

Using biological tools in organic orchard and vineyard management – a demonstration site

Project Aims

Mountford Wines seeks to trial a range of biological management practices to improve their soil's condition with the flow-on effect of improved sustainable production.

Livestock (baby doll sheep and chickens) control grazing 7 ha of vineyard and 1.5ha cider apple orchard will perform multiple tasks with various resultant effects:

- a) biological mowing of grasses and weeds between vines and inter-rows;
- b) reducing fungal infestation of vines due to increased airflow
- c) controlling weevils, grasshoppers and parasites affecting the apples and grapes
- d) cycling nutrients and incorporating organic matter;
- e) stimulating root growth;
- f) triggering microbial activity
- g) improved soil health – specifically positive effect on pH buffering, moisture and nutrient retention, root volume, microbiological colonisation
- h) flow-on positive effect on sugar levels of fruit

Project Activities

Initially appropriate minerals will be applied to correct soil chemical imbalances (as detected by benchmark soil testing) to mitigate the effects of deficiencies as well as excesses that inhibit microbiological colonisation of the soil.

Electric netting fences will enable controlled grazing by sheep, purpose selected so their size will limit potential damage to the vines. Chickens will follow the sheep, dispersing and incorporating sheep manure in addition to their own specific insectivore control tasks. Chickens will be housed at night in a purpose-built caravan that moves with the chickens as they rotate through the pastured sections.

Standardised testing of soil characteristics will be undertaken to achieve benchmark and end of project data. This will be complemented by tissue testing of seasonal crops at strategic times, Brix readings of grape and apple sugar levels and regular monitoring of fungal disease infestation and insect populations.

Anecdotal observations of animal health, behaviour, production and performance and management practices will be recorded.

Photopoints will be established to enable regular visual recording of effects of project activities.

Project Partner: Andrew and Sue Mountford – Mountford Wines, Pemberton

