peats
SOIL & GARDEN SUPPLIES

WATER WATER EVERYWHERE 50% PLUS SAVINGS

During the summer's most intense heatwave vineyards thrived on only 3 hours irrigation per day compared to neighbouring properties requiring 5-7 hours per day. The difference? Peats Nitra Mulch™

Peats Nitra Mulch™ was applied on all Grosset Wine vineyards in the Clare Valley in June 2018. Over the summer the mulch has retained the moisture applied, allowing for the significant decrease in water required. Application of mulch is known for improving infiltration root structures and despite the intense heat, the vines have been sending feeder roots into the mulch for moisture and nutrient. (See Figure 1)

The savings really add up

Water costs currently range between $2,700 to $6,500 a mega litre. With the costs of mulch at around $4,500 per hectare and an effective lifespan of between three to five years, it is not hard to see how savings can be made.

Figure 1 – Vines send feeder roots into the mulch for moisture and nutrient

peats
VINEYARD SOIL IMPROVEMENT

Peats Nitra Mulch™ is a specifically designed composted organic surface mulch. A 100% natural organic product produced from recycled green organics, the mulch is classified as an organically certified input product by the National Association for Sustainable Agriculture Australia (NASAA).

Peats Nitra Mulch™ has a nutrient value in its own right and reduces loss of existing nutrients in the soil while promoting microbial activity and increasing worm count by up to 350%. Other benefits for the soil's physical and structural properties include an increase in valuable trace elements and soil carbon levels, along with overall improvement of vineyard vigour and growth.

Whether you are working with water restrictions or costly usage charges, have limited water available or are looking to decrease water usage, Peats Nitra Mulch™ offers a cost effective solution.

Read more in the Peats Nitra Mulch Fact Sheet.

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SIGNIFICANT WATER SAVINGS AND YIELD IMPROVEMENTS ACHIEVED

The use of compost and mulch in vineyards
A case study from Torbreck Vintners, Barossa Valley

Torbreck has been making wine from grapes grown in the Barossa Valley since 1994 with a focus on Rhone varieties such as Shiraz, Grenache and Mataro. The vineyards were developed on cropping land that had been cleared, and traditional farming practices had depleted levels of organic matter in the soil. Soils were poorly structured, highly variable and had low water holding capacity. Subsequently, this led to reduced vigour and poor leaf health.

Torbreck Viticulturist, Nigel Blieschke, trialled different sources of organic matter and developed a structured composting and mulching program. Digital multi-spectral imagery (DSMI) was used to map the vineyards into vigour zones and along with soil and nutrient analysis and plant analysis, blocks were identified for remedial action.

The Bottom Line

- Remedial compost and mulch applications = $1380 per hectare per year^
- Value add from increased quality = $132,000 per hectare*
- Value add from increased yield = $6250 per hectare per year~

^ Based on purchase and application price of mulch averaged over 7 years and compost averaged over 3 years
** Based on 232% increase in bottle value*
~ Based on fruit value of $2500/tonne (Barossa Valley Shiraz)

Key Outcomes

The compost and mulch program delivered significant cost savings through yield improvements, reduced fertiliser inputs and improvements in wine quality. The program proved to be a very cost effective management tool with long-term positive effects on soils.

Water Use Efficiency

Benefits were seen within the first year. After 12 months, despite receiving 48 percent less rainfall than the previous year, Nigel saw reduced vineyard variability and an improvement in leaf condition. He also reported **significant improvement in water use efficiency of 30 – 40%** and attributed this to an increase in soil water holding capacity and reduced water loss from evaporation.

Improved Yield

Nigel measured consistent yield improvements of 70 to 100% in whites and 30 to 70% in reds.

Soil Health

Significant improvements to soil health were noted and biological activity of the soils increased. A higher number of earthworms were found at depth. Root penetration and water infiltration at depth also increased.

This case study was supported by the Adelaide and Mount Lofty Ranges Natural Resources Management Board through funding from the Australian Government's National Landcare Program. Source Ref: Sustainable Agriculture Factsheet No.2. A case study - The use of compost and mulch in vineyards.