

Take Time for Tannin

by Paul S. Dunseath (AWOnews, December 1999, Newsletter No. 15)

Someone once said that you can make wine from almost anything, including old boots! I wouldn't want to speculate on the taste of "Old Boot Wine", but one thing is for sure; it would certainly have a high tannin level. By the purest of coincidences, that is the subject of this article (tannin, that is, not old boots!).

In wine, tannin gives an impression of dryness in the mouth; with the correct amount, the wine has an appealing character of cleanliness; without it, the wine is flat and uninteresting; with too much, it is bitter and astringent. Tannins are substances which are most familiar because of their historical use in preserving – or "tanning" – leather and other hides. Members of the polyphenol family, tannins are closely related to the substances which give fruit its colour, and can be found in the skins, stalks and stems, as well as in the leaves of such plants as oak and tea. In the latter, in fact, tannins are one of the main flavour constituents. In wine, tannin gives an impression of dryness in the mouth; with the correct amount, the wine has an appealing character of cleanliness; without it, the wine is flat and uninteresting; with too much, it is bitter and astringent.

This of course returns us to the subject of wine, and wine grapes, in which tannins are also present. Since white wines are produced from the uncoloured juice of red or white grapes, and usually without skin contact, whereas red wines are produced from red grapes using a period of fermentation on the skins (sometimes with bits of stem and stalk present as well), white wines are consequently much lighter in tannin than reds.

Even among red wines, tannin content varies; Beaujolais Nouveau has a very short period of skin contact, and a resulting low tannin content (important, since otherwise the raw tannin of a young wine would make it undrinkable). Fine Bordeaux, and classic Chiantis, may have an extended period of fermentation on the skins (and, in the case of some Chiantis, on the stems and stalks as well), with a consequently high tannin content.

The effect of this is to produce a wine which, when young, has a raw harshness which some tasters compare to "Post Office Ink"; however, as the wine ages, the tannin content lessens, until at maturity it is present in the quantity required to provide an underlying austerity and complexity to the taste, without intruding unduly into the flavour. In the meantime, of course, the wine has benefitted from the preservative effects of the tannin to age slowly and safely.

While there are a variety of sources of tannin available, it is important to remember that each source produces a different member of the family, with different characteristics and taste, so although oak leaves and vine prunings, for example – both of which have been used in the past to make country wines – may contain ample tannin, their particular taste may be undesirable in a wine from delicately-flavoured fruit.

The two sources of choice for supplementing tannin in an otherwise-deficient wine are grape tannin, sold as such in winemakers' supply stores, and strong tea. Of the two, grape tannin is the more predictable since it is available in a known strength. Consisting of a reddish-brown powder, it is added to wines from concentrates or garden fruits according to recipe directions prior to the start of fermentation. Lacking this, the winemaker may use strong tea (the difficulty being, of course, that "strong" is a relative term); failing any other direction, an addition of one tablespoon of strong tea per gallon of must, or about 3.3 ml per litre, is a good average figure.

In addition to its ability to confer flavour and quality on a wine, and its contribution to the keeping quality of a wine, tannin also results in more rapid clarification of the must after fermentation has

finished. The home winemaker will often find, as a result, that red wines – particularly those which have had a reasonably lengthy period of fermentation on the skins – tend to clear more rapidly than whites, and seldom need the addition of wine finings to bring them to full clarity.

There is no readily-available test for excess tannin which is available to the home winemaker, so the best technique is to develop a sound appreciation for the taste of tannin in wine. If in doubt, simply add a small quantity of grape tannin to a finished red wine and do a side-by-side comparison of this wine with the original; at some point in tannin addition you will find that the taste first develops a slight dryness, then slides into overtones of a tea-chest, and finally becomes overly astringent. Determine where you find the flavour most to your liking (and that of your friends and guests), and simply aim at that content.

Low-tannin wines can always be changed by the addition of tannin; however if there is too much tannin present to begin with, there are three fundamental options open. The first is simply to allow the wine to age, since tannins become increasingly insoluble in alcohol over time; the second is to blend the wine with one which is low in tannin; and the third is to remove some of the tannin directly.

Blending requires little explanation; one simply mixes the over-tannin wine with one which is flat or insipid, after first having done a trial blending using small quantities of each to determine the optimum mix; after blending, the wine should be placed under an airlock, as renewed fermentation is always a possibility after blending. See also Gord Barnes' article on blending in issue #14 for advice on how to do this most effectively.

Tannin removal, for its part, is normally done by fining the wine with either unflavoured gelatin, or casein (milk). a quarter of a gram of gelatin, dissolved in 25 mls of warm water, will remove the same weight of tannin from a wine. Try this amount for each 5 litres of wine (or gallon, if you choose), as a starting point. We ourselves have not used milk, but it is an old remedy which many winemakers swear by. The basic dosage is 2 to 3 drops per gallon as a starting dose. Other "country wine" remedies include egg-white; one egg white, thoroughly beaten into 300 ml of wine, is reported to be suitable for up to 50 litres of wine. Of course, when using any perishable organic agents such as milk or egg white, it is important to rack off the sediment without delay.

All of these approaches are based on the fact that tannins and proteins precipitate each other. Several commercial finings work on the same principle and combine tannins and proteins in their mix; however these are formulated to balance each other, and therefore will not be particularly effective in removing excess tannin itself.

Although it may appear that tannin is a troublesome ingredient, in fact this is not the case. Readily available and easy to use, tannin is an essential ingredient in making the finest wines, wines with complexity and character, and ones which will reward your patience with an aristocratic maturity.

TANNIN CONTENT OF COMMON FRUITS AND INGREDIENTS

LOW: Flowers, vegetables, grain, bananas, honey, gooseberries, strawberries, pineapple, rhubarb

MEDIUM: Grapes, apple skins (most varieties), blackberries, cherries, loganberries, raspberries, currants, sultanas

HIGH: Elderberries, crab apples, oak leaves, tea, grape stems, apricots, blackcurrants, plums, grapefruit, oranges, peaches, pears, figs, raisins