Northern Nevadans are establishing home vineyards, discovering the satisfaction of growing their own grapes and making their own wine. Grapevines add beauty and diversity to a landscape and enrich a home’s exterior, evoking a European charm. Vines can be trained to cover an arbor, with their large leaves providing a welcome shady respite from the summer’s heat. In the fall, the leaves turn spectacular shades of red and orange.

Growing productive wine grapes (Vitis vinifera) in Nevada is not as crazy as it sounds. In fact, University of Nevada, Reno, has been experimenting with viticulture, the science of grape growing, for over a decade. At their vineyard (above), they have proved that many wine grapes can be grown in our climate.

An increasing number of
Northern Nevadans do face special challenges—such as late spring freezes, dry winters, and poor soil quality—with good viticulture practices, you can successfully grow your own grapes and make your own wine.

Growing wine grapes will require patience, as most varieties won’t produce fruit for the first three years. Establishing healthy and vigorous vines is critical for good fruit production.

START WITH THE SOIL
Before you purchase any vines or dig any holes, get your soil tested. Most wine grapes thrive in well-drained, slightly acidic soils with a pH of 6.0 to 6.5, but can do well in soils with a pH of up to 7.5. Soils in northern Nevada tend to be alkaline (above 7.5) and low in organic matter.
Armed with the results of your soil test, add the recommended amendments to bring your soil into proper grape-growing conditions. Keep in mind, you won’t be able to replicate the taste and characteristics of grapes grown, for example, in the decomposed granite of El Dorado County, or the calcium-rich soils of Châteauneuf du Pape in southern France. Each wine region of the world has its own terroir, or local taste of the earth. When amending your soil, focus on creating soils that have the appropriate pH level, a lot of organic matter and good drainage.

LAYING OUT THE VINEYARD
Usually grapevines are planted on long trellises. However, you can just as easily plant a few vines to cover an arbor or patio structure. If you want to stick with the traditional vineyard look, you’ll probably want to install a few rows of long trellises, about four to six feet high, made of posts and wires. Space the rows three to four feet apart. You’ll need enough room between the rows to walk, prune, maneuver a wagon or wheelbarrow, and dance for joy when you pick the first harvest. If it better suits your landscape design, you can also just plant one long row. Once you’ve marked out the rows, install posts every six to eight feet. Then, string one wire four feet from the ground, and a second pair of moveable wires two feet above the first one.

CHOOSING YOUR STOCK
Now it’s time to choose the grape varieties you want to grow. Make sure to get vines that are certified disease-free and are not grafted. Also, certain

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Because young vines are so susceptible to winter damage, it is best to plant them after the last frost in late spring. Plant the vines between the trellis posts in holes dug two to three times as wide as the container and just as deep as the container. If you are planting bare-root vines, or rooted cuttings, plant them in fourteen-inch-deep holes that are about a foot wide. Mound about one inch of soil on the bottom of the hole and place the cutting in the hole. Backfill the hole with a few inches of soil and give the cutting a gentle upward tug to make sure the roots are pointing down and are not kinked or twisted. Finish filling the hole with the remaining soil. By planting the cuttings deeply, roots will grow along the entire length of the cuttings, establishing a strong root system.

Providing Irrigation

The best way to ensure your vines get adequate water in our dry climate is to install a drip irrigation system. Secure one-quarter-inch microtubing to the trellises, about a foot and a half above the ground. Install a two-gallon emitter on each side of each vine. University of Nevada, Reno research shows that irrigating weekly for about one hour during the first two years will establish a vigorous and robust root system. The University’s researchers have also found

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Red Varietals

Lemberger

Hailing from vineyards along the lower Danube River, this Austrian varietal is the most prolific red grape in our region. Depending upon the winemaking style used, it can be a jammy wine with notes of blackberries and cherries, or a spicy bold wine with notes of plums and green bell peppers. It is very susceptible to powdery mildew, which must be controlled with repeated sulfur applications. A good alternative to this variety is Regent. In Germany, Regent is more commonly grown than Lemberger because of its greater powdery mildew resistance.

Cabernet Franc

This moderate producer hails from Bordeaux, where it is often blended with other big reds. It stands very well on its own with spicy aromas and floral notes.

Pinot Meunier

This moderate producer hails from Champagne. It is traditionally used to make sparkling wine, and sometimes used to make rosé. When allowed to ferment with the skins, it makes a pleasantly low-tannic, fruity, and provincial red wine.

Pinot Noir

This low to moderate producer has its origins in Burgundy and has been cultivated for over 2,000 years. It is especially expressive of terroir, both the good and the bad. It can be a very sensuous wine, but is also difficult to grow. In the hands of a good winemaker, it can be coaxed into silk and finesse, or revved up to be spicy and bold, depending upon where and how it is grown and made.

Merlot

Grown in Bordeaux for over 2,000 years, this varietal was planted at the University’s experimental vineyard in 2001, and long-term production data are not available. However, the 2006 harvest was very productive, and preliminary data suggest it may be a promising variety for this area. It can be a rich, opulent wine with floral notes and an earthy bouquet.

Syrah

This grape has its origins in the Rhone Valley; it is widely grown in Australia where it is called Shiraz. Here, it was planted at the experimental vineyard at the same time as merlot. Like pinot noir, it is very expressive of terroir. Characteristics can range from big and spicy to fruity and heady. Initial research at the experimental vineyard suggests our climate may be too cold for this variety, as it is struggling compared to the merlot. Still, Syrah makes a nice wine and may do well in areas where the temperatures are a little warmer than they are in downtown Reno.

The University’s most recent findings show that after last spring’s frost following a warm spell, only four varieties did well: Riesling, gewurztraminer, Lemberger, and merlot. Continued on page 29

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that during these years, it is beneficial to apply two deep irrigations (sixteen gallons), once in the spring after the buds have opened, and again in the fall after the leaves have changed color. This will help establish good roots, aid in drought tolerance, and reduce winter damage.

After the first two years, you should irrigate only as needed. A common mistake is to water too much. Grapes hate wet feet! To judge when plants need water, watch the tendrils. Very long ones indicate overfertilization (especially nitrogen) and overwatering. If the tendrils start to dry up, the vines are becoming too water-stressed. Note that some water stress is good. It produces better quality grapes and fruitier wines. In addition, the University’s research has found that winter survival of the vines in our area is markedly improved with water stress.

GUARDING AGAINST SPRING FREEZES

In Northern Nevada, the biggest threats to establishing vines are the spring freezes that are so characteristic of the Great Basin Desert. To protect young vines from freezing, many universities are studying the effects of burying the vines, and there have been some positive results. According to preliminary findings, it is best to bury the vines in November. Detach all of the canes from the trellis. Tie the canes together, and carefully place them on their sides. University of Nevada, Reno researchers have found that it is important to establish the proper training system, or the canes will be too stiff and will break when trying to bend them. Then, cover the canes with twelve to sixteen inches of fine soil or compost. In late March, uncover the canes and reattach them to the trellis.

LONG-TERM CARE: PRUNING AND WEEDING

After your vines are in, you will spend the next five years focused on keeping the vineyard weed-free and the vines properly pruned. Proper pruning encourages good vine structure and regulates fruit production. Pruning is as much art as it is science, and its complexities are beyond the scope of this article. However, excellent research-based information on grapevine pruning can be found on many university Web sites, and is available at University of Nevada Cooperative Extension in Reno, at 5305 Mill Street.
Keeping the vineyard weed-free will reduce competition from unwanted plants for water and nutrients. Laying down a thick layer of organic mulch, such as wood chips or weed-free straw, will smother many annual weeds and allow you to walk between the rows without compacting the soil. Annual weeds are also easily controlled by simply pulling them after they first sprout. You can also apply pre-emergent herbicides before they sprout, which will kill some annual seeds as they sprout. Be sure to use products appropriate for edible grapes.

Perennial weeds may be a bit more challenging to control. You can try hand pulling them as they sprout. If you need to resort to using herbicides, be very careful when applying them, as herbicides that control perennial broadleaf weeds will also damage or kill your vines. Always read the label, follow the directions, and wear proper protection. If you are unsure about what types of weeds you are battling, you can bring samples to the University of Nevada Cooperative Extension office for identification and control recommendations.

Another interesting weed-control option is to plant companion cover crops to discourage weeds, while simultaneously building the soil. Plants that provide nitrogen to the soil, such as vetch, beans, and peas, are mixed with other annual herbs and planted between the rows. They are allowed to bloom and set fruit, and then are slashed and left in place to provide “green manure” to the vineyard. A few vineyards using cover...
crops in this way include Navarro in the Anderson Valley, Ceàgo in Lake County, and Fitzpatrick in Fairplay. It is worth a trip to these or other vineyards practicing organic, sustainable, or biodynamic practices to learn innovative methods of weed control and viticulture.

It is also worth a trip to our local research vineyard at the University of Nevada, Reno Agricultural Experiment Station on Valley Road in Reno. A team of researchers (including article coauthor Cramer) has been conducting viticulture and enology studies there for over ten years. Their research results are summarized in the University of Nevada, Reno Research Bulletin, “Towards Wine Grape (Vitis vinifera) Vineyard Establishment in Northern Nevada,” available online at www.ag.unr.edu/cramer/Publications/ViniferaFactSheet.pdf. The researchers also have newsletters available online, with tips and links to other important information.

For more information on growing wine grapes or gardening issues in northern Nevada, contact University of Nevada Cooperative Extension, 784-4848 or allenl@unce.unr.edu.

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merlot. These four varieties are recommended for a home vineyard because they are most likely to succeed in our climate. Their better success is due to their ability to remain dormant for a longer period of time. Another potential variety that is being tested in Yerington is Tempranillo. It is a red grape that has a late bud break and early harvest, two important characteristics for our area, with its relatively short growing season.

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