



## Wine From Fruits & Vegetables

When making wine from fresh (or frozen) fruits and vegetables, the first point to consider is the quantity of wine that you would like to make and then ensure that you have the necessary equipment to accommodate that volume throughout the winemaking process.

Whether making a one-gallon or a fifteen-gallon batch, the wine will begin fermentation in a primary fermenter. We recommend using a food-grade plastic bucket with lid as the primary and we sell these buckets in various sizes ranging from 1.5 to 20 gallons. The size of the primary fermenter is determined by the volume of wine that you're making. You should ensure that you have enough air space in the primary to accommodate the considerable foaming that will occur during the initial stages of fermentation. In other words, it wouldn't be wise to place 1.5 gallons of must (the unfermented juice) in a 1.5 gallon bucket—the foam would push up through the airlock and might even blow the lid off the bucket making a nice little mess. On the other hand, it is perfectly alright to start a one gallon batch in a 6.5 gallon bucket. A good deal of CO<sub>2</sub> is released during primary fermentation and this CO<sub>2</sub> acts as a blanket which protects the must from exposure to oxygen.

While it is necessary and important to have adequate headspace in the primary, it is equally important to minimize airspace in the secondary fermenter. We recommend using non-porous glass containers (carboys) or plastic containers (Better Bottles) as secondary fermenters and you should match these containers to the volume of wine that you are making. In other words, if you are making a one gallon batch you should you a one gallon secondary, etc. When the wine is transferred into the secondary, the fermentation has slowed considerably and little CO<sub>2</sub> is being released. Thus too much airspace at this point could lead to the possibility of oxidation.

Again, the first point to consider is how much wine you're going to make and this, of course, directly relates to how much raw material you have to work with. As a rule of thumb, 3-5 pounds of fruit or vegetables will produce one gallon of wine. These amounts will vary depending on the individual produce and the style of wine you're making. We sell a nice little book that retails for around \$3 that is filled with over 100 recipes; these recipes will provide good information on how much produce you need for the volume of the individual wines that you wish to make.

After you gather your equipment, you will need to purchase some sanitizing products, various chemical additives and, of course, the wine yeast. Recipes for fruit and vegetable wines will include various additives.

It is very important that you sanitize everything that comes in contact with your wine. We sell a number of no-rinse sanitizers. Simply follow the package instructions for best results. We do not recommend using bleach. The recipe handbook mentioned above will give good step-by-step instructions on how to handle the produce, when to add the chemicals, when to transfer from

primary to secondary, etc. This book will also give a set amount of sugar to add for the respective recipes but we feel that there is a better method for adding sugar and this method follows.

The amount of alcohol in a finished wine is directly related to the amount of fermentable sugar in the must. These sugars come from the naturally occurring sugar in the juice and from sugar additions (chaptalization) by the winemaker. The hydrometer is the indispensable tool winemakers use to adjust the sugar content in the must. A hydrometer measures the specific gravity of a liquid—the higher the specific gravity the more sugar is present and thus the higher potential alcohol. A good starting point for specific gravity is 1.090-95 and the winemaker needs to adjust the sugar content of the must to that level to produce a balanced table wine.

The problem with adding the set amount of sugar indicated in a recipe is that naturally occurring sugar in produce can change from year to year depending on the type of growing season. This may result in original specific gravities that are either too high or too low. A more accurate method for adding sugar is to take a gravity reading of the must (the juice from the produce along with the appropriate water additions as indicated by the recipe) and then adding sugar based on this reading to get to the desired original gravity. This is accomplished by referring to a chaptalization chart.