EDUCATION MOMENTS by Dr. Jeff

PART I. THE LIFE OF WINE

Chapter 1: Wine Closure in the 21st Century.

Wine begins its life, at the end of primary fermentation in a chemically reduced state (as Mike Scott noted reduced wine is yucky and awful tasting) and then progresses toward oxidation which is the chemical opposite of reduction. Rapid oxidation, which occurs in days if wine is fully exposed to air, kills the wine. Slow partial oxidation allows gradual development: emergence of fruit flavors, mellowing and softening of acids and the many other chemicals including precipitation of tannins. It's everything we love in wine. This begins in barrels at the winery, and continues in bottles, *where the closure is the key.* Since the mid *16th c*entury, stoppers made from bark of the Cork Oak tree have been the gold standard for wine bottle closure. They are secure and rarely leak, are easily inserted and removed, last for decades, and do let in just the right amount of oxygen very slowly for ideal wine maturation. BUT cork has a *dark side* because a small number contain a harmless but *vile tasting* chemical called 2,4,6 trichloroanisol or TCA. When the bottle is filled and the CORK placed, the TCA diffuses into the wine. In small concentration, it makes a great wine taste a bit like wet cardboard. In higher concentration, it will make you GAG. AND the cost of cork is rising as skyrocketing worldwide wine production outpaces supply.

So began the search for CORK alternatives. There was resistance to change -- 400 years of CORK *TRADITION (think of the gentle romantic POP).* Viable closures included the Crown Cap (invented in 1890 and used in the bottle fermentation stage of Champagne, etc), the Stelvin closure (aluminum screw cap first used in 1920 for drugs), the artificial plastic and composite "corks", and the glass stopper with silicon "O" ring (Vino-seal and Vinolok). Trials have shown that artificial corks admit too much oxygen and wine can oxidize as early as 18 months, and chemical taste has been reported. Vino-seal and Vinolok are expensive and require high tech inserters, and are oxygen impervious risking that wine will remain reduced. The Stelvin screw cap is cheap, has no TCA, and has simplicity of use. It is winning over other cork alternatives, although it has some issues. In early experiments plastic inserts broke down at 10 years allowing air in. Others

found too much air excluded early on, can leave the wine reduced. Improved materials for the disc inserted in the cap has minimized these issues but it still falls short of the ideal air exchange real CORK provides.

Decanting or aeration prior to serving will give the proper oxygenation with screw caps. .

Chapter 2 . Aeration of Wine will be my next topic.

To learn more about the Stelvin screw cap go to the Bonny Doon Winery website.