

How Melomel is Produced at Shields Demesne Winery

The process of winemaking at Shields Demesne Winery involves 5 basic steps:

1. Establishing the Winemaking Environment
2. Preparation of the Materials
3. Fermentation
4. Aging
5. Packaging

The following provides a brief description of the work that goes into every bottle of Melomel produced at Shields Demesne Winery. *Melomel* is the premier style of wine we currently sell.

Establishing the Winemaking Environment

An interesting aspect about winemaking at Shields Demesne Winery is the location. Every step is performed in a greenhouse. The initial incentive for using a greenhouse was purely coincidental in that our established retail nursery business, Shields Herb & Flower Farm, had room available for wine production. In classical thinking, winemaking in a greenhouse would seem preposterous - the temperature dynamics from summer to winter being detrimental to wine character. Our success has convinced us that this simply isn't the case. The greenhouse atmosphere has in fact proven itself as a nearly perfect influence, and there is a reciprocal effect upon the plants. The alcoholic fermentation produces CO₂, increasing plant metabolism and leading to more growth in the fall.



The Greenhouse

Preparation of the Materials



The Honey

At Shields Demesne Winery, the main ingredients used to create Melomel are grapes and honey. For every Melomel variety we produce, specific grape varietals are added in combination with wildflower honey at the start of the process. Grape juice is the first constituent poured into a sterilized oak barrel. The honey is then mixed to a homogeneous consistency with a portion of water to easily allow its pouring into the barrel as well.

In any situation where honey is an ingredient for making a wine (e.g. mead), water must be added to lower the viscosity and sugar content; even the most robust yeast culture cannot survive the 80% sugar concentration found in honey. Unfortunately, the additional water also decreases flavour characteristics of the final product, thus an acceptable balance needs to be found. A recipe commonly used in making mead involves a 1:3 ratio of honey to water. At Shields Demesne Winery, we employ a notably more potent ratio of 1:1 – such a high proportion of honey is not often seen in the industry.

Fermentation

Alcoholic fermentation is the process in which simple sugars are converted to ethanol by yeast cells and is the key step by which any alcoholic beverage is produced. A couple of options exist to initiate fermentation during winemaking. Historically, juice was allowed to stand and spontaneously begin fermentation on its own accord; this is possible because yeast cells are present on the surface of fruits and will eventually culture themselves if exposed to the fruit's sugars. Spontaneous fermentation is not practiced as heavily today because the wild yeast strains found on fruits are unpredictable and many can lead to a botched batch of wine. The commonplace method to start fermentation in the current commercial industry is to use specific yeast strains developed by laboratories and packaged individually in a powdered form. Several grams of powdered yeast are added to a few ounces of lukewarm water for ~ 15 minutes to allow rehydration. The yeast/water mix is then combined with juice and subsequently overwhelms any wild strains present by sheer numbers.



Barrels with Air-locks

Shields Demesne Winery chooses to use commercially produced yeast for its wine production in an effort to maintain greater consistency among vintages. Once yeast is added to a full barrel, an air-lock device is placed in the bung hole that allows CO₂ from the fermentation process to escape but doesn't allow air to enter. Fermentation will commence within several hours and last for approximately 3-4 weeks.

Aging



Barrels await Bottling

Two months after juice and honey were placed in a barrel for fermentation, the newly formed wine is ready to be transferred to a fresh barrel. The transfer process is called “racking” and removes a great deal of precipitated dead yeast cells, which can adversely affect flavour, from contact with the wine. Once in a new barrel, the wine ages for at least 22 months with little disturbance other than the occasional collection of samples. To determine exactly when a barrel of wine will be bottled, samples are tested for clarity, acidity, alcohol content, and, most importantly, taste.

Packaging

The final step in the winemaking process consists of bottling and labeling the end product for sale. At this juncture, many commercial wineries employ a rigorous amount of filtration to minimize the amount of solids that will enter the bottle. Color, flavour, and aromatic components are often collateral victims during filtration, a fact that Shields Demesne Winery has not taken lightly. We have decided to forgo the bulk of filtration for our wine and instead practice alternative techniques. One method of choice is to use gravity-fed siphoning to fill bottles, this way solids on the bottom of a barrel are not disturbed when removing the wine. The process consumes a greater amount of time, but we feel confident in the results.



The Tasting Room

Labeling of the wine is currently performed by hand, ensuring that every bottle made is granted one last inspection. We then fill the shelves of our tasting room and wait for those few passersby who will soon discover a wine like no other.