

Missouri Environment & Garden

February 2008

Volume 14, Number 2

Late Winter Seeding for Home Lawns and Selecting Turfgrasses

Late Winter Seeding

Late winter seeding techniques can vary depending on which month your seeding occurs. The old remedy of seeding prior to a snowfall does warrant some credibility if done at the right time of the late winter or early spring. This procedure will work from late January through February if there is an excellent chance of getting the seed down to the soil surface. Melting snow will mud-in the seed just enough to achieve germination. This is not necessarily the best method; however germination rates should be sufficient to improve a thinned stand of turfgrass.

A second option is to broadcast seed on mostly bare soil that may have been tilled or loosened the previous fall. This can be done through the month of February when weather conditions will still bring forth a series of freezing and thawing periods. Freezing and thawing of bare soil produces small ice-forming, peaks and ridges in the surface of the soil creating cracks and crevices for seed to fall into and eventually cover with soil. Germination rates for this type of seeding is very good and allows seed to establish very early offering some competition against summer annual grasses and broadleaves.

Normal late winter/early spring seeding practices after the final thaw can involve two procedures. The first includes complete tillage of the area being seeded, however this requires drier conditions for the soil to work. Over-seeding on freshly tilled, graded soil offers a perfect seedbed and only requires minor raking or dragging to work the seed into the soil. Germination should be as complete as the seed label specifies. Straw may be needed to help hold the soil and serve as a little mulch until germination takes off. One bale of straw per 1,000 square feet is recommended on freshly tilled soil.

Seeding with a power-seeder or slit-seeder will plant turfgrass seed without the need for complete tillage. These can be rented at most rental or hardware stores for a nominal fee. They can be used for complete renovation jobs as well as partial renovations on thinned out areas of your lawn. They simply plant seed into a powder seedbed or actually plant the seed into shallow furrows on 3-inch centers. Achieving good seed to soil contact is the most effective way to get complete germination of your seed, as these two techniques perform. These procedures generally do not require the use of straw.

Keep in mind that late winter/early spring seeding may not allow the use of many pre-emergent herbicides (crabgrass preventers) for annual grass control, however there are two that are available. Tupersan (siduron) can be applied at any time seed is planted, but is best with applications during the last week of March through the first two weeks of April even though grass seed may have been planted much earlier. Dimension is a product that can be used for annual grass control (crabgrass, foxtails, etc.) after a new

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Rose: A Brief History

Shakespeare once wrote: "Of all flowers, methinks rose is best". Such sentiment is quite common and throughout history this elegant, symbolic flower has occupied a special place in the hearts and minds of people everywhere. Americans show their reverence for rose by purchasing 1.2 billion cut roses annually. Additionally, it is estimated that 150 million rose plants will be purchased by gardeners worldwide during the coming growing season. Perhaps there is no better time to explore rose history than February and Valentine's Day, the season of the year when, in the United States alone, an estimated 214 million roses will find their way into the lives of "significant others" everywhere.

Rose belongs to the family *Rosaceae* and genus *Rosa*; the latter contains about 150 species. According to Greek mythology, Aphrodite, goddess of beauty, gave the rose its name in honor of her son Eros by rearranging just one letter in his name. In time Eros gave the rose to Harpocrates, god of silence, as a bribe to conceal the weakness of the gods. From there, rose became symbolic of secrecy, silence and love.

Fossil records show rose to be one of the most ancient of flowers. It probably originated in Central Asia but spread and grew wild over nearly the entire northern hemisphere. Two historical geographical groupings of roses can be made: 1) European/Mediterranean roses, which includes the Gallicas, Albas, Damasks, Damask Perpetuals, Centifolias and Mosses, and 2) Oriental roses, which are represented by the China and Tea roses.

The cultivation of roses likely began in Asia about 5000 years ago and they have been an intimate part of human civilization ever since. Confucius wrote of growing roses in the Imperial Gardens about 500 B.C. and mentioned that the emperor's library contained hundreds of books on the subject of roses. Later, members of the Han dynasty were so obsessed with roses that their parks devoted to this flower took up so much land as to threaten the food supply, so the emperor ordered some to be plowed under.

Paintings on walls and other artifacts depicting roses were found in 5th century Egyptian tombs. It is said that Cleopatra was a fancier of roses and used them to try and seduce Mark Anthony. Reportedly she had her fountain filled with rose water and her chamber filled with two feet of rose petals in an attempt to win his affection. Additionally, the Persian King Nebuchadnezzar is said to have slept on a mattress filled with rose petals.

Centuries later, rose became synonymous with the lavish excesses often characteristic of the Romans, who associated rose with love, beauty, purity and passion. Roman emperors filled their baths with rose water and sat on carpets of rose petals for their feasts. Rose petals were used as confetti and Nero was said to be especially fond of having them fall from the ceiling at banquets (to the point dinner guest sometimes

suffocated in their excess). So insatiable was the demand for roses that peasants often were forced to grow them instead of food just to satisfy the Roman aristocracy.

Early Christians considered rose to be symbolic of paganism and their oppressors, the Romans, and were warned by church leaders not to plant it. This warning (evidently) was ignored and it slowly gained popularity and was used in religious ceremonies. In time, rose became a Christian symbol and has become a rich part of its culture and literature.

Alexander the Great is credited by some with having introduced rose into Europe while others attribute the latter to knights returning from the Crusades of 12th and 13th century. During the dark ages European monasteries preserved the tradition of rose and required that at least one monk be skilled in botany and knowledgeable about the virtues of rose. Later, in 17th century Europe, rose became so prized that roses and rose water were considered a source of legal tender and could be used for paying the debts commoners owed to royalty. It also was during this era that Napoleon's wife Josephine, a lover of roses, established one of the first extensive collections of roses at Chateau de Malmaison where her garden contained more than 250 rose varieties.

Presumably most of the roses in Josephine's garden were of the European/Mediterranean type for it was not until the late 18th century that the China group was introduced into Europe. Shortly thereafter the China rose (*Rosa chinensis*) was crossed by hybridizers with *Rosa gigantea* (a European/Mediterranean type) to form a new rose. Since some thought the newly-opened flowers of the resultant cross had the fragrance of an exquisite cup of tea, it was given the name tea rose. Decades later another type of rose was developed by crossing Damask rose (a hybrid formed in the Middle East by crossing *Rosa gallica* with *Rosa moschata*) with various species roses. Since the offspring of these crosses rebloomed freely they were given the name hybrid perpetuals and were quite popular through most of the nineteenth century.

A landmark achievement in rose breeding occurred in the mid-19th century when tea roses were crossed with hybrid perpetuals to give us the modern hybrid tea rose. Replete with their large flowers available in a palette of colors and their vigorous plants with glossy, green foliage, they are the most popular type of rose in the world today. Most consider them to be the standard of excellence by which all other types of roses are judged.

Several species of rose are indigenous to North America and rose was a favorite of many of those credited with shaping American history. William Penn imported 18 rose bushes from England in 1699. George Washington planted roses at Mount Vernon and Thomas Jefferson grew them at

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Managing Fruit Plants after the Historic April 2007 Freeze

The unprecedented freeze that occurred last spring will impact fruit harvested in 2008. One of the first things that growers are faced with in preparation for the upcoming growing season is pruning. When temperatures plummeted in April after a very warm March, many growers had already applied fertilizer. In more normal years, nitrogen fertilizer is used for reproductive and vegetative growth. However, with the loss of the fruit buds and/or fruit, nutrients normally diverted to the developing crop were available for the production of more vegetative shoots and leaves. Therefore, any nitrogen applied before (or after) the freeze promoted excessive vegetative growth. For this reason, fruit trees will require more hours of pruning this season. When pruning, the dead and diseased wood should be removed first. Secondly, thinning out unproductive branches and those that shade other fruit-bearing shoots will be necessary to ensure sustained fruit production.

Unlike blueberry, blackberry, and peach, apple trees go into a cycle of alternate bearing (excessive fruit set the year after a season of low fruit production). In 2008, apple trees will likely have a heavy crop load (barring any erratic weather). It will be important to apply adequate fertilizer to produce quality fruit. However, splitting the total amount of recommended fertilizer into two applications (before bloom and after fruit set) or more will help provide better sustained growth and help avoid leaching of the nitrogen if applied as ammonium nitrate. Using multiple fertilizer applications also gives the grower the opportunity to stop fertilizing if another catastrophic frost or freeze occurs. Multiple fertilizer applications are recommended for all

fruit crops, starting pre-bud burst and ending by July 1. Fertilizer applications after this date promote late season growth, delay hardening, and increase fruit bud susceptibility to winter injury.

Fruit removal (i.e., thinning) will be very important on peach and apple trees to balance the amount of fruit and vegetative growth. For apple, only one fruit per cluster should be retained. This should be done as early as possible, when the fruit is the size of a dime. For peach, strip off all small fruitlets, leaving 10 inches between each fruit. Peach branches often break when they are bearing too many fruit.

The incidence of pests may also be greater this growing season, depending on the pesticide applications used after the 2007 freeze. Many growers reduced their chemical applications or quit spraying completely after the freeze. Thus, uncontrolled pests from last year may increase pest populations this year. Fire blight on apple and pear trees may be worse this year on trees that were fertilized either before or after the 2007 freeze because of the excessive vegetative growth. Also, canker development may be worse than usual on peach trees after the April freeze and the low winter temperatures experienced recently. There may also be outbreaks of pests not normally seen in Missouri due to the erratic weather. Even though the true consequences of the freeze may not be known for a few years, woody fruit plants are often productive with optimum culture following unseasonable weather events.

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Plants Can Improve Indoor Air Quality

In the summer, I greatly enjoy filling my outdoor patios with huge tropical plants such as banana, elephant ears, *Dracaena* and *Ficus* trees. Then I always grumble as I try to find space indoors in which I can over winter these plants. In reality, bringing these plants indoors may provide a way to improve the air quality in the rooms in which they are located. Several years ago, NASA studies found that plants can be very useful in absorbing harmful pollutants, and hence cleaning the air inside homes and buildings. In an ongoing study, NASA research found that living plants were so efficient at absorbing contaminants in the air that some of these plants were launched into space as part of the biological life support system aboard orbiting space stations. NASA research has consistently shown that living, green and flowering plants can remove several toxic chemicals from the air in building interiors, including benzene, which is an irritant to eyes and skin, formaldehyde, which is also found in almost all indoor environments, and trichloroethylene. When plants undergo photosynthesis, they take in carbon

dioxide from the atmosphere and release oxygen. During this process, they also take in air pollutants at the same time as taking in the carbon dioxide. The roots and plant tissue then degrade the pollutant. Studies since have also found that the potting soil, and microorganisms in the potting soil, also play a role in removing pollutants from the air. Years ago, houses and office buildings were not sealed as tightly, and indoor air quality was not as contaminated because the air was replaced often enough by leaky walls, windows, and doors. With current construction, buildings and homes are much better insulated and sealed, and as a result, air might linger for hours allowing air pollutants to accumulate.

Plants that are listed as particularly good at absorbing air contaminants can be found at: <http://www.plant-care.com/indoor-plants-clean-air-1.html>.

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stand of grass has had two mowings. Grass seed planted very early could possibly receive two mowings by mid-April, therefore allowing for an application of Dimension. Many other pre-emergent products require the grass to be well established.

Seed Selection

A quality lawn containing the recommended mixtures of species or blends of turfgrass varieties can be a difficult decision and process. Selecting turfgrasses is dependent on how you manage your lawn and what you expect of your lawn. Managing a lawn involves frequency of mowing, how often you fertilize, will you water your lawn or not and will you use crabgrass preventers and/or products to control turfgrass diseases and insects. Once you know the answers to these questions, you can then decide which specie blend or mixture of species you wish to establish.

All seed bags will have a seed label printed, pasted or sown on the bag. There are several pieces of information on a seed label that needs consideration prior to purchasing the product.

Species name, name of variety, purity, germination, weed seed and noxious weeds should be noted when looking at a seed label. Species name and name of variety will obviously tell you if it is the seed you want. Purity of the seed should be greater than 90%. Germination of the seed should be greater than 85% with a test date no longer than 12 months ago. Two other key pieces of information include the weed seed content and noxious weed percentages. Avoid products containing large amounts of weed seeds such as annual bluegrass or common bluegrass and others; as well as products containing noxious weeds.

Specie Selection

Blends of Kentucky bluegrass look very rich with dark blue-green colors, have pretty good resistance to brown patch disease, however, they do require more inputs of fertilizer and water to maintain that rich cover through the summer months. They are also more susceptible to dollar spot, leaf spot and summer patch diseases. Selecting bluegrass varieties that offer some resistance to some of these diseases is a practical first step in lawn establishment. Bluegrasses do develop tillers and small rhizomes, which allow bluegrasses to recover from thinning or other problems.

Blends of turf-type tall fescues can give deep emerald green appearances with a slightly coarser texture than the bluegrass. They tend to be a deeper rooting plant, therefore requiring less water than the bluegrass. They are not as susceptible to dollar spot and summer patch, but generally will require fungicides for the control of brown patch. There are several varieties of turf-type tall fescues that offer better resistance to brown patch than other varieties, therefore selecting the more resistant varieties will improve turf

quality. Tall fescues will tiller to help with recovery, but tend to be clumpy with severe thinning.

Mixtures, such as turf-type tall fescue with bluegrass (90% fescue, 10% bluegrass), combine the advantages of each species to mask the weaknesses of the other. Mixtures with perennial ryegrass should not exceed 20% perennial ryegrass as it is very susceptible to most of the diseases list above. Ryegrass is not very heat or drought tolerant and does not recover from thinning of cover.

Variety Selection

So which varieties do you select once you decide on a blend or mixture? There are many resources available that list turfgrass varieties for Missouri. State turfgrass specialist, MU guide sheets, garden centers and other lawn care experts are good sources for information about turfgrass selections and varieties.

The difficulty for most individuals is trying to find the varieties suggested. Lowe’s, Home Depot, hardware stores and other garden centers cannot carry all of the premium varieties. However, they do carry some acceptable blends and mixtures.

Specific varieties, blends and mixtures available

The number of seed products being sold over-the-counter can be overwhelming to homeowners. However, by looking at the seed tags on products, several can be eliminated immediately. These include products that contain large percentages of ryegrasses. Many of these seed products are packaged for national sales and while they are excellent products for many areas of the country, they are not the best for the type of climate we deal with in Missouri. Concentrate more on the products that are tall fescue and Kentucky bluegrass blends or mixtures of tall fescue and Kentucky bluegrass. By doing this the selection choices becomes more narrow and simplified.

Individual varieties (from different venders) of tall fescues can be found locally to create your own blends. Measure equal portions of each variety used and combine thoroughly in a large clean bucket or trashcan. You have now created your own tall fescue blend. Some of the tall fescue varieties available locally include:

Turf-type Tall Fescue Variety	Vendor
Falcon II	Ace Hardware, MFA
Hounddog V	MFA
Plantation	Lowe’s
Rebel III	Lowe’s
Rebel Exceda	Home Depot
Rembrandt	MFA

Several pre-packaged blends of tall fescue can also be found. These will generally have some of the better varieties

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Rose: A Brief History continued from page 10

Monticello. John Adams is credited with planting the first rose at the White House and the formal rose garden that still exists today was established during the presidential term of Woodrow Wilson.

The American Rose Society lists over 40 different type of roses in its classification system. Generally, they are grouped into Old World Roses (introduced before 1867) and Modern Roses (developed after 1867). Additional to the hybrid tea, other important modern rose groups include polyantha, floribunda and grandiflora. Polyantha roses are shrubby, low-growing roses with clusters of small flowers. They usually are quite hardy and bloom freely throughout the growing season. Floribundas were derived from crosses between hybrid tea and polyanthus roses. They produce large, hardy, shrubby bushes that bloom profusely and produce clusters of flowers. Grandiflora roses are the result of crossing floribundas with hybrid tea roses. Like their floribunda parent, they produce flowers in clusters. However, as their

name implies, individual flowers are much larger and favor their hybrid tea parent in size.

It can be seen from the previous that rose lineage is quite complex. Over the centuries breeding efforts have attempted to produce the “ideal” rose, whatever the latter might imply to the developer. In spite of all the progress made in their improvement, rose still represent a formidable challenge to the gardener because of its susceptibility to diseases and cold temperatures. We tend to hold most dearly those things in life that are difficult to obtain. One can’t help but wonder if at least a small part of the fascination people have for roses lies in their fragile nature and the skill it takes to grow them. The next time you admire a rose consider the number of people throughout the course of civilization who also have paid homage to this exquisite flower.

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acceptable for Missouri, but it still does not hurt to check those seed tags. These include:

Turf-type Tall Fescue Blends	Vendor
Revolution	Ace Hardware, Williams Lawn Seed
Winning Colors	Lebanon Turf
All-Pro	MFA
Pennington (turf-type) Tall Fescue Blend	Lowe’s and other fine retailers
Rebel Supreme Blend Grass Seed	Lowe’s and other fine lawn & garden retailers
Rebels Elite	Home Depot
Scott’s Classic Tall Fescue Blend	Lowe’s, Home Depot

The next selections are Kentucky bluegrasses; some may have only a single variety, others are blends. One can always check the seed tag to know what you are purchasing. These products usually offer some of the better varieties acceptable for Missouri as well. They include:

Kentucky Bluegrasses	Vendor
Scott’s Classic Kentucky Bluegrass Seed	Lowe’s, Home Depot
Pennington Kentucky Bluegrass Lawn Seed Blend	Lowe’s and other fine retailers
Tournament Quality Kentucky Bluegrass Lawn Seed Blend	Lowe’s
Pennington Kentucky Bluegrass Penkoted Lawn Seed	Lowe’s and other fine retailers
Scott’s Turf Builder Kentucky Bluegrass Grass Seed	Home Depot

The mixture we discussed with tall fescue and Kentucky bluegrass has several nice combinations available over-the-counter. Many vendors also feel the 90/10 combination of tall fescue and Kentucky bluegrass is an excellent choice. Of all mixtures, this is possibly the best for Missouri. Some of these products include:

Tall Fescue/Bluegrass Mixtures	Vendor
Revolution Plus	Williams Lawn Seed
Winning Colors Plus	Lebanon Turf
Tournament Quality Ultra Premium Fescue Plus Lawn Mixture	Lowe’s
Pennington Tall Fescue & Kentucky Bluegrass Lawn Seed Mixture	Lowe’s and other fine retailers
Master Turf Ultimate Blue Lawn Seed Mixture	Wal-Mart

The above information is intended to make the selection process for turfgrass seed less troublesome and giving you more confidence in your choices. Be sure to always check with your local garden centers first for availability of these products, since all stores do not carry complete product lines.

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March Gardening Calendar

Houseplants

- As day lengths increase, plants begin new growth. Repot root bound plants, moving them to containers 2 inches larger in diameter than their current pot. Check for insect activity and apply controls as needed. Leggy plants may be pruned now.
- Two handsome houseplants that provide fragrant blossoms indoors this month are the Confederate Jasmine (*Trachelospermum jasminoides*) and Japanese Pittosporum (*Pittosporum tobira*). Both thrive in average home conditions and are easy plants to grow.

Ornamentals

- Trees, shrubs and perennials may be planted as soon as they become available at local nurseries.
- Dormant mail order plants should be unwrapped immediately. Keep the roots from drying out, store in a cool protected spot, and plant as soon as conditions allow.
- Loosen winter mulches from perennials cautiously. Re-cover plants at night if frost returns. Clean up beds by removing all weeds and dead foliage at this time.
- To control Iris borer, clean up and destroy the old foliage before new growth begins.
- Fertilize bulbs with a "bulb booster" formulation broadcast over the planting beds. Hose off any granules that stick to the foliage.
- **Weeks 1-2:** Heavy pruning of trees should be complete before growth occurs. Trees should not be pruned while the new leaves are growing.
- **Weeks 2-4:** Summer and fall blooming perennials should be divided in spring.

Lawns

- Mow lawns low to remove old growth before new growth begins.
- **Weeks 2-4:** Apply broadleaf herbicides now for control of cool-season perennial and annual weeds. These must not be applied to areas that will be seeded soon.
- **Week 2:** Apply controls for wild garlic. It will take several years of annual applications for complete control.

Vegetables

- Any root crops such as horseradish, parsnips, Jerusalem artichokes, or carrots still in the ground from last year should be harvested before new green top growth appears.
- Cultivate weeds and remove the old, dead stalks of last years growth from the asparagus bed before the new spears emerge.
- Fertilize the garden as the soil is being prepared for planting. Unless directed otherwise by a soil test, 1 to 2 pounds of 12-12-12 or an equivalent fertilizer per 100 square feet is usually sufficient.
- **Weeks 1-2:** Delay planting if the garden soil is too wet. When a ball of soil crumbles easily after being squeezed together in your hand, it is dry enough to be safely worked.

Fruits

- Gradually remove mulch from strawberries as the weather begins to warm.
- **Weeks 1-3:** Continue pruning apple trees. Burn or destroy all prunings to minimize insect or disease occurrence.

Miscellaneous

- **Weeks 1:** Red maples begin to bloom.
- **Weeks 1:** Watch for the Harbinger of Spring (*Erigenia bulbosa*) blooming in rich wooded areas.