A Comparison of Vineyard & Cellar Techniques for Producing Simple v. Complex White Wines

by Mike Mazey, winemaking consultant, South Moravia

Type of Technique	Simple, Fruity White Wines	Complex, Structured White Wines
Canopy management	None	**De-leafing** on the morning side, to reduce shading, improve ripening & reduce disease pressure
Vine Balance	None	**Green harvest**, to reduce the yield and improve the flavour concentration on the grapes that remain
Harvesting	All plots combined	**Parcel harvesting** of the best, green harvested plot separately
Skin Contact Time	Minimal (in press), 2-3 hours	In press, up to 8-12 hours leading to fuller, richer body due to improved flavour concentration and positive/balanced phenolic compounds extracted
Settling Time	Long, 24 – 48 hours, leading to a very clean must, and hence bright, fruity flavours	Shorter, 16 hours, leading to a cloudier must, production of more complex flavours, and adequate nutrition for a malolactic fermentation
Yeast Type	**Innoculated, or cultured yeast**, often based on a specific variety to be made	**Natural yeast and a spontaneous fermentation**, where a number of yeast types contribute to a greater variety of flavours
Fermentation temperature	Cooler, 15 to 18 degrees Celsius, to faciliate production of fruitier aromas	Warmer, 18 to 22 degrees, to faciliate more complex aromas
Fermentation Vessel	Stainless steel, temperature-controlled tanks	Barrel or cask, limited access to temperature controls
Sulphur Addition	Made immediately after confirmation that primary fermentation has stopped	Not added until later
Malolactic Fermentation	Often avoided, or if used, then performed by inoculated bacteria on a component of the wine, or on the whole production in cooler years to offset high acidity levels	Often initiated by naturally-occuring bacteria, during the lees stirring or lees contact phases of barrel maturation
Heat Stabilization	**Bentonite fining** to remove protein that could cause a haze if the wine gets too warm	Long periods in oak can often lead to **protein stability**, bentonite fining used only if a protein test indicates that it is necessary
Cold Stabilization	Wine is chilled to -1 or -2 degrees and tartaric acid crystals are added to remove excess tartrates from the wine	Long periods of oak can mean that tartrates naturally crystallize against the sides of the barrel. Cold stabilization often not performed on this style of wine
Filtration	If the fermentation has been stopped to leave residual sugar in the wine, then often a sterile filtration step is necessary to ensure there is no re-fermentation in bottle is possible	Light filtration or can be 'unfiltered' if sufficient rackings have been performed
Stopper	Often screw cap, to capture and preserve the fruity flavours	More often, cork, so that the wine's development becomes more pronounced over time

This table represents a broad and often oversimplified summary of the techniques used for simple and more complex white wines. It is quite likely that a lot of the same techniques are used for both styles of white wine, or that a complex wine will include simpler, fruitier components and vice versa. A number of other techniques have also not been mentioned.