

Tis the Season...

o go back to school, get back to the daily "grind", put away the vacation pictures...and get the yard ready for next year! Most people are tired of dealing with the lawn by this time of the year, but fall is the ideal time to plant a new lawn or overseed one that has suffered through an unfavorable summer in the cool-season regions of the country.

Lawns started or improved four to six weeks before the first frost will be ready for sturdy, healthy growth next spring and summer. With shorter days and cooler nights, the soil down into the root zone is cooling off and is becoming ideal for germination and establishment of lawnseed.

Overseeding your lawn this fall with a mixture or blend of quality, named varieties of lawnseed suitable for your location and environmental conditions will also better ensure that crabgrass and other weeds won't gain a major foothold in your lawn next spring and summer.

The old saying that "two things can't occupy the same space" has special significance for lawns. Which will it be, healthy, dense grass, or

weeds? New grass added to a crabgrass weakened lawn this fall will provide the competitive strength needed next spring to prevent a crabgrass and weed takeover.

Remember that weed seeds, like crabgrass, will lie dormant in the soil until lilac blossom time next spring. However, few will germinate if the healthy stand of grass is already there!

Remove the Weeds and Thatch

On the last mowing before the overseeding process, set the mower level at 1/2 the normal cutting height of grass species you have in the lawn. It is **not** necessary to "scalp" the lawn. After the closer mowing, you can use a power rake, verti-cut-

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Fall is the ideal time to plant a new lawn or overseed one that has suffered through an unfavorable summer

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ter or a core aerifier with spoons or hollow tines.

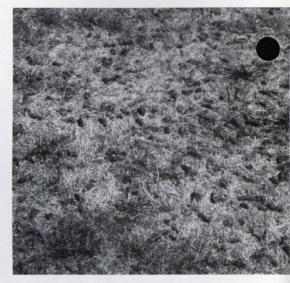
With the majority of lawns suffering from compaction, we recommend you use a core aerifier this fall. They are generally available at rental shops.

Note: If the lawn is dry, water to soften; but not muddy. These type of tines actually remove a portion of the soil, opening it up for better penetration of nutrients, water, oxygen to the plant roots; the key area for a healthy

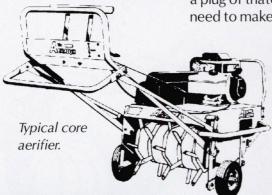
grass plant.

The core aerification process also gives you the holes for the fertilizer and the planted grass seed. The passageway they make into the lawn will stay open several weeks, much longer than spiking or slicing. Also, the plug will break up slowly working into the thatch layer helping to keep it under control.

Golf courses often use coring as a tool to help manage thatch layers. In our opinion, the tube type tines that cut a full circle and leaves a round or oval hole with a plug on the surface are the best kind, because they cut out a plug of thatch with the soil. You will need to make several passes in differ-



After aerification the plugs lay on top of the lawn, ready to renew the soil.



LAWN & LANDSCAPE

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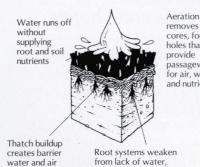
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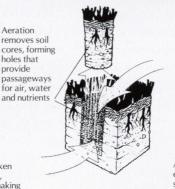
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from lack of water. nutrients and air, making cannot penetrate them vulnerable to disease and stress



Combination of air and water quickly breaks up thatch betweer holes

Air and water now easily reach root systems, greatly enlarging and strengthening them Larger, stron roots make g thicker, much more stress resistant

ent directions across the lawn.

A rule of thumb for good aerification coverage is at least 10 holes per sq. ft.

Money Saver note: Talk to your neighbors and arrange to rent and use the equipment on the same weekend and then divide the cost for the day or weekend. You can also share this issue of the Lawn & Landscape Digest or suggest that each of your neighbors subscribe!

Apply Fertilizer and Other Nutrients

A soil test is really the best way to determine what nutrients your soil needs and the proper amounts. The test can also show if the soil pH (acidity/alkalinity) needs adjusting.

Many local county extension offices offer testing and information, but allow time for processing and results. There are also private testing firms, and many of the better lawn & garden centers, nurseries, and hardware stores carry basic soil testing kits. In the absence of soil test, use a slowrelease fertilizer with a N-P-K analysis ration of 3-1-2.

Follow the manufacturer's recommended rate. Also, most lawns grown on soils that tend to be acid benefit from 50 lbs. of ground limestone per 1,000 sq. ft. every two to three years.

Again, the soil test is the best way to determine the degree of acidity in your soil. Lawns are most healthy and vigorous when the soil pH is between 6.0 and 7.0. Use a drop spreader, properly calibrated, to apply the fertilizer and other nutrients to the lawn.

Apply a Mixture or Blend of Premium Quality Lawnseed

We can't overemphasize the importance of renovating or overseeding with named, improved varieties of lawngrasses. These new, improved varieties are definitely superior to the common varieties in disease and insect resistance, heat and drought tolerance, density, color, and heartiness. (Refer to the Premier Issue, How to Make Sure You're Buying Quality Seed, p.6, and Spring Issue, Tech Corner, p.3) for a review before purchasing seed.

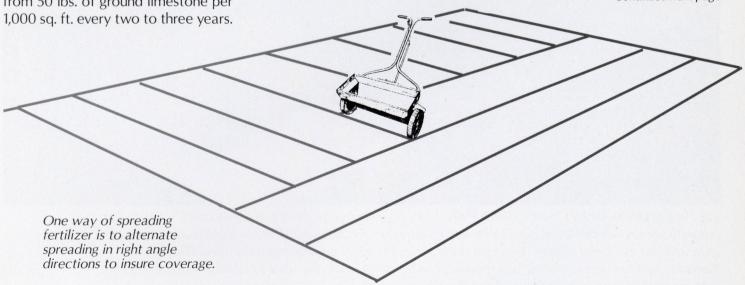
Remember that the lawn area is the "glue" that holds the landscape together and quality seed is the least expensive item you purchase when considering the number of grass plants

Remember that the lawn area is the "glue" that holds the landscape together and quality seed is the least expensive item you purchase when considering the number of grass plants you get for the dollars spent.

you get for the dollars spent. Said another way, the largest area of your landscape is not the place to "skimp". Besides, using these named, improved varieties will more than likely cost less to maintain when you follow proper mowing, watering and fertilizing practices.

However, even the best quality lawnseeds won't grow to their potential if the general environment is marginal for optimal growth. Again, ask yourself these environmental questions before you make your purchase

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of quality seed. Does the majority of the lawn receive considerable sun? Is there a substantial amount of shade? Will there be a considerable amount of traffic and play on the lawn? Will it be watered regularly, or rely basically on rainfall? Answers to these questions will help you and the retailer make a better decision as to which quality seed mixture or blend to buy that meets your environmental situation. To review:

Generally sunny with irrigation - In the northern portions of cool, humid, semi-arid, and inter-mountain areas, choose a blend (2 or more) named Kentucky bluegrasses or a mixture of Kentucky bluegrass and some fine fescue. In the southern portion of the cool humid and semi-arid regions, se-

Blades of Grass
by BC Roberts

"Another mouth to feed!"

lect a named Kentucky bluegrass blend with the addition of named perennial ryegrass.

Considerable Amount of Shade -In the northern portions, semi-arid, and inter-mountain areas, select a named Kentucky bluegrass blend, combined with a higher percentage of fine fescues.

In the southern portion of the area, select a mixture of named Kentucky bluegrass, named perennial ryegrass, and named fine fescues. Another good option is to use a blend of named turf-type tall fescues.

High Traffic and Play - In the northern and southern areas, select a mixture of named Kentucky bluegrasses, with a relatively high percentage of named perennial ryegrass. In the southern area, you can also select a blend of named turf-type tall fescues.

In overseeding a lawn with less than 50% weeds, you can generally sow at 1/2 the recommended rate per 1,000 sq. ft. However, still seed 1/2 in two directions at right angles to one another with the drop spreader or cyclone-type seeder to better ensure good coverage.



KEEP THE LAWN WATERED THROUGH GERMINATION - Like the establishment of a new lawn, renovated or overseeded lawns need to be kept moist, but not soaked, until the new seeds begin to grow and develop a root system. Too much water promotes poor germination and seedling disease. Generally, in 4 to 6 weeks, treat it as a reestablished lawn. You may also want to consider using a light covering of straw over the lawn during this time period to help hold the moisture.

Establishing a New Lawn

Putting in a new lawn does require more work and energy than renovating and overseeding an existing lawn. It requires proper grading, raking rocks and debris brought to the surface, possibly adding good top soil, soil testing to determine nutrient needs and pH levels, controlling weeds in the soil with a post-emergent herbicide, plus the steps discussed in overseeding.

Unless you're determined to "tackle" the task yourself, we recommend that you contract the new lawn with a licensed lawn care or land-scape professional. However, we also recommend that you make the decision on the quality lawnseed mixture or blend to be planted. If the contractor has recommendations, ask to see the seed label and determine if it's the quality you desire, and meets your environmental needs, i.e. sun, shade, traffic, etc.

We also recommend that you consider sodding the lawn rather than seeding. Installation costs are higher, but after watering in for the first 1 to 2 weeks to get the roots firmly established in the new soil...your new lawn is ready to go! Installation costs are offset by added values of timing, uniformity, visual appeal, reduced maintenance, chemical and water costs. Like seed, you want to get the highest quality of sod you can obtain.

There should be names of several sod farms for your area listed in the Yellow Pages. Call and discuss your needs and what they recommend of the highest quality. If you're unable to find listings in your phone book, call the Turfgrass Producers International (630) 705-9898, the trade organization for professional sod producers, who will recommend member companies in your area.

Sod can be installed almost anytime during the year, except when the ground is frozen.

Winter Overseeding with Quality Perennial Ryegrass

In the South, a growing number of home owners are using improved, named perennial ryegrass to overseed bemudagrass, which keeps the lawn green through the winter. The best time to overseed with perennial ryegrass is 6 to 8 weeks before the average date of the first heavy frost and before the bermudagrass goes completely dormant. The lowest seeding rate just to give the lawn a little green throughout the winter is 3 lbs. per 1,000 sq. ft. However, the Lawn & Landscape Digest recommends using 8 to 10 lbs. per 1,000 sq. ft. to keep a fairly thick lawn during the winter months.

Overseeding the bermudagrass does not require any special equipment other than a seed or fertilizer spreader. However, if the lawn has a thatch buildup, or the soil is compacted, use a dethatcher and core aerator before planting, racking off the debris. Mow the lawn at the normal height before seeding, but do not "scalp" the lawn. Overseed the lawn by putting half down in one direction and the other half of the seed at a right angle to the first pass for more complete coverage. After seeding, keep the lawn moist for the first few weeks, but not soaked, until the perennial ryegrass has germinated and has established roots.

The biggest potential down side to overseeding bermudagrass with perennial ryegrass is that some ryegrass plants may linger as the weather turns warmer into the summer when the bermudagrass is once again dominant. The ryegrass then becomes weeds in the lawn. Low mowing and less water will further encourage the bermudagrass over the ryegrass, or use a post-emergent herbicide to control the ryegrass.

Guideline - Sod is best planted within 24 hours after it has been cut at the sod farm. So, order only after all other preparations have been made. We recommend that you have the sod laid by professionals.

National Turfgrass Evaluation Program (NTEP)

Most home owners have little or no idea of the efforts by private seed companies and some universities to breed and bring to market seed varieties that are more heat and drought tolerant, insect and disease resistant, require less maintenance, and have better color and density than the common varieties which were about the only kind you could buy 25 years ago.

The goal of this breeding and research (which can take up to 15 years to produce a distinctive new variety) is to bring more environmentally sound turfgrasses to the professional and homeowner market. This is the principle reason why The Lawn Institute and the Lawn & Landscape Digest continually recommends the purchase of these improved, named varieties. Environmentally and aesthetically, they are definitely superior to the common varieties of lawnseed.

The National Turfgrass Evaluation Program has been in existence for a number of years through the U.S. Department of Agriculture (USDA). NTEP

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sponsors field tests of different varieties at numerous locations throughout the U.S.

Over the course of three or more years, the different entries are evaluated on a number of different characteristics, including density, color, green-up, drought, heat and cold tolerance, insect and disease resistance, shade tolerance, fertilization, and ad-

ditional characteristics generally claimed by the grass species.

The Table below is a listing of several of the named, improved varieties of different species which had above average over-all rankings in recent NTEP turf trials. Those varieties listed in **boldface** are registered varieties of Proprietary Members of The Lawn Institute.

Note: Several of the named varieties listed are primarily found in the professional market, but many can also be found in premium quality mix-

tures and blends at better retail lawn & garden centers, nurseries, or with lawn and landscape professionals.

It is also important to know that not all varieties will be available in all parts of the country, as some are more suitable to certain regions of the country. Remember, the key is to buy quality seed with the named varieties on the label; not common named species, i.e. Kentucky bluegrass, K-31 fescue, perennial ryegrass, fine, hard fescue, etc., and no more than 10% annual ryegrass or annual bluegrass! •

IMPROVED TURFGRASS VARIETIES

KENTUCKY BLUEGRASS

(medium/high maintenance)

SR 2000, Midnight, Blacksburg, Eclipse, Preakness, Princeton 104, Aspen, Fairfax, Ascot, Glade, Allure, Julia, Shamrock, Apex, Eagleton, Able I, Indigo, Unique, Livingston, Trenton, Suffolk, Ram I, Dawn, Opti-Green, Coventry, Washington, Barblue, Nustar, Destiny, Classic, Freedom, Caliber, Alpine, Challenger, Cobalt, Abbey, Monopoly, Belmont, Estate, Georgetown, Haga, Connie, Banff, Baronie, Cannon, Pennpro, Raven, Limosine, Miranda, Barcelona, 4 Aces, Nublue, Buckingham, Kelly, Minstrel, Ampellia, Touchdown, Viva, Liberty, Silvia, Nassau, Cynthia, Gnome, Marquis, Bartitia, Opal, Merit, Barsweet, SR 2100, Nottingham, Barzan, Crest, Baron, Fortuna, Chelsea, Miracle, Ronde, Donna, Noblesse, Barmax, Blue Star, Kenblue.

KENTUCKY BLUEGRASS

(low maintenance)

Ram I, Belmont, Livingston, SR 2000, Bronco, Unique, Dellwood, Washington, Midnight, Freedom, Baron, Merit, Voyager, Haga, Crest, Cobalt, Baronie, Gnome, Nustar, Monopoly, Miracle, Cynthia, Amazon, Sophia, Liberty, Nublue, Suffolk, Bartitia, Destiny, Barzan, Park, Caliber, Banjo, Opal, Chelsea, Alene, Barcelona, Barsweet, Barmax.

PERENNIAL RYEGRASS

Pennant II, Imagine, Calypso, Majesty, Line Drive, Accent, Laredo, Top Hat, Prizm, Divine, Manhattan 3, Excel, Blazer III, Omega 3, Brightstar, SR 4200, Wizard, Cutter, Elf, Riviera II, Wind Star, Omni, Saturn II, Advantage, SR 4400, Citation III, Achiever, Vivid, Roadrunner, Assure, Edge, SR 4010, Precision, Quickstart, Legacy, Night Hawk,

Morningstar, Navajo, Saturn, Nobility, Express, Stallion Select, Dancer, Williamsburg, Pegasus, Nine-O-One, Pennfine, Figaro, Linn.

TURF TYPE TALL FESCUE

Jaguar 3, Houndog, Falcon II, Crossfire II, Coronado, Southern Choice, Coyete, Finelawn Petite, Genesis, Rebel Jr., Lexus, Lancer, Pixie, Grande, Apache II, Empress, Duster, Renegade, Marksman, Pyramid, Debutante, Micro DD, Starlet, Tomahawk, Gazelle, SR 8210, Shortstop II, Sun Pro, Adobe, Leprechaun, Alamo, Safari, SR 8200, Ninja, Palisades, Duke, Siverado, Bonsai Plus, Guardian, Virtue, Vegas, Montauk, Titan 2, SR 8300, Cohise, Trailblazer II, Rebel 3D, Eldorado, Avanti, Chieftain II, Bonsai, Mirage, Shenandoah, Bonanza II, Kittyhawk, Monarch, Aztec, Finelawn 88, Austin, Phoenix, Olympic II, Astro 2000, Twilight, Arid, Falcon, Anthem.

FINE FESCUES

(includes red, chewings, sheep, hard, and hair fescue)

Brittany, Discovery, Tiffany, SR 5100, Bridgeport, Treazure, Shademaster II, Seabreeze, Reliant II, Victory, Jasper, Nordic, Shadow, Jamestown II, SR 3100, Banner II, Ecostar, Brigade, Spartan, Aurora, Darwin, Scaldis, Aruba, Dawson, Flyer, Jamestown, Rondo, Medina, Pamela, Cascade, Molinda.

SEEDED BERMUDAGRASS

Mirage, Guymon, Jackpot, Sundevil, FMC 6-91, Sahara, Cheyenne, Sonesta, Primavera, Arizona Common.

VEGETATIVE BERMUDAGRASS

Tifway, Baby, Midiron, Midlawn, Tifgreen, Midfield, Texturf 10, Floradwarf, Arizona Common.



■ It's a late summer Saturday afternoon. Picture a well-intentioned homeowner standing in the yard, armed with an ordinary hand saw and ladder, gazing purposely into the branches of a tree.

Later, having plunged ahead, our haphazard hacker finally stands hip deep in strewn piles of twigs and branches admiring his handiwork. He is obviously pleased and relieved that he has survived the encounter unscathed.

He is lucky, but the tree may not be as fortunate. It could be severely injured, badly deformed, left open to disease, even brutalized beyond redemption.

Many of us can identify with the "haphazard hacker" homeowner because we've been there. The simple fact is most of us don't know much about pruning the plants in our land-scape; particularly our trees, shrubs and hedges. The story is meant to illustrate several points about proper pruning procedures.

- First, late summer may not have been the right time of the year to do a major pruning job on the tree. Many trees are prunable in all seasons. Some are not. Timing is vital to effective pruning. You can check with your local extension office, lawn & garden center, or nursery for the most beneficial season calendar for pruning the different trees, shrubs, hedges, and ornamentals in your landscape.
- Second, keep your feet on the ground and leave the ladder in the garage when pruning. There is too much risk of injury from falling or slipping

A little careful cutting back and thinning each year will lead to increased vitality and strength. It keeps the root system ahead of the branch system, better assuring adequate moisture and nourishment for the flourishing growth of the remaining plant and the new growth or flowering yet to come.

when using ladders. If you can't reach the area with the proper pruning tool from the ground, call a tree specialist. Medical bills and loss of work time will generally cost a great deal more than what you pay a professional. Our "hacker" should have been relieved that he survived the encounter unscathed.

• Third, make sure that the proper tool is used for the task at hand; for your sake and the plants sake. There are pruning knives, pruning shears, hedge shears, lopping shears, pole pruners,

and pruning saws. Each is ideally suited for its intended purpose, but can be injurious to the plant when used for a different pruning job. (See Best Pruning Tool for the Job). The hand saw was definitely not the right tool for the job in this story.

Here are a few basic principles recommended by the *National Arborist Association (NAA)* to help the homeowner to understand some of the whys, whens, and hows of pruning for natural beauty and health of shrubs and trees.

Why prune? To encourage healthy and attractive growth. Each species of tree and shrub has its own delightful growth characteristics. Selective pruning can help it develop and maintain its graceful beauty and balance. No amount of pruning can make a naturally spreading shrub into one that will grow vertically.

Regular removal of injured or diseased branches will insure the health of the remaining plant. Overlapping, rubbing, or interfering branches should be removed or cut back to prevent future problems of injury leading to disease.

A little careful cutting back and thinning each year will lead to increased vitality and strength. It keeps the root system ahead of the branch system, better assuring adequate moisture and nourishment for the flourishing growth of the remaining plant and the new growth or flowering yet to come.

When to prune? Some general rules apply here. Most flowering trees and shrubs should be pruned immediately after they finish flowering. This

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GARDENER'S CORNER

Test Soil for Drainage

Before you plant your trees this fall, test your soil for drainage. Dig a hole about the depth needed for the proposed tree. Fill it with water and check it twice, once after 24 hours and again after 48 hours. If the hole drains well in this time frame, the soil should adequately support a tree in this location.

Dig Deep for Bulbs

When planting bulbs, you should dig a bed 9-12 inches deep. Place each bulb into the bed with the point facing up, and space them from 5 to 6 inches apart so the resulting flowers are close enough to look dramatic, but not so close as to be crowded. High impact gardens generally include a minimum of two dozen bulbs of each type grouped together. When grouping bulbs, arrange them in an oval or triangular shape. This creates a natural, relaxed look, as though your garden simply sprang up on its own. Remember to place the taller plants near the back, and leave pathways so you'll have access to your plants.

Feed Trees Before the Snow Flies

Your existing trees will benefit from a fertilizer feeding in mid to late fall, before the ground freezes hard in the northern climates. This will provide nutrients the tree will use in early spring when active growth starts again. Too often, we forget about the needs of our trees, the most valuable and most costly plant to replace in our landscape.

Much of the damage and death of trees and other plants in the landscape caused by severe winters can be materially reduced or eliminated by proper mulching with bark. Applied in the fall at a depth of 5 to 6 inches to a diameter depending on the plant size and age (root zone area), the bark provides insulation which will maintain a higher soil temperature and decrease the depth of freezing.

Preparing Your Mower for Winter

After the last time for mowing the lawn this season, plan on servicing or having the mower serviced. Most people won't do this, so time in the shop should be minimal. If you do it yourself, sharpen the blade, change the oil, plug and air filter. Also, remember to drain the gas for the winter "siesta".

allows time for the setting of new buds for next season's bloom. Pruning too late will reduce flowering next year. Needled or panicled evergreens such as, arborvitae, hemlock, juniper, cedar, and yew are best pruned in late winter or early spring since new growth in the spring will soon cover the pruning wounds.

Bleeding trees such as birch and maple should be pruned in midsummer. Rogue shoots which outstrip the natural outline of a plant can be pruned at anytime to bring back vi-

sual harmony.

How to prune? It is important to point out a few facts concerning the growth habit of all plants. The tip of each branch is called the terminal bud. When allowed to remain, it will grow faster and further than any of the side buds along the same branch.

Making a cut about 1/4 in. or so above one of the side buds or shoots, will make this former side bud the new terminal bud which will inherit all the rapid growth characteristics of the original, but in the direction the new

tip is headed.

Thus, it is possible to control air choking interior growth, encourage the filling in holes and bare spots in the foliage, or add to the attractive shape and branching of a tree or shrub. Always cut back to a side shoot or all the way back to a main fork or trunk. Cutting midway between shoots will leave an ugly stub. Cut cleanly and smoothly on a slight diagonal with clean, sharp shears to allow the plant the best start in sealing the wound. When cutting out diseased branches, make sure to wipe the shear blades with alcohol to prevent the spread of disease to healthy branches cut later. It may be helpful to apply a tree wound paint to cuts larger than a 1/2 in. in diameter.

The National Arborist Association recommends that home owners obtain a good booklet/book on pruning, which is written in "plain" language and both describes and illustrates specific methods of pruning trees and shrubs. Check with your local extension office, lawn & garden retailer, or bookstore. •

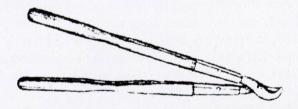
The Best Pruning Tool for the Job

The well-equipped homeowner should have the following pruning tools on hand to properly handle the several jobs around the garden and landscape.



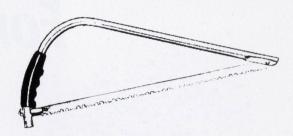
Pruning Shears. Good for light pruning and trimming. There are two basic types of pruning shears. The first is a blade and anvil type. Its straight blade presses against a flat metal edge. The other resembles a pair of scissors, with two blades sliding past one another, one hooked and one curved. The first type, with the its prominent blade, requires less strength to operate. The second type, with the scissors mechanism, costs and weighs more. It does, however, make a cleaner cut and reduce the chance of damaging the branches or stems of the plants being pruned.

Hand Shears. Good for special pruning jobs, such as higher tendrils and thicker shoots. Check out a pair of ratchet hand shears for light work such as pruning roses. These require little pressure and are perfect for smaller tasks. You might also invest in a pair of cut-and-hold clippers that grip the stem as you cut it. These are designed primarily for cutting flowers.



Lopping Shears. Good for stems and branches larger than 1/2 in. in diameter. This tool resembles a long handled pruner. It is basically a larger, heavier version of a pruning shear, but it may have additional gears or levers. They will increase the amount of force you can use as you prune.

Pole Pruner or Pole Saw. Good for removing the top branches of fruit trees. This tool is essentially a pole with a cutting blade and saw attached. The blade and saw are operated by pulling a cord.



Pruning Saw. Although it's tempting to bring your carpenter's saw out of the toolshed, it's best to purchase one intended solely for the landscape. Pruning saws differ from carpenter's saws in that their teeth are angled widely. This keeps them from bending when cutting through sappy green wood. In addition, a pruning saw cuts on the pulling stroke rather than on the pushing one. This will benefit you when you are cutting branches that are overhead. A small pruning saw with a single set of teeth is best for most tasks, as it is easy to inadvertently gash the bark of nearby branches when using a large saw.

Hooked Pruning Knife. Professionals use these to remove small twigs and to smooth and trim the edge of pruning cuts.



Hedge Shears. Good for shaping ornamental hedges. Hedge shears enable you to prune to a flat and smooth expanse of shrubbery. However, hedge shears should not be used for precision work because they do not create a clean, sharp edge.

Be sure to keep your tools in good condition by cleaning, oiling, and sharpening them after frequent use. Make sure the blades of shears and loppers are adjusted and tightened. At the end of the season, oil and clean off any rusted parts and sharpen all dulled blades. If you have any questions, check with the professionals at your local lawn & garden center.

American Association of Nurserymen

The Pansy—A Flower For All Seasons





The National Garden Bureau designated 1993 'The Year of the Pansy', and continues to recommend pansies highly

for fall planting. Pansies are growing in gardens during the winter in the South and Southwest and during the summer and early fall in the North. Many regions in California grow pansies outdoors all year. It is certainly a "plant for all seasons".

The popularity of the pansy continues to increase due to its durability and ease of growing. Whether grown from seed or bedding plants, pansies are relatively disease and pest free, blooming prolifically for the gardener's enjoyment.

History

The history of the pansy is linked forever to the viola (veye-OH-lah), its ancestor. Viola is a large genus containing about 500 species. Violas were familiar to people living in Greece in the 4th century B.C. The center of origin for violas was continental Europe. The flower was cultivated by the Greeks for herbal medicinal use and much later inspired William Shakespeare to write of romance.

Sometime after the 4th century

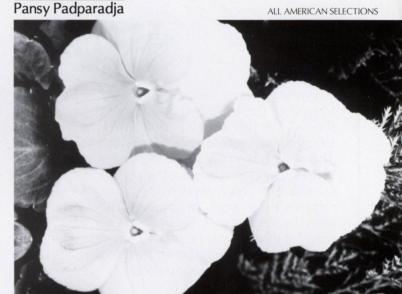
B.C. in Europe, an astute observer noticed a plant similar to a viola but growing in open areas with more sunlight. This plant thrived in alpine meadows and on rocky ledges.

Someone named this plant a wild pansy. Now known as Viola tricolor, this early wild pansy had two clear differences from the viola. The plant grew from the ground on one main stem and branched above the ground.

Viola plants branch below ground with many plants sharing the same root system. The wild pansy bloom was larger and more round than violas.

In the last 50 years much of the innovative breeding has been in Germany, the U.S. and Japan.

New pansy colors such as shades of pink, rose or orange and unusual bicolor designs have expanded the variety of pansies available to gardeners in North America. The diversity of pansies will flourish as pansy popularity continues to grow.



Description and Varieties

Pansy blooms are single with five petals that are rounded in shape. Pansy flowers have one of three basic color patterns. Blooms can be single, clear color, such as yellow or blue. A second pattern is a single color having black lines radiating from its center, called penciling. The last type is probably most familiar to gardeners. The bloom of this type has a dark center called a "face".

The pansy has one of the widest color ranges of any garden annual. Included in the wide color range are red, purple, blue, bronze, pink, black, yellow, white, lavender, orange, apricot and mahogany. The plant itself is compact, not more than 9 inches in both height and spread, and bears many stems.

The medium green, coarsely notched leaves are oval or heart-shaped. Gardeners can choose pansy varieties based on the size of bloom



ALL AMERICAN SELECTIONS

Pansy F1 Maxim Marina

and color combination. The size of a pansy bloom will fall into three categories: large - 3 1/2 to 4 1/2 inches; medium - 2 1/2 to 3 1/2 inches; multiflora - 1 1/2 to 2 1/2 inches.

The National Garden Bureau has created a listing of cultivars based on flower size. The cultivars are listed in alphabetical order by name of series. A series has similar plant qualities in different colors. Each series differs in the number of colors and patterns available.

Large

Accord series. Introduced in 1992, these pansies have large blooms on short sturdy stems. There are 8 single colors, both faced and clear, and a mix. Abundant blooms are produced on strong plants.

Lyric series. Freedom of bloom and weather tolerance are two of its best qualities. It is available in 5 colors, all faced, or in a mix.

Majestic Giant series. This series has withstood the test of time. Majestic Giant Mix and Majestic Giant White Face were 1966 All-America Selections Winners. The series has a free-flowering habit and stands up to heat and cold particularly well. There are 6 colors and

a mix, all with faces.

Medallion series. The pansies in this series have extra large flowers in 6 colors, and a mixture. All have the face.

Swiss Giants series. Swiss Giant is an old-fashioned European pansy bred in Switzerland. The large flowers on long stems are good for cut flower bouquets. Many of today's hybrid varieties were developed from Swiss Giants.

Medium

Crown series. All clear colors, and no faces adorn the 9 colors and mixtures. All are early flowering and bright spring colors.

Imperial series. Prized for its non-fading colors and vigorous growth. Most of the blooms are faced. A long-standing favorite of gardeners is Imperial Blue, All-America Selections Winner in 1975. There are unique colors in this series such as pink shades.

Joker series. The striking color combination of Jolly Joker gave it an AAS Award in 1990. This pansy is a velvety purple with orange face. The plant has a compact habit and may grow 8 inches wide.

Roc series. This unusual name refers to *V. x Wittrockiana*, the botani-

Plant Bulbs & Pansies Together for Color

Planting bulbs is a great way to bring an early burst of color into the landscape. When you combine bulbs with other flowers, such as pansies, you'll gain a wonderful opportunity to introduce new and different colors into your garden each year.

Create your bulb and pansy garden by starting with the bulbs, planting them in the fall before the first frost. The next spring, after the bulbs have dazzled and delighted with their bright colors, bring on the pansies. Plant pansies in a partially shaded area, applying mulch to keep the roots moist and cool. In warmer climates, plant the pansies this fall.

cal species and to the rock solid garden performance. Introduced in 1985, the series contains 9 colors with or without face.

Springtime series. This series has a wide rainbow of 17 colors. The plants are heat and cold tolerant, resulting in a reliable performance.

Multiflora

Crystal Bowl series. All are clear colors without a face. There are 11 colors. These compact plants don't sprawl in the garden.

Maxim series. The 14 Maxim colors have faced flowers that bloom prolifically on compact plants. Maxim Marina is an AAS 1991 Bedding Plant Winner. Its unusual flower color is light blue with a dark blue face that is outlined in white. All Maxims exhibit heat and cold tolerance.

Padparadja is a 1991 AAS Winner

The Pansy Continued

named for the rare brilliant orange sapphire. The blooms don't fade under heat stress.

Universal series. These pansies have masses of early blooming flowers that may be clear colors or mixed. There are 13 colors and a mixture. The plants have proven to be cold tolerant during southern winter conditions and heat tolerant in northern summers.

Culture

Plan to sow pansy seeds indoors in the North about 6 to 8 weeks prior to setting out. Pansies thrive in cool weather and will tolerate light frost or cold night temperatures. They can be grown successfully in the South for fall and winter flowering.

Sow seeds indoors in mid-summer, 6 to 8 weeks before transplanting. Pansies can be planted outdoor once the summer heat has broken and cooler weather arrives. In temperate areas, you can get the instant color of pansies in the fall garden by purchasing packs or flats at your local nursery or garden center.

Select the flower colors that suit your design. Choose plants that are stocky with dark green foliage. If there are just a few blooms but several buds, this is the right plant for your garden.

With planting, first water the plants while still in the containers. This will make it easier to remove the plants without damage to the root structure. Dig holes that are larger than the soil surrounding the roots in the container. Space the holes 6 to 10 inches apart. If you've not added organic material to your soil recently to boost fertility, now is the time to do it. A granular or time release fertilizer can be incorporated into the soil. Carefully remove the pansies from the containers, plant, covering all the plant roots with soil while leaving the green plant parts above the soil. Water the newly planted pansies thoroughly. Moving the plants from container to the garden does produce stress on the plants.

It's crucial that they receive plenty of water during this adjustment period. Mulching around the pansies with 2 inches of organic material will help conserve moisture and reduce weed growth. Water the soil deeply, not the plant leaves.

Sowing Seeds Indoors

Whether in the North or South, the basic recipe to start pansy seed indoors is the same. Start seeds in a clean con-

tainer filled with a soilless germinating medium. This will help prevent problems with the fungi that cause seedlings to die from damping-off.

The germinating mixture temperature should be about 60-65 F. If the air temperature is about 70-75 F. indoors. this is fine for germination because the mixture is always cooler than the air temperature. Sow about 1/8 inch deep, cover lightly with the mixture, water gently, and thoroughly. Pansies need darkness to germinate. Experienced hands at seed starting often wrap the seed flat or container in plastic and then cover it with damp folded newspaper. Check daily to see if the mixture is still moist. Don't let it dry out. Gently add moisture to the mixture with a mister or fine spray. Germination should occur in 10 to 20 days.

As soon as the first tiny green shoots emerge, remove newspaper and move container to a cool room with bright light. When seedlings have two sets of leaves, gently pull them apart and plant in a larger container about 2 inches apart. Place plants in a sunny, cool location (50-60 F.) and feed with a diluted water soluble fertilizer. Make room in your garden this fall or next spring for the "flower for all seasons", the delicate, durable, colorful pansy.

-The National Garden Bureau

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