



Prairie Harvest

Hardy roses for harsh climates

by Stephen L. Love

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YOU ARE A SHORT-SEASON, HIGH-ALTITUDE GARDENER IF:

- You live in Idaho at an elevation above 4,500 feet, **OR**
- Your USDA hardiness zone is 4 or lower, **OR**
- You have a frost-free growing season of 110 days or less

INTRODUCTION

Roses create emotions of intrigue and romance. Roses combine season-long flower production with large blooms and unlimited choices of color. Few other plants contribute as much interest to a landscape. It's little wonder roses are the official flower of the United States and arguably the most popular flowering shrub in the world.

In Idaho's warmest climates, rose care is relatively easy, and winter losses are rare. Growing roses in the short-season/high-altitude regions of the state presents an entirely different challenge. Most modern rose varieties—usually classified as hybrid tea, floribunda, and grandiflora roses—often fail to survive in Idaho's harsher climates. When they do survive, the annual die-back eventually causes a decline in health and beauty of these plants.

In spite of the difficulties of growing roses in harsh climates, there is hope for the short-season gardener. Breeders of hardy roses have made significant progress over the past few decades in creating beautiful, large-flowered roses that grow on manageable, civilized bushes. Even if you prefer growing tender hybrid tea roses, cultural techniques can enhance your chance for success. This publication provides information to help gardeners select and grow beautiful roses in Idaho's short-season/high-altitude climates.

Table 1: Descriptions of common rose market classes

CLASS OF ROSE	DESCRIPTION	HARDINESS
Hybrid Tea Fig. 5	The classic familiar rose, large flowers, wide range of colors; large number of petals, repeat or continuous bloom habit. Most common rose in the marketplace.	Very tender to tender
Floribunda	Very similar to hybrid teas except the flowers are usually smaller and grow in clusters; wide range of colors, some with single or semi-double flower form. Most bloom continuously. Very common in the market place. A few floribunda rose varieties are hardier than hybrid teas.	Mixed - very tender to moderately hardy
Grandiflora	Very similar to hybrid tea except the flowers grow in clusters; large flowers, wide range of colors, repeat blooming. A limited number of varieties are common in the marketplace.	Very tender to tender
Miniature Fig. 4	Diminutive rose varieties with small plants and small flowers, otherwise variable with a wide range of colors and petal counts. Becoming common in the market place.	Mixed – very tender to moderately hardy
Modern Shrub Figs 1,2,3	The most variable rose category; ranges from large-flowered varieties similar to hybrid teas to varieties that are more similar to wild roses, variable in color, petal count, and growth habit.	Mixed – very tender to very hardy
Climber	Variable except for the tendency to produce long canes; myriad colors and flower counts from single to fully double. Fairly common in the market place.	Mixed – very tender to hardy
Old Garden	Varieties with a long history (sometimes hundreds of years) of use, usually once-blooming, mostly producing flowers ranging from pink to purple, variable petal count. Available mainly from nurseries specializing in antique varieties.	Mixed – moderately tender to very hardy

ROSE CLASSES

Many methods are used to categorize roses. Classification can be based on genetic background, petal count, variety history, or market class. Market class may be the most useful category for most rose buyers because this is how they are typically labeled in the nursery. Table 1 describes the most common classes of roses sold.

HYBRID TEA, FLORIBUNDA, GRANDIFLORA ROSES

Most varieties of hybrid tea, floribunda, or grandiflora roses have large flowers with classic form. For this reason, many people choose them over any other type of rose. However, in Idaho's harsher climates, these roses are marginally hardy, at best. Without strenuous protective measures, they usually survive through one or two winters. Even with protection, they may be killed or weakened beyond recovery by a severe winter.

MINIATURE ROSES

Miniature roses produce tiny, perfectly formed flowers on diminutive plants (Figure 4). Otherwise, they are variable for flower color, petal count, flower form, and bloom habit (although most are continuous blooming). The majority of miniature roses will not survive high-altitude Idaho winters, but with a little research you can find those that are sufficiently hardy. Miniature roses are enjoying a surge in popularity and are relatively common in the marketplace.

MODERN SHRUB ROSES

Modern shrub roses are genetically diverse and contain both hardy and tender varieties (Figure 2). This category contains many of the best roses for high elevation locales in Idaho, but not every shrub rose variety will be adapted. In fact, some are as tender as hybrid teas.

Consider varieties within this category very carefully to find those adapted to cold and high altitudes. Shrub roses vary in hardiness, but also in plant size and form, flower color, flower shape and petal count, and almost any other characteristic imaginable. Finding a suitable rose from among shrub roses requires extensive research but usually is worth the effort. Some of the most interesting large-flowered shrub roses are those bred by Dr. Griffith Buck, previously of Iowa State University.

CLIMBING ROSES

Until recently, culturing an attractive climbing rose was a virtual impossibility in Idaho's high altitude regions. Available varieties were too susceptible to winter injury to make maintenance practical. Some of the long-caned shrub roses, many with extreme hardiness, now can be trained as climbers.

OLD GARDEN ROSES

Antique roses are another diverse group of varieties. The one characteristic these many varieties have in common is the tendency to bloom one time in late spring or early summer, with a few exceptions. The lack of repeat bloom is often balanced by the intense fragrance and massive quantity of flowers. For the most part, old garden roses are purchased and grown by people who consider themselves connoisseurs of antique rose varieties.

RETHINKING ROSE USES IN LANDSCAPES

Roses are often consigned to their own small bed in one corner of the yard—due both to tradition and to roses' unique cultural needs. Sometimes it's easier to give proper care if roses are all in one place. However, roses have sufficient cultural flexibility that they can be successfully grown



Figure 1. April Moon is a continuous blooming Griffith Buck shrub rose that combines good hardiness and large flowers with a hybrid tea form.



Figure 3. Hope for Humanity—one of the newest Morden (Parkland) roses—is a repeat bloomer that is completely hardy in the harshest of Idaho climates.



Figure 2. Modern shrub rose Carefree Delight produces a continuous display of clear pink flowers and is also very disease resistant.



Figure 4. Classic miniature (blooms less than 2" across) rose Millie Waters is sufficiently hardy to survive, regrow, and bloom after a severe winter.



Figure 5. Audrey Hepburn, a tender hybrid tea rose, suffers fairly severe winter dieback but has the ability to produce beautiful continuous blooms after regrowing healthy new canes.

anywhere in a well-managed yard. A single rose plant that provides summer-long color makes an outstanding landscape focal point, especially if placed near the front entryway of the home. Some newer varieties of landscape roses also make good hedges or groundcovers. For roses used in this way, it is particularly important to choose hardy, disease resistant varieties that need minimal care, especially with respect to pruning. The advent of hardy climbers makes using roses to create arbors or cover unsightly objects in the landscape now feasible in harsh climates.

SELECTING, GROWING HARDY VARIETIES

Hardiness is a relative term when speaking of roses. Classes and varieties vary widely with respect to the injury that appears following severe winter conditions. The most tender roses may succumb, even after what may be considered a mild Idaho winter. Hardest varieties can take anything a high-altitude winter can throw at them without visible damage. Most roses fall somewhere in between. Roses also differ in their ability to recover from winter injury. Given equal amounts damage, some never return to full vigor while others rapidly regrow and bloom luxuriously, year after year.

The objective when selecting rose varieties is to choose those with the right combination of hardiness and the ability to meet the needs of the intended use. Roses selected as groundcovers or hedges should be hardy enough to show little or no damage, in order to minimize the need for spring pruning and cleanup. Plus, they should bloom continuously. Selection of fully hardy varieties is less critical for roses planted in beds specifically for flower production.

But these roses should have show-stopping blooms. In addition to hardiness, consider these factors when selecting a rose variety. Obvious visible characteristics include bloom size, shape, conformation, color, and petal count. Beyond that, knowing mature size of the plant, the potential for repeat or continuous bloom, the growth habit (arching, upright, spreading, etc), and resistance to common diseases may all be important. One additional factor important to southern Idaho gardeners is the ability to remain healthy when growing in alkaline (high pH) soils. Some rose varieties will suffer from severe iron chlorosis, which will decrease hardiness and general plant health. This information is sometimes difficult to obtain but is very useful when available.

BUYING HARDY ROSES

A wide selection of truly hardy rose varieties is often unavailable at local nurseries, especially when compared to the more tender and fussy hybrid teas. This situation is beginning to change, and a wider array of hardy roses is becoming available. Many nurseries will order plants if you make the request. However, buying from a mail-order vendor may be necessary when seeking a lesser-known variety. Find contact information for mail-order nurseries that specialize in hardy roses at the end of this publication.

OWN-ROOT VS. GRAFTED ROSES

Most rose plants are grafted, meaning leaves and branches of the plant are an entirely different variety or species from the roots (rootstock). You can tell if a rose is grafted by looking at the point where the branches come together at the base of the plant. If all of the branches emerge from one side of the stem and the branch joint looks like a swollen node, the plant is probably grafted.



Figure 6. Fully hardy rose variety Prairie Joy, a spreading shrub, expresses no injury—even on branch tips—after a typical zone 4 winter.



Figure 7. Some hardy roses—such as the Explorer rose William Baffin—experience tip dieback of young tender branches after a typical zone 4 winter. This type of injury requires minimal pruning and has very little impact on the health of the bush.

Grafting has many advantages for the nurseryman, including cost reduction and enhancement of resistance to soil diseases. However, for high-altitude gardeners, the grafted plant has two distinct disadvantages. First, the rootstock is often less hardy than the grafted variety, meaning that severe winter temperatures may damage the rootstock and result in a weakened or dead plant, even though the top growth is perfectly hardy. Second, when a plant is winter-killed down to near soil level, the top (meaning the purchased variety) will be completely dead, resulting in loss of the plant. This "dead" plant may sprout back, but it is the rootstock that is sprouting from below the graft and the resulting plant will not produce attractive flowers.

One way for the short-season gardener to solve graft issues is to plant "own-root" roses. These plants are grown from cuttings rather than being grafted, meaning the tops and roots are genetically identical. If the plant is on its own roots instead of being grafted, the plant will grow back true-to-type instead of having the rootstock sprout and take over. It is sometimes difficult to purchase "own-root" roses, but many nurseries specialize in this method of propagation. If you cannot tell whether or not a rose is "own-root," ask your retailer before making a purchase. If you desire own-root roses but can only find grafted plants of the preferred varieties, there are planting techniques covered later in the publication to minimize potential problems.

SELECTING HARDY, ADAPTED VARIETIES

So many wonderful roses are in commerce that no single publication can list or describe even a significant portion of them. Descriptions of roses with potential to thrive in Idaho's short-season/high-altitude climates can be found from many sources, including books, the Internet, local roses societies or clubs, nursery growers, or trial gardens. Tables 2 and 3 list roses that have proven to be hardy, adapted, and attractive in a trial garden in the Aberdeen, Idaho, located in a zone 4 high-desert climate (4,400-foot elevation).

Repeat vs. continuous blooming. Rose classes and varieties vary widely in bloom habit. Some bloom only once in the spring, others bloom in cycles with short rest periods between (called repeat bloom), while others bloom all summer long (continuous bloom). The bloom habit—whether it be once, repeat, or continuous—is largely under genetic control. Although continuous flowering habit is something most rose growers desire, finding the best rose for a given situation may mean choosing something with less consistent bloom. Preference may be given to appropriate plant size, disease resistance, bloom color, or fragrance.

Plant care then becomes important in helping the plants flower to their potential. Enhancing flower production for any repeat or continuous blooming rose is largely a matter of maintaining plant health and deadheading old flowers to prevent the development of hips. Plant health can be improved by selecting hardy varieties and by fertilizing and irrigating properly.

Table 2. Continuous blooms. These 22 hardy rose varieties suitable for planting in the short-season/high-altitude climates of Idaho are continuous blooming and organized by color. An asterisk (*) indicates the variety is moderately fragrant. Key below this table explains additional terms.

VARIETY NAME	MARKET CLASS AND (ORIGIN)	DESCRIPTION	HARDINESS
Pink			
*Audrey Hepburn Fig. 5	Hybrid Tea	Medium-small (3') upright plant; flowers light pink, large, double; moderately fragrant	70% dieback, good regrowth
Carefree Beauty	Shrub (Buck)	Medium-size (4') upright plant; flowers light pink, medium-size, double; slightly fragrant	10% dieback
Carefree Delight Fig. 2	Shrub (Modern)	Medium (4') dense plant; very healthy; flowers pink, medium-size, single; not fragrant	25% dieback
Countryman	Shrub (Buck)	Medium-small (3') spreading plant; flowers pink, large, double, hybrid tea form; slightly fragrant	50% dieback, good regrowth
DeMontarville	Shrub (Explorer)	Medium-size (4') dense plant; flowers dark pink, medium-size, double, petals fold back; slightly fragrant	Tipburn
Nearly Wild	Floribunda	Small (2') dense plant; flowers pink, medium-size, single; slightly fragrant	50% dieback, good regrowth
William Baffin Fig. 7	Shrub (Explorer)	Very large (10') arching plant; flowers pink, medium-size, semi-double; slightly fragrant	Tipburn

Key:

Market Class (Origin): Modern refers to varieties bred over the past few decades by one of many rose breeders from around the world; Buck refers to roses bred by Dr. Griffith Buck at Iowa State University; Explorer refers to roses bred by Agriculture Canada in Ottawa, Ontario; Parkland or Morden refers to roses bred by Agriculture Canada at the Morden, Manitoba research station. Buck, Explorer, and Parkland roses are all officially categorized as Modern Shrub roses, but are designated separately because of their exceptional value in high-altitude locales.

Table 2. Continuous blooms (cont.). These 22 hardy rose varieties suitable for planting in the short-season/high-altitude climates of Idaho are continuous blooming and organized by color. An asterisk (*) indicates the variety is moderately fragrant. Key below this table explains additional terms.

VARIETY NAME	MARKET CLASS AND (ORIGIN)	DESCRIPTION	HARDINESS
Red (cont.)			
Champlain	Shrub (Explorer)	Medium-small (3') upright plant; flowers red, medium-size, double; not fragrant	10% dieback
Fiesta	Shrub (Modern)	Medium-small(2') upright plant; flowers bright red, medium-size, double; slightly fragrant	25% dieback
Quadra	Shrub/Climber (Explorer)	Moderately large (6') arching plant; flowers very dark red, large, fully double; slightly fragrant	Tipburn
*Winnipeg Parks	Shrub (Parkland)	Medium-small (3') upright plant; flowers red, very large; double; moderately fragrant	Tipburn
Yellow, Peach, Salmon			
*April Moon Fig. 1	Shrub (Buck)	Medium-small (3') upright plant; flowers light yellow, very large, double, hybrid tea form; moderately fragrant	10% dieback
*Golden Unicorn	Shrub (Buck)	Medium-small (3') spreading plant; flowers yellow/amber blend, very large, double, hybrid tea form; moderately fragrant	50% dieback, good regrowth
Millie Walters Fig. 4	Miniature (Modern)	Small (2') upright plant; flowers orange/peach blend, small, fully double; slightly fragrant	50% dieback, good regrowth
*Morden Sunrise	Shrub (Parkland)	Medium-size (4') upright plant; flowers yellow/orange blend, medium size, semi-double; moderately fragrant	Tipburn
Sally Holmes	Shrub (Modern)	Medium-size (4') plant; flowers light salmon, medium-large, semi-double, not fragrant	75% dieback, good regrowth
Multi-colored			
Mountain Music	Shrub (Buck)	Small (2') spreading plant; flowers pink/yellow blend, medium-large, double; slightly fragrant	50% dieback, good regrowth
Mozart	Old Garden	Medium-large (5') sprawling plant; flowers pink with a white center, tiny, single, grow in large clusters; not fragrant	25% dieback
Pearlie Mae	Shrub (Buck)	Medium-size (4') plant; flowers yellow/pink blend, very large, double, hybrid tea form; not fragrant	25% dieback
Pink Meidiland	Shrub (Modern)	Medium-size (4') upright plant; flowers pink with a white eye, medium-size, single; not fragrant	50% dieback, good regrowth
Sunrise, Sunset	Shrub (Modern)	Small (2') spreading plant; flowers pink/yellow blend, medium-size, double; moderately fragrant	50% dieback, good regrowth
White			
Popcorn	Miniature (Modern)	Very small (1') dense plant; flowers white, very small, double; not fragrant	25% dieback

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Table 3. Repeat blooms. These 30 hardy rose varieties suitable for planting in the short-season/high-altitude climates of Idaho offer repeat blooms each summer. They are organized by color. One asterisk (*) indicates the variety is moderately fragrant; ** means very fragrant. Key below this table explains additional terms.

VARIETY NAME	MARKET CLASS AND (ORIGIN)	DESCRIPTION	HARDINESS
Pink			
Bonica	Shrub (Modern)	Medium-small (3') dense plant; flowers pink, small, double; slightly fragrant	50% dieback, good regrowth
Country Dancer	Shrub (Buck)	Medium-small (3') plant; flowers light pink, very large, double, hybrid tea form; strong repeat bloom, slightly fragrant	50% dieback, good regrowth
*Do-Si-Do	Shrub (Buck)	Medium-size (4') upright plant; flowers rose-pink, large, double; moderately fragrant	50% dieback, good regrowth
Morden Blush	Shrub (Parkland)	Medium-size (4') dense plant; flowers light pink, medium-size, fully double; strong repeat bloom, slightly fragrant	Fully hardy
*Prairie Harvest Front page	Shrub (Buck)	Medium-size (4') upright plant; flowers pink, large, double; strong repeat bloom, moderately fragrant	25% dieback
*Prairie Joy Fig. 6	Shrub (Parkland)	Large (6') spreading plant; flowers dark pink, medium-size, double; light repeat bloom, moderately fragrant	Tipburn
*Quietness	Shrub (Buck)	Medium-small (3') spreading plant; flowers light pink, very large, double, hybrid tea form; moderately fragrant	25% dieback
*Rural Rhythm	Shrub (Buck)	Medium-size (4') upright plant; flowers pink, large, double; moderately fragrant	50% dieback, good regrowth
**Stanwell Perpetual	Old Garden	Medium-size (4') arching plant; flowers light pink, medium large, double, strongly fragrant	10% dieback
Red			
*Brave Patriot	Shrub (Buck)	Medium-small (3') plant; flowers dark red, large, single, moderately fragrant	75% dieback, good regrowth
Bucred	Shrub (Buck)	Medium-small (3') upright plant; flowers bright red, large, double, hybrid tea form; strong repeat bloom, slightly fragrant	25% dieback
*Cuthbert Grant	Shrub (Explorer)	Medium-size (4') upright plant; flowers velvety-red, very large, double; moderately fragrant	25% dieback
George Vancouver	Shrub (Explorer)	Medium-size (4') spreading plant; flowers red, medium-size, double; slightly fragrant	Tipburn
Griff's Red	Shrub (Buck)	Medium-small (3') plant; flowers dark velvet red, large, double, slightly fragrant	50% dieback, good regrowth
Henry Kelsey	Shrub/Climber (Explorer)	Large (8') arching plant; flowers dark red, medium size double; slightly fragrant	Tipburn
Home Run	Shrub (Modern)	Medium-small (3') upright plant; flowers dark red, large, single; slightly fragrant	50% dieback, good regrowth
*Hope for Humanity Fig. 3	Shrub (Parkland)	Medium-size (4') spreading plant; flowers dark red, large, double; moderately fragrant	75% dieback, good regrowth
**Hunter	Shrub (Modern)	Medium-size (4') upright plant; flowers dark red, medium-size, double; strongly fragrant	75% dieback, good regrowth

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Table 3. Repeat blooms (cont.). These 30 hardy rose varieties suitable for planting in the short-season/high-altitude climates of Idaho offer repeat blooms each summer. They are organized by color. One asterisk (*) indicates the variety is moderately fragrant; ** means very fragrant. Key below this table explains additional terms.

VARIETY NAME	MARKET CLASS AND (ORIGIN)	DESCRIPTION	HARDINESS
Red (continued)			
Linda Campbell	Shrub (Modern)	Medium-small (3') plant; flowers dark red, medium-size, semi-double, slightly fragrant	75% dieback, good regrowth
Robin Hood	Shrub (Modern)	Small (2') plant; flowers red, very small, grow in large clusters, double, slightly fragrant	75% dieback, good regrowth
*Square Dancer	Shrub (Buck)	Medium-size (4') spreading plant; flowers light red, very large, double; strong repeat bloom, moderately fragrant	10% dieback
William Booth	Shrub (Explorer)	Medium-size (4') spreading plant; flowers dark red, medium-size, single; strong repeat bloom, not fragrant	Fully hardy
Yellow, Peach, Salmon			
Fred Loads	Floribunda	Medium-size (4') spreading plant; flowers medium orange, medium-large, semi-double, slightly fragrant	25% dieback
Multi-colored			
Chuckles	Floribunda	Medium-small (3') upright plant; flowers pink/white center, medium-size, single; slightly fragrant	25% dieback
*Country Song	Shrub (Buck)	Medium-size (4') upright plant; flowers pink/apricot blend, large, semi-double; strong repeat bloom, moderately fragrant	50% dieback, good regrowth
*Elias	Shrub (Buck)	Medium-small (3') upright plant; flowers pink/white blend, very large, double, hybrid tea form; strong repeat bloom, moderately fragrant	75% dieback, good regrowth
*Fergus Gamez	Shrub (Modern)	Medium-size (4') plant; flowers light salmon to white, medium-large, double, moderately fragrant	50% dieback, good regrowth
Incredible Fig. 8	Shrub (Buck)	Medium-small (3') upright plant; flowers salmon-pink, very large, double, hybrid tea form; slightly fragrant	75% dieback, good regrowth
*JP Connell	Shrub (Explorer)	Medium-tall (5') upright plant; flowers white or very light yellow, medium-large, double; sparse repeat bloom, moderately fragrant	25% dieback
White			
*Morden Snowbeauty	Shrub (Parkland)	Medium-size (4') spreading plant; flowers white, large, double; moderately fragrant	Fully hardy

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ADDITIONAL ROSE SELECTION POINTERS

Hybrid rugosa roses provide exceptional hardiness, repeat bloom, and outstanding fragrance. However, they are prone to iron chlorosis when grown in alkaline soils and are susceptible to damage from gall wasps. For this reason, few hybrid rugosa varieties are listed here. The two exceptions are Hunter and Linda Campbell. If you are lucky enough to live where the soil is acid and gall wasps rare, you may want to grow other hybrid rugosa rose varieties. Some of the best varieties are: Agnes, Dart's Dash, Grootendorst Supreme, Hansa, Henry Hudson, Jens Munk, Martin Frobisher, Robusta, Therese Bugnet, and Topaz Jewel.

Large-flowered hybrid tea and floribunda roses are tender and often suffer severe winter injury in high altitude gardens, however, some varieties demonstrate better hardiness, or at least greater ability to recover and bloom after a tough winter. Among the best performers in the UI hardy rose demonstration garden are the following: **floribunda** – Betty Boop (back page photo), Betty Prior, Chuckles, Fred Loads, Hula Hoop, Nearly Wild, and Showbiz; **hybrid tea** – All that Jazz, Audrey Hepburn (Fig. 5), and Pink Peace.

CARE OF HARDY ROSES

Practices for planting and general care of hardy roses are similar to those prescribed for most other adapted shrubs and woody plants. Numerous publications describe principles of proper rose care and can be purchased, accessed at a local library, or downloaded from the Internet. For sake of space, this section will outline only the practices unique to hardy roses grown in short-season/high-altitude areas.

PLANTING

For own-root roses, typical tree and shrub planting procedures can be followed when establishing hardy rose varieties. Alternatively, if a variety is grafted, it is best to dig the planting hole deep enough to allow the graft union to be buried 2 to 3 inches below the soil surface. Deep planting will help protect the rootstock in case it is not hardy enough to survive local conditions.

FERTILIZING

Gardening traditions often perpetuate the belief that roses need copious amounts of fertilizer. However, vigorously growing, hardy roses need very little fertilizer, once established. The requirement for minimal fertilizer is especially applicable if roses are grown in a mulched bed.

Products suitable for fertilizing roses vary in nutrient content. For this reason, specific rate recommendations are difficult in a brief publication such as this one. Many manufacturers produce fertilizers designed to meet the needs of roses and other shrubs and most provide directions for using their products. Directions will be geared toward tender roses, so use the minimum recommended product rate, or less (possibly half as much). The best application time for hardy roses is in the fall, although a small amount may be applied in the spring. Hardiness of roses will be negatively impacted if they are over-fertilized or if fertilizer is applied late in the season (after July).

IRON CHLOROSIS/HIGH PH SOILS

Yellowing of the newest leaves accompanied by dark green veins on the affected leaves can be a persistent problem in areas with alkaline (high pH) soils. The best way to manage this problem is to plant resistant varieties. To express resistance, the rose variety must be own-root, otherwise the rootstock will dictate response to soil pH. Finding information about the response of varieties to soil pH is difficult. In general, among hardy roses, the Morden (Parkland) shrub roses are resistant to iron chlorosis whereas the hybrid rugosas are very susceptible. Other groups of rose varieties show a mixed response.

Preventing iron chlorosis in susceptible varieties requires constant effort. The soil should be treated by incorporating garden sulfur, and iron sulfate, or aluminum sulfate around the plants two or three times each summer. In cases of severe symptoms, spraying the foliage with a solution of a chelated iron product may be necessary. This procedure is only effective if done multiple times each summer, starting before severe iron deficiency symptoms appear. Incorporating organic matter in the form of composts or manures also helps minimize iron deficiency problems.

PRUNING

Pruning practices for hardy rose bushes are distinctly different from those required for tender roses. The reason is reduced need to manage or remove winter-damaged wood each spring. Hardy roses will maintain the growth that occurs each year, causing them to grow larger and denser each season. The strategies for pruning hardy rose bushes are to control overall size, thin old wood, and maintain young, vigorous flowering stems.

Timing—One important decision is to determine the best time to prune. This is dictated by the flowering habit of the variety. Once-blooming (also called spring-blooming) roses should be pruned after they flower. Once-blooming roses, such as most Old Garden Roses, develop their flower buds the previous fall, and early spring pruning will eliminate the flowers. Prune these varieties in early summer after bloom is complete. Repeat-blooming roses (those that bloom on and off all summer) set flower buds on new growth so early pruning does not eliminate the flowers. The best time to prune these varieties is early spring, before new growth begins.

4 steps—With both types of varieties, the steps involved in proper pruning are the same, though the timing is different:

1. Remove all damaged and dead wood, including winter-killed branch tips.
2. Remove 1/4 to 1/3 of the oldest, least vigorous branches by cutting them at or near ground level. This will help keep the plant young, vigorous, and free blooming.
3. Remove branches that interfere with or rub other branches.
4. Shape the bush by removing excessively long or out-of-place branches.

CARE OF TENDER ROSES

With sufficient protection, tender hybrid tea, grandiflora, and floribunda roses can be grown in the warmest of Idaho's short-season/high-altitude locales. Proper care of tender rose bushes provides no guarantee that they will thrive, or even survive after a hard winter. However, adherence to proper techniques will bring a greater chance of consistent, showy bloom. As with the hardy rose management section, the information provided here is intended to be less than comprehensive. General rose care information is available from many sources, and only supplemental information, specific to cold climates, will be given here.

PLANTING

Nearly all tender rose varieties are propagated by grafting onto a common rootstock. Winter injury severe enough to damage the graft union may kill the upper portion of the plant. Minimizing damage to the graft union is done, in part, by planting the bush with the graft union 2 to 3 inches below the surface of the soil. This practice will improve the odds of having the plant come back true-to-type if the plant is killed to ground level by a severe winter.



Figure 8. Moderately tender varieties such as the Buck shrub rose Incredible tend to experience winter injury to 75% or more of the wood, but they have the ability to regrow rapidly and bloom generously in early summer.

FERTILIZING

Tender roses need more nutrients than hardy roses because of the need to regrow wood each spring. A complete fertilizer product should be applied when sprouts appear in the spring and again around the first part of July. Fertilizer products suitable for use on roses vary widely in nutrient content, so it is difficult to provide an application rate recommendation. Carefully follow manufacturer instructions. Avoid fertilizing after July because it will encourage new, tender growth that will be very susceptible to winter damage.

PRUNING (FIGS. 10 A, B)

Proper pruning of tender roses is mostly a matter of removing damaged wood and encouraging vigorous, healthy new stems. The best time to prune tender roses is early spring, before new growth appears.

1. Remove all dead and damaged wood. After a severe winter, stems may be cut back almost to the soil line in order to remove black or brown branches that are symptomatic of winter damage. If possible, cut each stem to a point one or two inches below the apparent line between brown or black dead tissue and the living green, shiny tissue. The practice of over-pruning will keep the plant from growing weak sprouts that originate in damaged but still living wood.
2. Remove at the base any small or weak branches. When pruning an established, healthy plant, the goal is to leave 4 or 5 of the largest, strongest canes.

WINTER PROTECTION

Providing winter insulation and wind protection to tender roses is probably the single most important cultural requirement. In the short-season/high-altitude climate of Idaho, winter damage to roses is partly due to cold, but much of the damage is due to desiccation resulting from drying winter winds. Several techniques can be used to protect roses from winter damage. Three of the most effective are described here.

Mounding (Figs. 11 a,b) is an effective method of providing winter protection. Placing soil around and over the plant to a depth of 8 to 12 inches is the simplest method of mounding. The soil should be moist. Be careful not to damage roots by digging too close (3' or so) to the plants when obtaining soil for the mounds. Compost, mulch, leaves, or other types of organic matter can also be used to mound roses.

A strategy that works well is to buy new mulch in the fall, mound it around plants to provide winter protection, and subsequently spread it around the bed the following spring. Avoid using straw or hay as mounding materials because these attract rodents that may chew and damage bark and small branches. Wire or plastic cages can help keep mounds in place if they are placed around the plants and filled with mulch.



Figures 9 a, b. Proper pruning of hardy rose bushes consists of thinning and shaping the plant as shown in these before (a, left) and after (b, right) pictures.



Figures 10 a, b. Pruning tender roses involves removing all dead wood and taking out small or weak canes as shown in these before (a, left) and after (b, right) pictures. After a severe winter, the plant may require extensive pruning that involves removing wood nearly to ground level.



Figures 11 a, b. Mounding soil or mulching materials around the base of tender plants provides effective winter protection. On the left (a) is a tender rose in the fall mounded in preparation for winter cold. The right picture (b) shows the plant in spring and demonstrates how canes tend to die down to the top of the mulching materials.

Tipping (Figs. 12 a,b,c,d), also called the Minnesota Tip method, is a very effective, but labor-intensive method for protecting roses. Tipping is done by digging a shallow trench that radiates out from the base of the plant to a length equal to the height of the plant. Pruning the plant to half its original height will cut down on the amount of digging needed. Be careful to minimize damage to the roots of the plant when digging around the base. Most rose roots are shallow so they are easy to damage. However, it is necessary to expose the crown and roots on the trench side of the plant, and some damage will occur. After the trench is prepared, simply tip the plant into the trench, being careful not to break the branches or roots, and cover the entire plant with soil. Leave the plant covered until the soil begins to warm in the spring at which time it can be uncovered, pulled back upright, and the trench filled and tamped to provide support to hold the plant vertical.

Styrofoam cone cover. The third method of protection is to cover plants with commercially available styrofoam cones. Fitting plants into the cones usually requires that they be pruned and the branches tied together. This method has two down sides—the unattractive nature of the cones, and the expense (around \$4 each). However, the cones do provide very effective protection against both cold and drying winds.

Protection removal in spring. Regardless of the protection method employed, it is important to remove the protective materials in a timely manner in spring. Starting in March or early April, periodically inspect the roses to check for developing sprouts or the growth of mold around the base of the stems. When new sprouts or fungal growth are detected, begin the process of gradually removing the mulch or other protective material until (a few weeks later) the roses are completely exposed. The gradual removal process should be completed by about the end of April in most of Idaho's short-season climates. In some areas and years, the timing may be a few weeks earlier or later.



a.



b.



c.



d.

Figures 12 a, b, c, d. The Minnesota tip method is an effective way to protect tender hybrid tea and floribunda roses from winter injury. It is done in late fall by, a) pruning the bush to about 18" tall, b) tying the canes together, c) digging a trench extending radially in one direction from the plant, and laying the plant into the trench by bending the roots, and (d) covering the canes with soil.

WHERE TO BUY HARDY ROSES

A local nursery is the best place to buy hardy roses because plants can be inspected before purchase. Also, advice from a nursery professional can be invaluable in making the proper selection. However, many attractive, adapted rose varieties may not be available locally. Below is a list of mail-order nurseries that specialize in hardy roses that grow well in Idaho's short-season/high-altitude climates. Inclusion in the list is not an endorsement by the University of Idaho.

ANTIQUEROSE EMPORIUM

9300 Lueckmeyer Rd
Brenham, TX 77833
800-441-0002
E-mail: roses@wearroses.com
Web: www.antiqueroseemporium.com

CHAMBLEE'S ROSE NURSERY

10926 US Highway 69 North
Tyler, TX 75706-8742
800-256-7673
E-mail: roses@chambleerose.com
Web: www.chambleerose.com

HIGH COUNTRY ROSES

9122 E. Highway 40
Jensen, UT 84035
800-552-2082
E-mail: roses@easilink.com
Web: www.highcountryroses.com

HORTICO NURSERY

723 Robson Road, RR#1
Waterdown, ON Canada L0R 2H1
905-689-6984
E-mail: office@hortico.com
Web: www.hortico.com

OLD HEIRLOOM ROSES

PO Box 9106
Halifax, NS Canada B3K 5M7
902-835-4209
Web: www.oldheirloomroses.com

PICKERING NURSERIES

3043 County Rd #2, RR#1
Port Hope, ON Canada L1A 3V5
866-269-9282
E-mail: roses@pickeringnurseries.com
Web: www.pickeringnurseries.com

ROSES UNLIMITED

363 N. Deerwood Dr.
Laurens, SC 29360
864-682-7673
E-mail: rosesunlmt@aol.com
Web: www.rosesunlimiteddownroot.com



Hawkeye Bell

Find more gardening resources and publications online at
www.extension.uidaho.edu/homegard.asp



Betty Boop

ABOUT THE AUTHORS

Stephen L. Love is a Community Horticulture Specialist in the Department of Plant, Soil, and Entomological Sciences at the University of Idaho Aberdeen Research and Extension Center.

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