



Snow on Wine

Viticulture and Synthetic Chemicals

Dr. Jeff Snow, SES Education Director – Aug. 2020



Today there seems to be increased interest in “organic” food and the minimizing of synthetic chemicals (pesticides, herbicides and fertilizers) which may have far reaching environmental effects. I grew up in a home where “organic” food was prized and if “unpronounceable” chemicals were on the ingredient list, it was “delisted” for us. Of course there are always skeptics, such as my dear friend Bruce who says “...organic means ‘we spray at night.’” All this, of course, applies to wine which is an agricultural product. SES members frequently ask me about avoiding sulfites in wine, and some have voiced concerns about Glyphosate and other synthetic pesticides now showing up in wine. Four widely used classifications of wineries that seem to reflect environmental concern are now in use: 1) Sustainable 2) Natural 3) Organic and 4) Biodynamic. Only Organic and Biodynamic are well defined with certifying agencies.

Sustainable – sounds great, but a bit of research revealed the main focus here is soil and water conservation (with proper tillage, and cover crops, minimal irrigation, if any, and only drip, etc.) and carbon footprint reduction (by minimizing use of fuel in trucks, tractors, mechanical pickers, etc.). It’s “all good,” but use of synthetic chemicals and sulfur are not limited.

Then there is the new and trendy **Natural** wine movement. A broad and ill-defined trend of returning to centuries old winemaking techniques, often from small appellations in the “Old World”. The 2018 fad in “Orange Wine”¹ would be an example. Often sulfur use is eliminated. Since Sulfur is the #1 preservative in winemaking, these wines are notoriously unstable, with great “bottle variation”. Unpredictable early oxidation, unwanted secondary fermentations or bacterial growth leading to vinegar are common. Big wine distributors and stores don’t want to deal with this, so you’ll need to buy them directly from the winery or specialty wine shops. Then drink up before it can spoil! Just remember, even with no sulfur added, small amounts of sulfites occur as a byproduct of fermentation.

Wine labeled **Organic** must meet strict criteria and inspections to be certified. Synthetic chemical pesticides and fertilizers are severely limited in the vineyard. Soil is improved naturally with compost and/or manure. Sulfur (a naturally occurring element and thus NOT a synthetic) is allowed, but limited. This insures stable wine, free of spoilage in bottle and bottle variation.

To be **Biodynamic** a wine must first be certified **Organic**. Biodynamic agriculture views the farm as “a self-sustaining organism” and integrates all the animals and plants tied to that patch of ground. For instance, manure must be from their own cows, and is mixed with herbs grown there. It apparently harkens back to writings in the 1920s by Rudolph Steiner², and Austrian philosopher. He considered science, but for things science couldn’t then explain he founded “spiritual science” or Anthroposophy. This includes the effects of the moon, planets, constellations, and mysterious life forces present in earth, fire, water and air, and a calendar like none I have seen. Sounds crazy but as Beverly Blanning³, Master of Wine and IWFS member said, if some of the largest, most famous and successful wineries are now doing it, maybe there is something there. True **Biodynamic** will be certified on the label by either “**Demeter**” or “**Biodyvin**”.

So, like my mother, and her mother, who studied food labels, read those wine labels. Look for certification of **Organic**, and for those who want **Biodynamic**, the additional name of **Demeter** or **Biodyvin**. Of course Sulfur is allowed, but minimized, and even without added sulfur, some sulfite always results from fermentation.

References:

- 1) [Snow on Wine, Orange is the New White](#), Dr. Jeff Snow, SES WineMinder, Dec. 2018.
- 2) Agriculture, Rudolf Steiner, June, 1924.
- 3) Biodynamic Wine, Beverly Blanning MW, International Wine & Food Society, video and monograph, July 2020

