Managing Diacetyl in Alcoholic Fermentation

	BUILDING MORE DIACETYL	PREVENTING DIACETYL
Bacterial strain	**LACTOENOS® SB3 DIRECT**	**LACTOENOS® 450 PREAC** or **LACTOENOS® B7 DIRECT**
Dosage rate	Lower	Higher
Timing	Sequential inoculation	Co-inoculation
Duration of MLF	Long MLF	Fast MLF
Wine chemistry	Higher pH & warmer wine temperature	Lower pH & cooler temperature
Lees management	Rack off lees before MLF	MLF on lees
Stirring	Yes	No

1 BACTERIAL STRAIN

- **LACTOENOS® SB3 DIRECT** is a fast diacetyl producer and diacetyl is at its maximum level just at the end of MLF.
- Bacterial Strain: **LACTOENOS® 450 PREAC** and **LACTOENOS® B7 DIRECT** are slow diacetyl producers, and usually have not reached the production peak at the end of MLF.

2 DOSAGE RATE

- For higher diacetyl production, use a lower dosage rate.
- For lower diacetyl production, use a higher dosage rate.

3 WHEN TO ADD BACTERIA

- For maximum diacetyl impact, it is best to add bacteria sequentially after primary fermentation.
- For reducing diacetyl, co-inoculation of yeast and bacteria is recommended. The diacetyl that is produced at the beginning of MLF fermentation can be reduced to acetoin by the active yeast completing primary fermentation.

4 DURATION

- More diacetyl is produced during slower malolactic fermentation.
- Less diacetyl is produced during faster malolactic fermentations.

5 WINE CHEMISTRY

- Slower malolactic fermentations favor higher diacetyl production, lower pH and cooler temperature conditions create a more difficult environment for the bacteria so the fermentation rate will be slow.
- Faster malolactic fermentations favor lower diacetyl production, higher pH and warmer temperature conditions create a more favorable environment.

For more information on diacetyl production, check out the technical paper on citric acid metabolism in lactic bacteria and controlling the diacetyl content in wine on page 43 - 47.