the fall, and with proper care, they can become a long-lasting part of your landscape. We are fortunate to be able to grow these bulbs in garden beds. In colder regions amaryllis must be grown in containers as they would freeze during the winter if planted in the ground.

Dormant bulbs that you purchase in fall, however, must be handled specially this winter. When they are dried off and forced into dormancy for shipping purposes, the bulbs are triggered to bloom during the winter rather than the spring. If you plant bulbs in the garden that you purchase now, they will send up their flower stalks this winter when they are likely to be damaged by cold.

Instead, plant newly purchased amaryllis bulbs into pots with a well-drained potting soil. Plant them with the neck of the bulb above the soil surface, or buy them pre-planted. The pot should be large enough for there to be a 1 inch clearance between the pot rim and the bulb. Clay or plastic pots may be used, but since an amaryllis in bloom can be somewhat top-heavy, clay pots provide a little more stability.

Place the pots in a sunny window and keep the soil evenly moist. When the flower stalk begins to emerge, rotate the pots two turns every few days so the plants will grow straight. If you provide your amaryllis with too little light, the flower stalk will grow excessively tall and may even fall over. Flowering generally occurs in December or early January from bulbs planted in fall. After the flowers have faded cut the stalk at the point where it emerges from the bulb, but do not cut any foliage. Keep the plant inside and continue to provide plenty of light or the leaves will be weak and floppy.

In April it’s time to plant the bulbs in the garden. Choose a well-drained bed that gets between four to six hours of sun. Amaryllis planted in the garden next spring will get into their natural cycle and bloom in April the following years.

Glorious Goldenrods

To me, one of the first signs that fall is approaching is the appearance of the golden yellow flowers on goldenrods. These perennial plants grow throughout the United States.

Goldenrod grows in practically every type of soil and climate from the mountains to the roadside to the swamp. Eighty-five species have been identified in the United States, the species varying with the locale.

A popular misconception is that goldenrod pollen contributes to hay fever. Only plants whose pollen is spread by the wind cause hay fever. (In the fall, grasses, and especially ragweed, are the primary culprits). Goldenrod is insect pollinated and so is incapable of causing the hay fever reaction unless you stick your nose into the flower.

Powdered goldenrod leaves were once imported by England for healing wounds. Solidago, the genus name for goldenrod, comes from the Latin word solidare, which means “to unite” – a reference to the plant’s healing power. During colonial times, tea was made from goldenrod leaves. After the Boston Tea Party, goldenrod tea was often referred to as “liberty tea.”

Goldenrods are so abundant that generally only wildflower lovers plant them in a garden. However, in the last decade or so, selections of goldenrod have appeared in flower or seed catalogs. These goldenrod selections are generally better behaved (goldenrods can spread vigorously) and even more attractive than those in the wild.

The goldenrod you will most commonly see blooming in fields and roadsides is Solidago altissima, but there are at least six other species native to our state.

So, this fall while you are sneezing and weeping from hay fever, don’t blame the glorious goldenrod. Enjoy their beauty and cuss the ragweed.

Plant Native Shrubs This Fall

Many of us think about planting shrubs in the spring, but fall is the best time to plant shrubs in Louisiana. There are advantages to planting woody ornamentals, such as trees and shrubs, in the fall. The roots of newly planted shrubs grow actively during the fall and early winter even though the top of the plants are not actively growing. This allows the plants to get established in its new location before spring growth begins. Also, the typically cool, wet winter weather means the shrubs will need less water compared to those planted in spring and early summer.

Some excellent native shrubs are available for Louisiana landscapes. Consider adding these species to your landscape.

<table>
<thead>
<tr>
<th>Species</th>
<th>Size</th>
<th>Light Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Evergreen, Semi-evergreen</strong></td>
<td></td>
<td></td>
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<tr>
<td>Coast Leucothoe (Leucothoe axillaris)</td>
<td>3’-6’</td>
<td>Partial shade, shade</td>
</tr>
<tr>
<td>Dwarf palmetto (Sabal minor)</td>
<td>2’-8’</td>
<td>Partial shade, shade</td>
</tr>
<tr>
<td>Dwarf yaupon (Ilex vomitoria ‘Nana’)</td>
<td>2’-4’</td>
<td>Sun, partial shade</td>
</tr>
<tr>
<td>Florida Anise (Illicium floridanum)</td>
<td>8’-12’</td>
<td>Partial shade, shade</td>
</tr>
<tr>
<td>Fetterbush (Lyonia lucida)</td>
<td>2’-6’</td>
<td>Partial shade, shade</td>
</tr>
<tr>
<td>Groundsel Bush (Baccharis halimifolia)</td>
<td>~12’</td>
<td>Sun, partial shade</td>
</tr>
<tr>
<td>Inkberry/Galberry (Ilex glabra)</td>
<td>7’-10’</td>
<td>Sun, partial shade</td>
</tr>
<tr>
<td>Florida Anise (Illicium floridanum)</td>
<td>6’-8’</td>
<td>Sun, partial shade</td>
</tr>
<tr>
<td><strong>Deciduous</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>French Mulberry/Beautyberry (Callicarpa americana)</td>
<td>3’-8’</td>
<td>Sun, Partial shade</td>
</tr>
<tr>
<td>Honeysuckle azaleas (Rhododendron canescens)</td>
<td>8’-16’</td>
<td>Sun, partial shade</td>
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<tr>
<td>Arrowwood (Viburnum dentatum)</td>
<td>6’-15’</td>
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<tr>
<td>Oakleaf Hydrangea (Hydrangea quercifolia)</td>
<td>6’-8’+</td>
<td>Shade, partial shade</td>
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<tr>
<td>Spicebush (Lindera benzoin)</td>
<td>3’-10’</td>
<td>Sun, shade</td>
</tr>
<tr>
<td>Strawberrybush/Wahoo (Euonymus americanus)</td>
<td>4’-8’</td>
<td>Partial shade, shade</td>
</tr>
<tr>
<td>Virginia willow (Itea virginica)</td>
<td>3’-4’</td>
<td>Partial shade, shade</td>
</tr>
<tr>
<td>Winterberry (Ilex verticillata)</td>
<td>6’-10’</td>
<td>Sun, partial shade</td>
</tr>
<tr>
<td>Red Buckeye (Aesculus pavia)</td>
<td>6’-12’</td>
<td>Partial shade</td>
</tr>
</tbody>
</table>
**Repotting Indoor Plants**

September and early October are ideal for repotting tropical container plants that you have summered outdoors. Their abundant growth during summer may mean they are pot-bound now.

Because many plants undergo some shock after repotting, a period of gradual adjustment should be allowed before they are moved indoors for the winter. They should be left where environmental conditions do not place great demands on their systems. Shaded porches, patios and terraces or areas beneath the canopy of shade trees usually are best for getting plants over the trauma that may occur from repotting.

Plants generally do not require frequent repotting. This is especially true if the potting mix drains well and contains a high amount of organic matter. Frequency depends on the plant, condition of the potting mix, container size and the growth rate of the plant. Look for roots growing out of the drainage holes. Or, gently slide the plant out of the pot. A solid mass of packed roots means it’s time to repot.

Don’t cut corners in obtaining the best possible soil mix when repotting. The life of the plant is influenced by the quality of that mix. Most nurseries and garden centers have prepared mixes for container plant culture. Make sure that the mix has a loose, fluffy texture instead of a fine, heavy texture so that it will drain well.

Fertilize repotted plants after three to four weeks. Use a water-soluble plant food and follow manufacturer’s directions. Most plants will not use much fertilizer after they are moved indoors, because the amount of light necessary for growth is considerably less. Plants should be in top shape before being moved inside for the winter.

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**Checklist for September, October, November**

1. Begin preparing beds for fall planting.
2. Take soil samples from landscape beds and submit to your parish LSU AgCenter Extension Service office for analysis. The cost is $7 per sample.
3. Fall is a great time to plant trees. If room is available in your landscape, plant a few native trees. Trees that provide good fall color in Louisiana include baldcypress, Nuttall oak, Shumard oak, cherrybark oak, Bradford pear, Chinese pistachio, ginkgo, Japanese maple, sweet gum, sumac and hickories.
4. Plant spring-flowering bulbs in your gardens from late October through early December. Exceptions are tulips and hyacinths, which must be refrigerated and planted in late December or early January.
5. Garden mums make a great addition for fall color. Check at your local retail garden center for availability.
6. Watch azalea plantings for early fall infestation of lace bugs. Control with Orthene, horticultural oil sprays and other recommended insecticides.
7. Build a compost pile out of leaves, grass clippings and remains from your vegetable garden.
8. Divide Louisiana irises in September.
9. Many of the summer blooming perennials are finished or finishing up their floral display for the year. Cut back the flower stalks and old faded flowers to keep the plants looking attractive.
10. October weather can be dry. Water plantings as needed. Pay special attention to any newly planted areas. It is generally best to water direct-seeded beds of flowers or vegetables lightly every day to make sure the seeds do not dry out.
11. Prune everblooming roses by early September.
12. Fall is an excellent time to plant many herbs in the garden. A few herb plants provide a lot of harvest, so don’t plant more than you can use. Herbs to plant now include parsley, sage, thyme, dill, cilantro, rosemary, oregano, borage, fennel, nasturtium, French tarragon, chives, mint and catnip.

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Dan Gill
Consumer Horticulturist
Pecans

Improving Pecan Quality

One problem that sometimes happens in pecan trees is that the nuts do not fill out properly. Many of the nuts may be light weight with very little kernel inside. This can be a very severe problem on pecan varieties with large nuts such as Mahan and Mohawk.

Several causes can lower pecan quality. Large crop loads, lack of rainfall, inadequate fertility, scab disease, sooty mold, shuckworm damage and scarab mites are some of the more common causes of low-quality pecans. The high cost of eliminating many of these problems makes treating trees unfeasible for a person with a few pecan trees.

Adequate water is a key factor that can improve the quality of a pecan crop. If the soil is dry, the tree cannot obtain nutrients from the soil needed to develop a kernel in the nut. Research has shown that the percent kernel in the pecan can be improved from 46 percent with one-half inch of rain to 58 percent with 2 inches of rain the first two weeks of September.

Providing water is one thing a homeowner can do to help trees produce well-filled pecans without a lot of expense. An inch of water added to the root zone of a pecan tree once a week in early September can substitute for inadequate rainfall. Water should be added once a week. Do not water a little each day. A soaker hose or sprinkler works well. A rain gauge or small container placed on the ground near the pecan tree will indicate when the sprinkler has applied enough water. A general recommendation for a soaker hose on a large tree is to water for four or five hours.

All of the nutrients used to fill the pecan kernel must travel through the vascular tissue of the shuck to the tip of the nut and then into the kernel. Pecan kernels start filling from the tip. Anything that damages the shuck can reduce transportation of nutrients into the pecan kernel which can result in shriveled or poorly filled kernels.

Hickory shuckworm is an insect that can reduce the nut quality of pecans by burrowing in the green shuck surrounding the nut. The burrowing in the shuck damages vascular tissue that carries nutrients that fill the kernel of the nut.

Control of shuckworms by spraying is not economical for the homeowner since a lot of pecans can be bought for what it would cost to spray a large pecan tree. One thing the homeowner can do without a lot of expense is to remove and destroy the old shucks from under the pecan tree after harvest. Shuckworm overwinters in the old shucks as small brown pupae. Removing the overwintering shuckworms can reduce the number of shuckworm moths the following year. Removing the overwintering shuckworms, however, will not eliminate the problem since shuckworm moths can fly from former neighboring trees.

Harvesting and Storing Pecans

Pecans should be harvested as soon as they fall from the tree (pecan quality deteriorates rapidly if nuts remain on the ground for an extended period) and dried to remove excess moisture. An additional reason to harvest pecans as soon as they fall is to reduce excessive loss to squirrels and other critters.

Drying usually can be accomplished by spreading the pecans in a shallow layer in a warm, dry area for approximately two weeks. Adding fans and heat can speed drying. Pecans with high moisture content (higher than 6 percent) do not store well. A method to determine if pecans are dry enough for storage is to shell a representative sample of the pecans and check the kernels. Bend the kernels until they break. If the kernels break with a sharp snap, they are usually dry enough for storage. Additional drying is needed if kernels do not break with a sharp snap. Proper storage can enable individuals to enjoy their pecans until they have another good crop.

Proper storage techniques must be used to maintain good nut quality. Poor storage conditions often leads to darkening of kernels and rancidity of the oils, thus destroying the natural flavor and aroma of the nuts.

Pecans should be stored under refrigeration. Lowering storage temperatures can extend storage life. The average shelf life for pecans at several storage temperatures is shown in the table.

<table>
<thead>
<tr>
<th>Storage</th>
<th>Average Shelf Life</th>
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<tbody>
<tr>
<td>Temp</td>
<td>Unshelled</td>
</tr>
<tr>
<td>70 degrees</td>
<td>6 months</td>
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<tr>
<td>45 degrees</td>
<td>9 months</td>
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<tr>
<td>32 degrees</td>
<td>18 months</td>
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<tr>
<td>20 degrees</td>
<td>30 months</td>
</tr>
<tr>
<td>0 degrees</td>
<td>6-8 years</td>
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</tbody>
</table>

Unshelled pecans can be stored for a longer period than shelled nuts. The unbroken shell protects the kernel from bruising and offers some protection against oxidation and rancidity. The disadvantage of unshelled pecans is that they take up more space than shelled pecans and cannot be used immediately from storage.

If pecans are refrigerated or frozen, they should be placed in airtight containers. Pecan meats readily absorb odors from other foods, resulting in off flavors. If pecans are to be stored at room temperature for an extended period, they should be held in containers that are adequately ventilated. Avoid storing improperly dried pecans in plastic bags.

John Pyzner
Pecan Extension Specialist

Fig Production

The common fig is a member of the genus *Ficus*, which is in the family *Moraceae* (mulberries). *Ficus* is a large genus with some 2,000 tropical and subtropical tree, shrub, and vine species distributed around the warmer parts of the world. The only *Ficus* cultivated for their fruit are the species *F. carica* (the common fig) and *F. sycamorus* (the sycamore fig of Egypt).

The fruit of all *Ficus* species is the syconium, an enlarged, fleshy, hollow peduncle that bears closely massed, tiny flowers on its inner wall. The true fruits are tiny drupelets that develop from these flowers. When we eat a fig, we are eating the container that holds the true fruit.

There are two basic types of figs: caprifigs and edible figs. Caprifigs bear both male and female flowers but are generally unpalatable since they are rather dry and pithy and have chaffy stamen structures. Edible figs bear only female flowers. Many varieties of edible figs fall into the following three fruiting classes:
• Caducous (or Smyrna) figs need pollination to set crops. Without pollination, the fruit drops before it matures. Caprifigs furnish the pollen needed. Examples of caducous figs are Marabout, Calimyrna (or Sari Lop) and Zidi.

• Persistent (or common) figs do not need pollination to set crops and are the type home gardeners most commonly grow. Examples are Black Mission, Brown Turkey, Celeste, Brunswick and Adriatic.

• Intermediate group (or San Pedro) figs do not need pollination to set a breba crop early in the season on old wood, but they do need it for the main crop in some environments. Examples are King, Lampeira and San Pedro.

Growing Figs

Figs are easy to grow in warm climates but produce their best fruit in Mediterranean climates with hot, dry summers and cool, wet winters. Although figs are a subtropical species, mature fig trees are fully cold-hardy to 15 or 20 degrees F. People who want to grow figs outside the normal temperature range must plant them in containers or go to considerable efforts to protect them during the winter.

Grown in the ground, fig plants can quickly reach 15 to 30 feet in height. The canopy can spread equally wide. The root system is typically very shallow without a taproot and can easily spread to three times the diameter of the canopy. Ideally, fig plants should be planted in a well-drained loam with plenty of organic matter, but they will tolerate average to poor soil. Once they are established, they are somewhat drought tolerant, probably due to their very extensive and wide-ranging root system. Figs tolerate soil with a pH ranging from 5.5 to 8.0. Growers who have acidic soils should apply lime to bring the soil pH up to the fig’s preferred pH of 6.0 to 6.5.

Fig plants need at least eight hours of sun and heat, which helps ripen the fruit. Figs respond very well (better than most fruit trees) to heavy applications of manure and compost. Be sure not to apply fertilizers too late in the growing season because doing so encourages new growth that cannot harden off before winter. Apply 2 to 3 cups of a balanced fertilizer such as 6-6-6 or 8-8-8 with micronutrients three times a year to mature in-ground plants. If you grow figs in containers, a complete slow-release fertilizer such as Osmocote plus micronutrients is a good choice. Growers who want to grow figs organically should apply generous amounts of compost and a high-nitrogen fertilizer such as cottonseed, soybean or alfalfa meal.

For the best fruit production, water your figs regularly during the growing season unless rainfall is adequate. However, make sure the soil is not constantly soggy or waterlogged. When fall arrives, stop watering and allow your plants to harden off. A word of caution: heavy rains and excessive or sporadic watering may cause the fruit to split. The amount of splitting varies from variety to variety, but a good rule of thumb is that the riper the figs, the more they will split and sour.

Figs can be successfully grown in containers if growers are diligent about watering and feeding them. Remember that nutrients leach quickly from containers. The easiest approach is to use a hefty pot (at least 15 gallons), and let the figs grow 5 to 10 feet tall. Prune tops and roots annually to control the size. In climates where winter temperatures fall below 15 to 20 degrees, you will need to bring potted plants into an unheated garage or shed.

How to plant. Fig trees from nurseries may be grown in the field and sold bare root, or they may be grown in containers and sold while still in the pot. Before planting a bare-root tree, prune off about one-third of its top unless it was topped by the nursery. Container-grown plants can be transplanted without being pruned; they need only to be removed from the container and set in the planting hole. Set fig trees in the planting hole so they are 3 or 4 inches deeper than they were in the nursery. Fill the hole with soil, and water heavily enough to settle the soil around the roots.

Training and Pruning Figs

Though fig plants can be trained to either tree or bush form, the tree form is not practical for the South. In this region, fig plants frequently are frozen back to the ground, making the tree form difficult to maintain.

Begin training figs to a bush form at the time of planting – cut back the young plant to about one-half its height. This forces shoots to grow from the base of the plant. Let these shoots grow through the first season. Then, during the winter after planting, select three to eight vigorous, widely spaced shoots to serve as leaders. Remove all other shoots, and prune the leaders back to within 1 foot of the ground.

Be sure the leaders you select are far enough apart so they can grow to 3 or 4 inches in diameter without crowding each other. If they are too close together, they cannot grow thick enough to support themselves and their crop, and they tend to blow down or split off under stress or high winds. If this happens, remove the damaged leader and select a new leader the next winter from one of the many suckers that arise annually.

Beginning the second year after planting, head back the bush each spring after the danger of frost has passed but before growth has started. Do this by removing about one-third to one-half the length of the annual growth. Also, prune out all dead wood and remove branches that interfece with growth of the leaders. Cut off low-growing lateral branches and all sucker growth that is not needed for replacement of broken leaders. Do not leave bare, unproductive stubs when you prune. These stubs are entry points for wood-decaying organisms. Make all pruning cuts back to a bud or branch.

David Himelrick
Fruit Specialist
Crop Highlights

**Onions (bulbing)** — Onion seed may be planted for transplants from mid-September until late October. Keep the soil moist to help germination. Because seed coats are hard, it may take two weeks for onion seed to germinate to a stand. Onions can be transplanted in mid-December through January. Sow directly in the row where they are to mature in October to early November.

Several drills may be planted on one row. Leave 6 to 8 inches between drills. Pay special attention to weed control in direct-seeded onions. Control winter weeds before the onset of wet soils and cool weather. Consider planting onion plants in black plastic mulch. The mulch controls weeds, enhances growth and keeps the onion bulbs clean.

**Short-day varieties to plant**
- **Red:** Red Creole C5, Red Burgundy
- **White:** Super Star Hybrid (AAS), Candy (golden), Savannah Sweet
- **Yellow:** Granex 33, Texas Grano 1015Y, Nirvana, Sweet Melody, Grano 502

Fertilize plants sparingly before planting. This will prevent excessive growth, which enhances premature seed stalk development or bolting. From 2 to 3 pounds of 0-20-20, 7-21-21 or 8-24-24 per 100 feet of row are sufficient. Sidedress onions just before bulbing next spring. Several nitrogen sidedressings at 2- to 3-week intervals increase plant size and bulb size. (Follow same schedule for bulbing shallots. Choose Prisma or Matador.)

**Green Shallots** — Shallot sets can be planted any time in fall or winter. Replant several as you harvest by separating plants and retransplanting. They’ll continue to divide and make several more plants. By doing this, you can have shallots through spring. The largest shallot bulbs for sets are made by transplanting in mid-November to December.

**Garlic** — Separate garlic bulbs into individual cloves before planting in October. Several varieties, like Silverskin, are available, but sets may be difficult to find. Tahiti, or elephant garlic, is the largest and mildest. The Italian and Creole varieties are smaller and stronger. Check the Louisiana Department of Agriculture and Forestry Market Bulletin and the Internet (http://www.ldaf.state.la.us/divisions/marketing/marketbulletin/on-line-issues.asp) for possible sources of sets.

Plant cloves about 1 inch deep and 4 to 6 inches apart in the row. Several drills may be planted on one row. Allow 6 to 8 inches between drills. Fertilize before planting with 4 to 5 pounds of 8-24-24 per 100 feet of row. Sidedress with nitrogen after garlic is up and again next February and March just before bulb swell.

**Lettuce & Endive** — September is the best month to plant lettuce. Head and semi-head lettuce should be planted so that it is harvested before a hard frost. Sidedress about 3 to 4 weeks after transplanting and again 2 to 3 weeks later.

Good varieties are Semi-head: Green Forest, Green Towers, Tall Guzmaine, Esmerelda, Buttercrunch (AAS), Oak Leaf, Parris Island Cos; Leaf: Simpson Elite, Red Fire, Red Salad Bowl, Nevada, Sierra, Red Sails (AAS), Sunset (AAS); Head: Great Lakes, Ithaca, Mavrick

Cover lettuce seed only lightly for best germination. For Endive or Escarole, choose Rufflo, Salad King or Full Heart.

**Greens** — Keep the soil moist. Avoid planting greens too thick. A 3- to 4-inch spacing between plants is recommended. For weed control, Treflan can be incorporated before planting. Double drills may be planted on one row, allowing 10 to 12 inches between drills.

**Broccoli and Cauliflower** — Direct-seed or transplant through September. Space cauliflower about 12 to 18 inches apart and broccoli 6 to 12 inches apart. Both shallow-rooted crops respond to fairly high rates of fertilizer, 4 to 6 pounds of 8-8-8 or 3 to 4 pounds of 8-24-24 per 100 feet of row. Sidedress with about a pint of ammonium nitrate per 100 feet of row about 2 to 4 weeks after transplanting. Two to three added sidedressings at 2-week intervals will increase yield.

Broccoli varieties recommended include Green Comet (AAS), Packman, Gypsy, Premium Crop (AAS), Arcadia, Decathlon, Olympus and Everest.

Recommended early cauliflower hybrids are Snow Crown (AAS), Majestic, White Passion, Cumberland, Wentworth, Serrano and Incline. Candid Charm is a
large-head, early hybrid that self wraps. Good open-pollinated varieties include White Rock and Self Blanch (fall only).

**Cabbage** — Recommended varieties for fall and winter production are Platinum Dynasty, Bravo, Stonehead and Rio Verde, Solid Blue 780, Blue Vantage, Cheers, Lynx, Vantage Point Red Dynasty, Blue Dynasty, Blue Thunder and Savoy Ace. A&C #5+ is the hardiest.

**Chinese Cabbage** — Chinese cabbage is an excellent crop for fall gardens. It may be used like lettuce. Seed may be planted in September. Solid heads form 55 to 60 days after seeding.

**English Peas and Snow Peas** — Plant English peas, snow peas and other peas with edible pods in September. The key to success is to plant early enough so they bloom before frost and late enough so they aren’t blooming when temperatures are too high.

Plant peas about 1 to 2 inches apart in the row. From 2 to 4 ounces of seed will plant a 100-foot row. From 70 to 80 days are required from planting until harvest. Staking or trellising peas, even the bush types, will help to increase the chance of success.

**Spinach** — For best growth, spinach requires a fertile, well-drained soil with a pH of 6.0 to 7.0. Apply 4 to 5 pounds of a complete fertilizer per 100 feet of row about two weeks before planting. Sidedress with 1 pound of ammonium nitrate per 100 feet of row about one month after seeding. This will keep it growing quickly, making it tender and improving quality. An additional sidedressing after harvest will improve yields on second cuttings.

Plant seeds about 1/2 inch deep, and thin plants to 1 to 3 inches apart in the row. Since seeds are slow to germinate, be sure to keep soil moist. Double drills may be planted on one row; allow 8 to 12 inches between drills. Suggested varieties are Bloomsdale Long Standing, Melody, Tyee, Hybrid 7, Unipak 151, Greyhound, Ballet, Tiger Cat and Mig.

**Pumpkins and Winter Squash** — Harvest pumpkins and winter squash after they have developed a hard rind and the appropriate color for their variety. If the rind cannot be easily penetrated by the thumbnail, the fruit is mature. Leave about 3 inches of stem attached to the fruit. Stored in a cool, dry place (off the ground and floor if possible), these cucurbits will keep well for several months.

**Sweet Potatoes** — Dig sweet potatoes before a frost occurs. Cure potatoes after digging by storing at 85 degrees to 90 degrees and 85 percent to 90 percent humidity for a week. Cured potatoes will keep longer. After curing, hold potatoes at about 60 degrees in high humidity. Maximum sweetness is 6 to 7 weeks after harvest. Don’t refrigerate. Dust potatoes kept for seed with 5 percent Imidan for weevil control.

**Tomatoes** — November is a good time to look through seed catalogs. All-American selections do well. Local seed growers are encouraged to handle new varieties but rarely do. Order before Christmas. Plant seed by early February.

**Carrots** — Direct-seed carrots from September on. Form high, well-drained rows 20 inches apart. Thin to about 2 inches apart. Choose Danvers 126, Thumbelina and Purple Haze (AAS).

**Beets** — Plant beets fall through winter. Choose from Centurion, Detroit Dark Red, Kestrel, Red Ace, Ruby Queen, Chariot and Solo.

**Collards** — For good collards plant Blue Max, Champion, Flash, HeaviCrop, Top Bunch Top Pick or Vates.