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PUBLICATION OF THE DEPARTMENTS OF SOIL AND CROP SCIENCES $oldsymbol{x}$ HORTICULTURAL SCIF

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JANUARY / FEBRUARY 2000

COLLEGE STATION, TEXAS

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Vanuary/February Plant of the Monthpository

Dallas Public Librar

Nasturtium

Tropaeolum majus

By Dr. William C. Welch, Professor and Landscape Horticulturist

listinctive appearance, rapid growth, and easy culture characterize this once popular annual. Nasturtium flower buds are sometimes pickled or used for seasonings because of their mustard oil. Unripe seed pods have a peppery flavor somewhat like watercress, and may also be used in salads.

Nasturtiums are grown as cool-season temperate plants. In Texas, the seed is usually planted about the time of the average last frost. They are usually planted where they can be allowed to mature, since young seedlings can be difficult to transplant. Seedlings started in small individual pots indoors or in the greenhouse can, however, be set out earlier, and provide a longer bloom season.

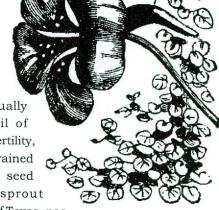
Nasturtiums are natives to the cool highlands of mountains extending from Mexico to central Argentina and Chile. There are both climbing and dwarf bush types. The dwarf types are much more commonly available. and are useful as 10- to 12-inch tall borders or as mass plantings in sun or partial shade. Flowers range in color from creamy white to orange, mahogany, red, and yellow. Double-flowered forms are also available.

Nasturtiums actually do better in soil of moderate-to-low fertility, and prefer well drained conditions. The seed are large and sprout quickly. In most of Texas, nas-

turtiums bloom until really hot weather begins, usually in June. The climbing or trailing kinds can quickly cover fences, banks, or stumps, and are excellent in the winter greenhouse as a source of cut flowers and ornaments. The flowers have an unusual and refreshing fragrance.

Few insects or diseases bother nasturtiums, and they add a touch of old-fashioned charm as borders in vegetable gardens or as potted specimens or mass plantings. They are also a good choice to mix with spring-flowering bulbs, since they can effectively hide the unattractive bulb foliage that may be allowed to mature.

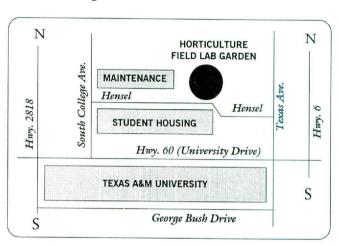
Nasturtiums are at their peak of flowering in Texas during May and June. If you have not grown them before, look for places now where they can be planted early next spring. Few plants offer so much for so little.

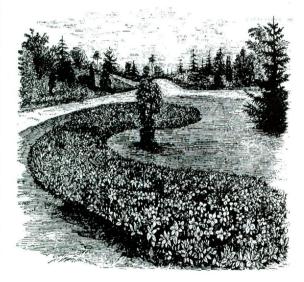


Winter Plants of Interest at the TAMU Horticultural Gardens & Field Laboratory

By Dr. William C. Welch, Professor and Landscape Horticulturist

he TAMU horticultural gardens at College Station (Zone 8-b) has had several light frosts by the middle of December, but many plants are still performing well. The VIP petunias are still covered with bloom, and pinks, pansies, snapdragons, stock, cyclamen, flowering cabbage and kale, and alyssum are coming into their own. Lobelia will continue to add its special blue colors to the garden until the event of a bad freeze. Wood violets are already blooming. Russelia equisetiformis (Fountain Plant) and Hymenoxys (Four Nerve Daisy), planted in a well-drained area in the dry garden, continue to produce showy blooms. Shrubs such as Turk's Cap will flower until hard frost, and the Australian spotted emu bush (Eremophila maculata) and Cassia splendida are well worth a second look.





LANDCAPE DESIGN STUDY COURSE III IN JANUARY, 2000

Part III of the Landscape Design Study Course series will be held January 17-19, 2000 at the Brazos Center in Bryan, Texas, under the supervision of Dr. William C. Welch, Professor and Extension Landscape Horticulturist. This is a series designed to provide familiarity with the principles of landscape design to the public, particularly to Master Gardeners and Garden Club members, nurserymen, civic leaders and municipal planners from all over Texas.

There will be lectures on subjects such as Conservation of Natural Resources, Development of Landscape Architecture 1840s-1940s, Landscape Design Management (Maintenance), Small Parks and Playgrounds, Color in the Landscape, Landscape Architecture Accessories, Standards for Evaluating Landscape Design, and a special interest talk on Attracting Birds to the Landscape by Charles Fryling, author of a recent book on the subject. Three of the participating lecturers are from the Louisiana State University School of Landscape Architecture in Baton Rouge.

Cost of the course will be \$55.00. For further details on the course, including registration forms and information on lodging, call Dr. Welch's office at (409) 845-7342, or contact Jacque Hand at (409) 845-7692 or (409) 845-8904.

A Guide to Solving Plant Problems

By Rondalyn Reeser, Howard County Master Gardener

STEPS TO FOLLOW IN DIAGNOSING PLANT PROBLEMS

- 1. Know what the plant normally looks like
- 2. Notice that there is a problem
- 3. Note specific symptoms
- 4. Look for a possible cause of those symptoms
- 5. Observe the overall pattern of injury
- 6. Decide on an appropriate control

CAUSES OF PLANT INJURY

- 1. *Pests:* Pests appear slowly and are not uniformly distributed on the plant or on the site.
 - Insects
 - Animals
- 2. *Diseases:* Diseases appear slowly and are not uniformly distributed on the plant or on the site. Most plant diseases are very host-specific (only one species of plant will be affected).
 - Fungal
 - Bacterial
 - Viral
- 3. *Environmental/Cultural Problems:* Most problems caused by non-living agents will appear suddenly and affect a wide variety of plants on the site. These disorders can weaken a plant and lead to diseases.
 - Above the soil surface
 - Weather conditions
 - Poor site location
 - Air pollution
 - Herbicide damage
 - Below the soil surface
 - Poor soil (compacted, poorly drained)
 - Over or under watering
 - Over or under fertilizing
 - Poor planting techniques (trees and shrubs)
 - Physical damage to bark or root

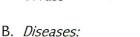
DAMAGE SYMPTOMS

- A. Insect pests:
 - Chewed leaves
 - Defoliation
 - · Discolored leaves or blossoms

- Dieback of shoots, twigs, or branches
- Wilting
- · Discolored speckles on the leaves
- Curled leaves
- Stunted new growth

Products of insects:

- Honeydew
- Fecal spots
- Silk
- Wax
- Spittle
- Pitch tubes
- Frass



- Chlorosis
- Dead or brownish areas on leaves
- Water-soaked or greasy appearance
- Premature defoliation
- Wilting
- · Abnormal plant growth
- Rotten spots on leaves or fruit

C. Environmental/cultural problems:

- Dieback; leaf scorch, sunscald
- Thickened, distorted growth
- Plant dies suddenly
- D. Nutrient deficiency symptoms:
 - Symptoms appear first on older or lower leaves
 - Nitrogen deficiency lower leaves yellow, overall plant light green, growth stunted, small leaves
 - Potassium tips and edges of leaves yellow, then brown, stems weak
 - Magnesium interveinal chlorosis, growth stunted

Micro-nutrient deficiency symptoms appear first on younger or upper leaves:

- Calcium buds and young leaves die back at tip
- Iron and manganese interveinal chlorosis, growth stunted — occurs in 'acid-loving' plants on high pH soils



Integrated Pest Management for the Turfgrass Manager

By Dr. Gene R. Taylor, Assistant Professor and Extension Turfgrass Specialist

based pest management system that uses all available methods to keep pests at non-damaging levels while minimizing the effects on man, the environment, and turf. A sound IPM program is based on the acceptance and tolerance of pests at damage levels which do not significantly reduce the quality of the turf. Once pest damage reaches a specific predefined level of infestation or damage, specific control measures may be taken, using pesticides only when control of the pests cannot be obtained with other non-chemical methods. It is this reduced reliance on pesticides which is an important factor in managing golf courses, parks, athletic fields, and land-scapes for water quality. A sound IPM program will include:

- A written copy of the program defining all aspects of pest management
- Within the written document, a set of acceptable pest-tolerance thresholds (weeds allowed in the rough, or number of white grubs per square foot of turf, etc.)
- Non-chemical control measures to be taken for specific pest infestations
- Cultural practices which may help reduce the impact of some pests (aerification to reduce compaction thus reducing goosegrass populations, planting of insect and disease resistant varieties of turfgrasses, sterilization of topdressing soils to keep weed seeds off of greens and tees, and other sanitary practices)
- Scout for pests frequently
- Keep accurate records of pest infestation found, actions taken, and results

The written copy of the IPM program is very important in that it requires the turfgrass manager to determine and write out all of the factors in his/her program. The grounds manager should use the writing of the program to gather information from the greens committee, manager, and coaches as to what they expect from him/her in terms of proper pest management. The greens committee and club manager may help in determining pest threshold levels that are acceptable on the site. Once in

written form, the plan will be a source of information and an educational tool for the grounds manager and staff about the proper management of pests in the landscape.

Thresholds are pre-set levels of acceptable pest damage or infestation which will determine when control measures must be taken. Thresholds will change from site to site; for example a few broadleaf weeds may be acceptable in a fairway or the rough but not on a green. Thresholds will also change from pest to pest; for example, a small outbreak of dollar spot on a green may be allowed without much concern or any control measures being taken, but an outbreak of pythium blight on a green would require instant applications of control measures.

Non-chemical control methods may include the use of mechanical or attractant traps for insects, the release of beneficial predatory insects or nematodes, and the use of biological insecticides such as Bacillus popilliae for control of white grubs. The planting of turfgrasses which are resistant to some pests is an important way to reduce the need for pesticides. There are several cultivars of tall fescue and perennial ryegrass on the market which are infected with an endophyte fungi, which makes them resistant to some surface-feeding insects. Unfortunately, there are a limited number of biological control methods available for turfgrass, and the ones available may be slow in control, and the golf course may be forced to accept some pest damage even with their use.

The cultural practices a grounds manager uses can significantly impact pest infestation. The simplest way to keep pest damage and infestation to a minimum is to keep the turf as healthy and stress-free as possible by effective use of basic cultural practices. The grounds manager must have a thorough knowledge of all of the turfgrasses on the site to effectively manage the turf. Mowing of the turf at a height which is too low may cause the grass to be under stress, which in turn makes the

(Continued on Page 5)

Integrated Pest Management . . . (Continued from Page 4)

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turf more susceptible to insect and disease infestation. A dense turf is one of the best controls for reducing weed infestation because it simply out-competes the weed. Aerification of compacted soils will help reduce populations of certain weeds, like goosegrass and spurge, and increase the rooting capability of the turf. The use of fans on greens which have poor natural air flow may reduce the stress on bentgrass turf by increasing transpirational cooling and drying out of wet soils; this will then reduce thinning of the turf, and reduce the chance of disease infestation.

There should be a written scouting plan for insects in the IPM program. Since most grounds managers are out on their site several times a day, they are able to look for problems constantly. But there are some problems the grounds manager may be able to predict, such as germination of crabgrass when soil temperatures reach 60 degrees F, or brown patch infections when daily temperatures and relative humidity are high. These predictable occurrences should be included in the IPM program so that other members of the staff will know when to look for them. The grounds manager should take the time to train his staff to look for potential pest problems.

Once a pest infestation is observed, the grounds manager should first record the pest type, infestation level, and location, and then determine if it is at a threshold level that requires control measures. If so, record the control measures taken and the results. It is important that the grounds manager keep these records, because they may help in predicting future pest problems and the best control measures to take. Mapping of pest populations may help the grounds manager determine problem areas, and reduce the need for blanket pesticide applications. If the grounds manager knows from previous years that crabgrass and goosegrass were problems on only certain areas of the playing field, he/she may elect to apply preemergent herbicides only to those areas. This will reduce the amount of pesticide required, the cost of application, and the chance of water contamination from the pesticide. Frequent outbreaks of pests on a given area may also indicate to the grounds manager that there are other possible problems with the turf and its environment, such as low soil pH, nutrient deficiencies, soil compaction, poor drainage, restricted airflow, or damaged or improperly-working irrigation heads.

PRESERVING & CRAFTING WITH GOURDS

By Dr. William C. Welch, Landscape Horticulturist

January is a good time to get down and check out the condition of those gourds you have put away to dry in the garage or back porch. As frost cuts back the foliage of the vines, the fruit can be allowed to hang in place to absorb the last possible nourishment from the parent plant. Cut gourds before the first really hard frost arrives and dry, preferably hanging, until light-weight and cured in appearance. By allowing air circulation all over the surface of the gourd you can cut chances of bad spots appearing due to rot. A little mold may appear on the surface but will not be a problem. If the gourds are to be left natural the mold patterns will add interest, or they can be scrubbed off with warm water. To provide a natural look, polish them with a cloth, or go over them with hard floor or shoe wax or polyurethane.

Elongated luffa gourds can be peeled after they have dried and the tangled skeins of dried fibers inside trimmed into neat shapes. They will make good 'scrubbers' to give as gifts with scented soaps for the bath, or kept for scouring purposes. The dipper, bottle gourds, bushel baskets and club types have relatively thin skins and will be the easiest to dry. The smaller fruits of the yellow-flowered *Cucurbita pepo*, typical of those found in the grocery stores in the fall and which come in many warted, striped or mottled forms, have thicker flesh and will take more attention during drying.

After gourds are cured, they may be trimmed or painted into such fanciful creations as Santa Claus, angels, penguins, various birds, spoons, plates, bowls, bird houses, butterfly hibernation habitats, lamps, carved 'pumpkins' or jack o'lanterns, baskets of all sorts, Indian rattles or other vessels. You can do to gourds many of the decorative things that can be done with wood: sawing, whittling, design burning or painting. For further information on techniques, check with your local library, or contact Mrs. Betty Kent of the Texas Gourd Society (409) 357-2603, a chapter of the American Gourd Society.

Texas Pecan Shortcourse Now Includes USDA Pecan Station and Bush Presidential Library Tours

By George Ray McEachern, Professor and Extension Horticulturist November 23, 1999

The 2000 Texas Pecan Orchard Management Shortcourse will be conducted in the Rudder Conference Tower on the campus of Texas A&M University at College Station, Texas the week of January 24 through 28, 2000.

The registration fee is \$150 for growers, \$50 for spouses, \$50 for county agents and parking requires \$30. Each participant will receive the 1997 Texas Pecan Handbook as the text for the course. Each participant will also build a Pecan Variety Board which has 48 leading pecan varieties. Rooms are available at the TAMU Student Center at phone 409 845 8909. There are many hotels and motels off campus. American flies to College Station via Dallas and Continental via Houston. Registration begins at 8:00 am on the second floor of the Rudder Conference Tower with parking next door. Class begins at 9:00 a.m.

To preregister, contact Ms. Jacque Hand at Conferences and Shortcourses, Rudder Conference Tower, Texas A&M University, College Station, Texas 77843 and phone 409 845 8904 or FAX 409 845 2519.

This Shortcourse was started by Benton Storey in the mid 1960's as a teaching aid for county Extension agents. The class was typically less than 15 agents. In the 1970's growers began to attend and the class size started to grow. A handbook was started in 1973 and it was updated each year. By the 1980's the class was about 50 each year, which it continues to have to this date. Over the years many instructors have taught at the Shortcourse and most of them continue today.

All aspects of orchard management are covered and include: soil and site selection, irrigation, planting and establishment, varieties, rootstocks, insect and disease



management, fertilization, week control processing, costs and returns, taxes and marketing. Management systems will be presented for west, central, east and native pecans. Some topics are one hour while others are all day. Questions and answers are taken during and after every lecture.

This is a comprehensive Shortcourse and pecan growers world wide are welcome. In addition to Texas, growers from Georgia, Arizona, Mexico, Australia, Israel, Brazil, Argentina, and other places have participated.

In addition to class room lectures, on Tuesday afternoon, each student will make a pecan variety board. Also on Tuesday, Cindy /Wise of the Texas Pecan Growers Association will make a presentation of the services her organization has available to growers and she will have pecan literature for growers to purchase. On Wednesday afternoon, the class will visit the new George Bush Presidential Library on campus. On Thursday afternoon, the class will bus to the USDA Pecan Station to learn and see all about the USDA cultivars, rootstocks and germ plasm repository. This will be followed by a Texas steak dinner. On Friday at noon the course is completed and diplomas are given to each student.

2000 TEXAS PECAN ORCHARD MANAGEMENT SHORT COURSE

Tentative Schedule

MONDAY, JANUARY 24, 2000

- 8:00 a.m. Registration, Second Floor, Rudder Conference Tower
- 9:00 a.m. Welcome, Sam Cotner
- 9:15 a.m. Keys to Pecan Profitability, George Ray McEachern
- 9:45 a.m. World Wide Pecan Distribution, J. Benton Story
- 10:45 a.m. History of Pecan Production, Bluefford G. Hancock
- 1:30 p.m. Site Evaluation, L. J. Grauke
- 2:15 p.m. Pecan Tree Growth and Development, Mary Rumpho
- 2:45 p.m. Pecan Tree Root Growth and Absorption, Malcolm Drew
- 3:15 p.m. Orchard Design, Spacing, Thinning and Expansion, George Ray McEachern

TUESDAY, JANUARY 25, 2000

- 8:00 a.m. Planting and Establishing Pecan Orchards, George Ray McEachern
- 9.30 a.m. Pecan Irrigation Management, Larry Stein
- 10:30 a.m. Native Grove Management, Larry Stein
- 1:00 p.m. Regional Pecan Variety Recommendations, George Ray McEachern
- 2:00 p.m. Pecan Variety Board Workshop, George Ray McEachern
- 4:00 p.m. Texas Pecan Growers Association, Cindy Wise

WEDNESDAY, JANUARY 26, 2000

- 8:00 a.m. Pecan Fertilization, Zincs Sprays, and Nutrition Analysis, J. Benton Storey
- 9:00 a.m. Cattle Production in Native Pecan Groves, Billy Kniffen
- 9:30 a.m. Native Pecan Timber Contracts, Judd Michael
- 10:00 a.m. Saw Mills for Native Pecan Timber, Ken Rogers
- 11:00 a.m. Pecan Nursery Production, J. W. Worthington
- 1:00 p.m. East Texas Pecan Management, Glenn Huddleston
- 2:00 p.m. Central Texas Pecan Management, George Ray McEachern
- 3:00 p.m. West Texas Pecan Management, John Begnaud
- 4:00 p.m. BUSH presidential Library Tour

THURSDAY, JANUARY 27, 2000

- 8:00 a.m. Pecan Weed Control, George Ray McEachern
- 9:00 a.m. Pecan Disease Control, Clip Lee
- 10:00 a.m. Pecan Integrated Pest Management, Marvin Harris
- 1:00 p.m. Pecan Insect Strategies for 2000, Bill Ree
- 2:30 p.m. USDA Pecan Station Tour
- 6:00 p.m. Steak Dinner

FRIDAY, JANUARY 28, 2000

- 8:00 a.m. Tax Consideration for Pecan Growers, Wayne Hayenga
- 9:00 a.m. Pecan Price Trends, Carl Shafer
- 10:00 a.m. Pecan Economics, Joe Pena
- 11:00 a.m. Graduation, Sam Cotner

Registration Fee: \$150.00 at (409-845-8904)



Rose Culture

By Dr. William C. Welch, Professor and Landscape Horticulturist

PLANTING. If planting only a few roses, dig individual holes for them. Holes should be at least 12 inches deep and 18 inches wide. Mix about one-third organic material (peat, pine bark, or compost) with some of the soil from the hole, along with a gallon or two of well-rotted cow manure, if available. A half-cup of bone meal or superphosphate, thoroughly mixed with the soil, is a good addition. A similar amount of agricultural gypsum is beneficial for heavy clay soils. Soil preparation can be done just prior to planting, but is more effective if completed several weeks or months before planting.

Spacing of the plants will vary with varieties. Most Polyanthas can be planted as close as 18 to 24 inches, while Chinas, Bourbons, Teas, Hybrid Perpetuals, Hybrid Teas, and Hybrid Musks are best at a 3- to 5-foot spacing, depending on the variety. Climbers and ramblers need more space to develop their potential. Eight to 10 feet is appropriate for most, but under good growing conditions, Banksias, Cherokee, and certain others could be spaced at 15-foot intervals.

Bare-root plants should be set out as soon after receiving them as weather and time allow. If a delay of more than a few days is necessary, remove the plants from the shipping bag and 'heel them in' by covering the roots and part of the tops with loose soil. Container-grown plants may be set out at any time, but most rose growers avoid the hot summer months, when extra irrigation and care may be necessary to insure success. Prune tops back an inch or two to just above a live and healthy bud on each cane. Cut back canes or roots damaged in shipping or handling to healthy tissue. Dig the hole large enough to accommodate the natural spread of the roots, and fill with the soil mixture described earlier. Firm the soil well around the roots, and water thoroughly to remove air pockets and settle the soil firmly around the root system. Set plants at approximately the same level at which they had been growing, or slightly deeper.

FERTILITY. Roses are heavy users of nutrients and require frequent application of fertilizers. To determine fertility of existing soil, contact your county Extension agent for instructions on submitting a soil sample.

Do not apply fertilizers until the first set of flowers begins to fade for everblooming types, or in the case of

once-blooming roses, 8 to 10 weeks after planting. A heaping tablespoon per plant of a complete fertilizer, such as 6-10-4 or 8-8-8, may be applied every 4 to 6 weeks until about September 1. Application after that time can promote soft fall growth that may result in freeze damage. The time-honored fertilizer for roses is well-rotted cow manure. Since manure may not be available, commercial fertilizers have become popular. Phosphorus is the material that helps plants develop strong, healthy roots and prolific flowering. Superphosphate is usually available, and can be applied at the rate of 3 to 4 pounds per 100 square feet. Since phosphorus is not very mobile in the soil, it should be well mixed during preparation.

Nitrogen is easily and quickly depleted from the soil, and needs to be applied periodically during the growing season. It is necessary for more and bigger canes, stems, and leaves. Slow-release commercial fertilizer or natural materials, such as cottonseed meal, last longer and require fewer applications through the growing season.

Potassium is needed for promotion of new growth, disease resistance, and cold tolerance. All 3 nutrients (nitrogen, phosphorus, and potassium) are included in balanced fertilizers. Many rose growers apply a balanced fertilizer every 4 to 6 weeks during the growing season.

National Pesticide Telecommunications Network

The National Pesticide Telecommunications Network (NPTN), sponsored cooperatively by Oregon State University and the U.S. Environmental Protection Agency (EPA), provides information about a pesticide-related subjects to the public. Telephone 1-800-858-7378 seven days a week from 6:30 am-4:30 pm, PST, excluding holidays. E-mail<nptn@ace.orst.edu>. Web site http://ace.orst.edu/info/nptn/. Also at NPTN is the National Antimicrobial Information Network (NAIN) which provides information about antimicrobial products – sanitizers, disinfectants, and sterilants. Telephone 1-800-447-6349 7:30 am-4:30 pm, PST, Monday-Friday, excluding holidays. FAX: 1-541-737-0761. E-mail: <nain@ace.orst.edu>. Web site: <http:/ /ace.orst.edu.info/nain/>. Mailing address: NAIN, Oregon State University, 333 Weniger Hall, Corvallis, OR

January/February Garden Checklist

By Dr. William C. Welch, Professor and Landscape Horticulturist

- ✓ Now is an excellent time to transplant mature or established trees and shrubs while they are dormant.
- ✓ Make flower and vegetable garden plans now before the rush of spring planting. Time spent in armchair gardening before the fireplace will pay off in improved plant selection. Besides, it is fun to page through the garden catalogs.
- ✓ Sow seeds in flats or containers to get a jump on plant growth before hot weather arrives. Petunias, begonias, and impatiens should be sown in early January. Warm temperature plants, such as tomatoes, peppers, marigolds, and periwinkles, should be sown in late January or early February.
- ✓ Apply a light application of fertilizer to established pansy plantings. Use one-half pound of ammonium sulfate per 100 square feet of bed area. Repeat the application every 4 to 6 weeks, depending on rainfall. Dried blood meal is also an excellent source of fertilizer for pansies.
- ✓ Prepare beds and garden area for spring planting.
- ✓ Select and order gladiolus corms for February/March planting. Plant at two-week intervals to prolong flowering period.
- ✓ Check junipers and other narrow-leaf evergreens for bagworm pouches. The insect eggs overwinter in the pouch, and start the cycle again by emerging in the spring to begin feeding on the foliage. Hand removal and burning of the pouches are ways of reducing the potential damage next spring.
- ✓ The life of the plant received as a Christmas gift can be prolonged with proper care. Keep the soil moist, but provide drainage so that excess moisture can flow from the pot. Keep the plant out of range of heating ducts and away from heating units. Keep in a cool room at night, preferably at 60 to 65 degrees F.
- ✓ Don't fertilize newly set out trees or shrubs until after they have started to grow, and then only very lightly the first year.
- ✓ When buying plants, the biggest is not always the best, especially when dealing with bare-root plants. The medium to small sizes (4 to 6 feet) are usually faster to become established and more effective in the landscape than the large sizes.
- \checkmark Prune bush roses during February or early March. Use good shears that will make clean cuts. Remove dead, dying, and weak canes. Leave 4 to 8 healthy canes, and remove approximately one-half of the top growth and height of the plant.
- ✓ Now is an excellent time to select and plant container-grown roses to fill in those bare spots in your rose garden.
- ✓ When pruning shrubs, first prune out any dead or damaged branches; then thin out by removing about one-third of the canes or stems at ground level, removing the oldest canes only; and last, shape the rest of the plant, but do not cut everything back to the same height.
- ✓ Plant dahlia tubers in late February and early March.
- ✓ In Central and South Texas, the following flower seeds may be sown directly without protection in well prepared flower beds in February or March: nasturtiums, annual phlox, California poppies, coneflowers, and larkspur. Petunia plants may be set out in sunny, well drained locations, with little chance of cold damage except in far North Texas.
- ✓ Water foliage plants as well as other containerized plants only when needed and not by the calendar.
- ✓ Climbing roses should be trained but not pruned. Weave long canes through openings in trellises or arbors and tie them with jute twine or plastic/wire plant ties. Securing canes now prevents damage from winter winds, and contributes toward a more refined look to the garden when roses are blooming. Wait until after the spring flowering period to prune climbing or once-blooming shrub roses.

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JANUARY/ FEBRUARY 2000

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Lawn and Garden Update is a publication of the Departments of Soil and Crop Sciences & Horticultural Sciences, Texas Agricultural Extension Service, The Texas A&M University System, College Station, TX. Contributing Editors: Drs. Gene R. Taylor, William C. Welch, and Douglas F. Welsh

William C. Welch, Editor January/February 2000

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