

Cornell University College of Agriculture and Life Sciences Cornell Cooperative Extension



## **Raspberry Wine Production**

By Robert Kime, Department of Food Science, New York Agricultural Experiment Station, Geneva, New York (New York State Gold Medal Vintner awardee)

Published in Raspberry and Blackberry Production Guide, NRAES-35. Eds. L. Bushway, M. Pritts, D. Handley. 2008. 157 pp.

Wineries may be interested in purchasing local raspberries, as fruit wines and fruit-flavored wines are increasing in popularity. The value of wine from a pound of raspberries can be ten times greater than the value of the fresh fruit. In addition, overripe fruit can be used to make raspberry wine, so long as the berries are not too moldy.

To make raspberry wine, you do not need fancy equipment – just a large pot, a fermenting bubbler, wine yeast, yeast nutrients, a hydrometer, a 5-gallon glass jug, and some cheesecloth. About 30 pounds of berries are required for every 5-gallon batch of wine. Berries are very fruity and acidic, so water and sugar are added to the berry pulp prior to fermentation to reduce the acidity to about 0.8% and increase the sweetness. The hydrometer is used to measure sugar content and to monitor the fermentation. If the desired alcohol content is 10%, then add more sugar to the mix to bring the mixture to 20° Brix, which is about 20% sugars (2% sugar for each 1% alcohol). In general, for every 2 pounds of berries, add 1 pound of sugar and 1 pound (pint) of water. Additional sugar may be required to obtain the desired sweetness. A simple rule of thumb is to add 0.1 pound of sugar per gallon of mixture to raise the sugar content by 1°Brix. At this stage sulfite might be added to prevent oxidation and to eliminate wild yeast. If used, add 50-100 ppm of sulfur dioxide (1/4 teaspoon of potassium metabisulfite or 3 Campden tables per 5 gallon) and let stand overnight.

Next add the wine yeast and yeast nutrient. Wine yeasts, available from a wine supplier, can tolerate much higher alcohol content than wild yeasts. Dissolve the yeast in 100°F water (use 1 gram of yeast for every 1 gallon of liquid), and add it to the fruit-sugar-water mixture. The yeast nutrient is added directly to the mixture. Add the yeast to the mixture within thirty minutes of dissolving so a food source is available to the yeast. Also, be sure the temperature difference between the yeast solution and the fruit mixture is no greater than 5°F, or the yeasts may be killed. Fermentation should occur at 70°F for about three to four days. This can occur in an open container, and the mixture should be stirred occasionally.

After three days, strain the mixture through cheesecloth and place it into a 5-gallon glass jug fitted with a fermentation bubbler. After another five to ten days, the wine will have reached an alcohol content of about 10%. When the wine reaches the desired alcohol and residual sugar content, stop

the fermentation by placing the wine mixture in a cold room (30°F) or filtering it. Then decant the mixture and add sulfites (25-50 ppm) and sorbate to prevent oxidation and refermentation.

Berry wine can be allowed to ferment until the alcohol content reaches about 17% assuming that there was enough sugar to reach that level. However, wine with such high alcohol content is rather harsh and will require a significant amount of sugar to balance the alcohol. Stopping the fermentation process at 9% to 10% is recommended. Typically, wines will be fermented to dryness (no residual sugar) and sugar is then added before bottling to adjust the sweetness. Inexpensive kits are available to monitor sugar, acid, and alcohol content. Monitor sugar content daily, as alcohol increases rapidly when fermentation occurs at room temperature.

Berry wines sometimes develop an orange color or an off-flavor, but the cause of this is unknown. As with grapes, there may be cultivar differences among berries in their ability to make high-quality wines, but this has not been studied. A mixture of berry cultivars likely will produce better wine than a single cultivar.

Berry wine can have excellent color, balance, and flavor properties; however, it can be very unstable and should be consumed soon after bottling or kept refrigerated. Berry wine can be mixed with honey wine to produce another value-added product. Novice vintners may want to attend a seminar on wine making for more details on wine production.

To sell wine, you will need a license. The selling of wine is regulated by the state liquor control board and the Bureau of Alcohol, Tobacco, and Firearms.

The information, including any advice or recommendations, contained herein is based upon the research and experience of Cornell Cooperative Extension personnel. While this information constitutes the best judgment/opinion of such personnel at the time issued, neither Cornell Cooperative Extension nor any representative thereof makes any representation, endorsement or warrantee, express or implied, of any particular result or application of such information, or regarding any product. Users of any product are encouraged to read and follow product-labeling instructions and check with the manufacturer or supplier for updated information.

Cornell University provides equal program and employment opportunities.