Grapes are Versatile Fruits and Have Market Potential

By J. R. McGrew

The grape is a versatile fruit. For dessert use, there is a wide range of flavors—fruity, spicy, muscat, and of textures—crisp, melting, juicy. There now is the same range of colors in seedless varieties adapted to most parts of the United States that is available in seeded varieties.

Fruits may easily be processed into jelly or breakfast juice for use throughout the year. With some additional effort, wine from your own vines can enhance your meals.

Grapes can be marketed for all the above purposes (except as wine which is strictly controlled by State and Federal laws) and may be a profitable, though sometimes risky, source of income.

Grape growing has been tried at some time during the last 400 years in almost every area of this country. Grapes are produced commercially where the climate is favorable, diseases are successfully controlled, and vines survive well enough to pay back the costs of a vineyard.

In established grape areas the competition for markets is greater than in areas where more care and skill are required or where the risk of failure is greater from frosts or rots due to untimely rains. Modern pesticides and use of varieties adapted to particular regions have extended the areas where grapes may be profitable.

If you can accept an occasional crop failure and plant those varieties best suited to your locality, rather than attempting to grow the "premium" varieties of the better commercial areas, grapes can be grown almost anywhere provided there is a frost-free season of 140 days or more.

There are too many varieties, climates and judgments of quality to cover this subject in detail here. A general listing of types of grapes will help you narrow down the possible choices.

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At that stage you should contact your County Agricultural Agent or the Extension specialist for fruit crops from your State Agricultural Extension Station for suggestions and recommendations.

Vinifera (European or California types). Among these varieties are found the highest quality grapes for table, raisin and wine use. Unfortunately, they are very susceptible to diseases and some are damaged both by winter cold and by warm spells in the winter.

A few small plantings have been made outside the recognized West Coast vinifera areas but they are considered too risky to recommend for general commercial plantings.

American. These are the hardy, disease-tolerant varieties. Most are derived in some degree from the wild American fox grape (*Vitis labrusca*). Well known examples are Concord, Delaware and Niagara. Several modern varieties in this group are seedless and well suited for table use.

Hybrids include the so called "French hybrids" developed in France over the past 80 years primarily for wine. They are more neutral in flavor than most American varieties and a few are well adapted for table use.

The hybrids are crosses between European grape varieties and various native American species. They were selected for the fruit quality of their European ancestors and the disease and insect tolerance of their American ancestors.

Both traits vary widely, from nearly wild with excellent resistance to pests, to high quality with modest resistance. As a group, hybrids are much easier to protect against the many pests than are the vinifera varieties.

Ripening of hybrids differs widely and there are varieties suited to most growing seasons. Also, in this group are several of the more recently introduced wine and table grapes originated in the U.S.

Southeast Grapes. Pierce's Disease of grapes is widespread in the Southeast U.S. It limits the survival of vinifera and most of the American and hybrid varieties. Muscadines (Scuppernong types) are tolerant as are a few of the older American varieties and some recent American varieties originated in Florida.

Whether rootstocks are necessary and if so, which one to use, is especially confusing to the beginner. For most U.S. vineyards only the *vinifera* varieties may need to be grafted.

A rootstock enables you to grow a variety under conditions where the own-rooted (non-grafted) vine might fail. Reasons

for failure include *phylloxera* root-louse damage (on heavy soils) and nematode damage (on lighter soils, especially when replanting a vineyard).

Certain rootstock varieties may increase vigor, permit good growth on lime soils, reduce damage from droughty or wet soils, or tolerate certain soil-borne diseases.

Rootstocks are advisable only when one of these particular situations has been found repeatedly in the area. The rootstock variety chosen is of the group that best corrects the situation.

Before planting grapes you must know what is to be done with the crop. A quarter-acre (100 vines) can produce a ton of fruit (50 to 60 bushels). This amount would make 100 to 200 gallons of juice or wine.

The date of harvest of a variety can vary a week or two from year to year. When the fruit is ready or if the weather turns wet, picking cannot be put off, and once the fruit is picked it must be used promptly. A ton or more of grapes with no visible market can lead to a state of panic.

Except in areas where the grape supply is at or near saturation, there are several ways to market the crop. Successful marketing depends on the correct choice of varieties made when planting the vineyard.

Cost of establishing a vineyard is generally estimated at around $3,000 per acre exclusive of actual land cost. This includes vines, trellis posts, wire, pesticides and labor for the approximately three years before the vines begin to produce.

Labor requirements for weed control, pruning and training of vines, and pest control is high. Many of the specific chores must be done at the right time or major (and expensive) problems can develop.

Successful grape production always depends on keeping ahead of the problems. You must take preventive steps against weeds, insects, and disease. Once any of the pests build up in a vineyard, control is more costly and risk of financial loss greater.

Recognizing and staying ahead of the problems extends to all phases of grape growing. For example, weak posts should be replaced promptly or the entire row may go over.

Other problems that must be considered are rabbits that can prune off young vines, deer that seem to prefer tender grape shoots to almost anything else, and birds that flock to the vineyard before the grapes are ripe enough for you to enjoy them. The cost of fences or netting may need to be added to the estimates for growing grapes.

Site Selection

To be productive, grapevines require full sunlight. Nearby trees, even when they do not shade the vines, compete for moisture and provide birds with a perch from which to invade the vineyard. Wet soils are not good for grapes.

At least three feet of medium to heavy soil or five feet of sand should be available. Shallower soils reduce vigor and size of crop.

Grapes are adapted to a wide variety of soil types. The low fertility of light or poor soils can be corrected with fertilizers. Deep, rich soils can result in overly vigorous vines that have poor clusters, mature later, and are of lower quality for wine.

The extremely steep hillside vineyards above the Rhine are picturesque and the slope does increase the sunlight and warmth reaching the vines, but only the high prices received for these special grapes justify the labor.

Less extreme slopes may be practical in areas where air drainage gives protection against frosts after the tender vine shoots have begun to grow. In most areas of this country, nearly level to rolling ground is more practical for grapes. Avoid frost pockets, those areas where cold air tends to collect at the bottom of slopes.

Spacing of vines is determined as much by the equipment to be used as by the varieties grown. Ten to 12 feet between rows is recommended so that tractors and sprayers can travel between the vines.

A closer spacing is possible if you use smaller equipment, but the actual yield per acre does not increase in proportion to the number of vines.

In humid areas where diseases are prevalent, close spacing of rows slows the drying of leaves and fruit and makes disease control more difficult.

Spacing between vines within each row is determined by the vigor of the variety.

You want the vine foliage to at least meet between the vines so that maximum use is made of sunlight. Some overlap of foliage is usual and expected.

For vigorous vines 9 to 10 feet will usually fill the trellis with foliage.

For some of the less vigorous hybrids, a spacing of 6 feet between vines is preferred.

Fruit yield is based on foliage exposed to the sun, so as long as the trellis is filled, optimum yield can be expected. Increasing the number of vines does not increase the yield.

Size of Crop. One factor in grape growing that cannot be ignored, and cannot be overly stressed, is that a vineyard can produce only a given sized crop without loss of fruit quality or damage to the vines.

Sunshine ripens the grapes. Under ideal conditions, a long growing season with no cloudy days or rain, a one-acre vineyard (regardless of the number of vines) can produce about 15 tons of properly ripened grapes per year. When the growing season is shortened, or if the available sunshine is reduced by clouds or rain, the maximum yield may be only a quarter as large.

If you permit the vines to bear too much fruit, sugar will be lower, vines may be damaged, and fewer fruitful buds produced so that during the following year the yield will be much smaller.

Varieties and the number of vines to plant for one's own use are determined by your goals. For juice, 10 Concord vines set at 8 to 10 feet apart will usually provide 50 quarts of grape juice each year.

For table use, each vine will produce 5 to 15 pounds of fruit. One or two vines each of 10 varieties chosen to ripen over a period of 1½ to 2 months will usually produce enough for lavish home consumption and gift baskets for friends.

For wine, a quarter acre is the maximum size for a home winemaker operating under the Federal permit (BATF 1541) limit of 200 gallons per year. The size can be scaled down to suit your goals.

Varieties grown will depend on the type of wine desired. Some varieties are acceptable for either table or wine use, and the wine grapes do make interestingly different unfermented juice or jelly.

Sale of Grapes

Successful marketing depends on planting the right varieties for both your climate and the intended end-use of your customers. The quantities you can expect to sell to each customer vary greatly.

Roadside stands are a popular marketing method and grapes make an excellent addition to other fruits and vegetables in attracting customers. Three classes of grapes can be marketed:

- Table Grapes. Top quality, well-ripened clusters are required. Individual sales are small, ranging from 1 to 5 pounds and some sort of container is required to prevent damage to fruit. Price per pound is high.

The great range of varieties can be used advantageously. Early to late ripening plus cold-stored clusters of some tougher varieties can further extend the season. Possible flavors include Concord, muscats, and neutral grapes. Seedless varieties will be especially popular.

- Juice and Jelly Grapes. The flavor generally expected by a customer is the Concord-type of fruity fox grape. Quantities for each sale may range from a half to a couple of bushels. Smaller clusters and a trace of imperfect berries are acceptable. Some not quite ripe berries with their higher pectin content are even desirable for the jelly maker.

  The neutral or muscat-flavored grapes make interesting juice and jelly. The offer of a sample of the finished product is a good way to convince a prospective customer.
- Wine Grapes. Home winemaking is a popular hobby and there appears to be a good market among those who do not have space or time to grow their own.

The quantities you can expect to sell to each customer range from 1 or 2 bushels (enough for a 5 gallon carboy) to several hundred pounds.

The wine quality from each variety is determined by proper ripeness of the grapes. While perfect fruit is desirable, a few damaged berries can be removed when the customer prepares fruit for fermenting.

Sugar levels of 20 to 22 percent are desirable and lower levels may mean lower prices.

The price received for good quality wine grapes sold by the bushel can be attractively high. The better varieties of hybrids and—if you can grow them successfully—of vinifera varieties are in demand by home winemakers.

Most of the State Agricultural Experiment Stations issue bulletins that recommend preferred varieties and suggest others for trial plantings. Small commercial wineries found in most areas of the country can give further suggestions on varieties that have done best for them.

Pick-Your-Own

When quantities of fruit such as these are purchased, the option of customer picking may be of mutual interest to both grower and customer.

The grower can eliminate the cost of harvesting, except for some supervision in the vineyard, when the customer is willing to harvest the grapes. The customer reduces his cash outlay and is able to do some trimming-out of defective fruit while picking.

If the grower decides to specialize in wine grapes, there are several ways to make the marketing more attractive to home winemakers.

After the fruit is in the basket, the home winemaker is faced with the problem of crushing and pressing white grapes or stemming and crushing the red grapes. Several growers, who may themselves be home winemakers, have purchased small commercial stemmer-crushers ($200 and up) and presses ($150 and up) and either lend or rent these to their customers.

This has been carried even further by some growers who offer (for a price) instructions in wine making, guidance and equipment for sugar and acid determination and suggestions for best handling of each batch of wine.

One successful operation that started this way now contracts with other growers to supply additional grapes, sells home winemaker supplies, and has a bonded commercial winery.

Customers among the home winemakers are found through advertisements in newspapers or by convincing a reporter from the local paper that your vineyard operation is worthy of a feature article. Ripe grapes, back to the farm, do-it-yourself-wine are all catchy subjects of local interest.

Several State Agricultural Experiment Stations issue annual lists of "Pick-your-own" fruit and vegetable growers that receive wide distribution. Local wine appreciation groups or clubs usually include some home winemakers.

Once you find good customers, keep them informed through your own mailing list of which grapes are available and the expected harvest dates. Telephone calls may be essential to assure that the crop is picked when ready.

Pressing grapes can be fun for a youngster.

Kevin Hayes

Other Markets. You may be able to sell grapes to supermarkets, local grocery stores, farmers' markets, or to stores that cater to home winemakers. These potential outlets should be questioned before planting to determine what varieties and quantities they might purchase. Good fruit quality is required for continued sales.

You may be able to sell your entire crop to a commercial winery. Prior arrangements—even a contract—on varieties, acceptable sugar levels and price should be made before planting. The price per ton received will be lower, but so will be the cost of marketing.

Because grapes are expensive to grow and take several years to reach maturity, consider several strategies in planning a vineyard.

If you are fortunate enough to know exactly which varieties your market requires and that these varieties are well adapted to your area, your worry will be whether you can provide the essential attention at the times required.

But in many areas the choice of varieties is not clear-cut and there is an element of experimentation involved. Then you should be more conservative in vineyard size and be willing to try only 5 to 10 vines each of several varieties.

It is possible to go too far in experimenting. One or two vines each of many varieties may enable you to select certain kinds that do grow well for further planting. But orderly marketing of small batches of fruit is difficult and quantities of fruit produced are not sufficient for the home winemaker to evaluate their wine potential.

It is better to start with a small vineyard of 10 to 100 vines to which you can give proper attention than to plant a couple of acres without considering the costs, labor, and unexpected problems that may lead to a disappointing failure.

The prospect of a good harvest of grapes is exciting and potentially profitable, but it does not "just happen." There is the continuing series of chores and always the prospect of a crop failure from frost, diseases, hail or birds. The grape grower must be willing to accept such risks.

Many State Agricultural Experiment Stations publish bulletins and guides to grape growing and a few have information on wine making. These are usually available through your County Agricultural Extension Agent or may be requested (or purchased) from the publication office of other States.