



SPRAYGRO LIQUID FERTILIZERS

ABN 47 007 974 496

SLOW RELEASE NITROGEN PUTS VINEYARDS BACK ON TRACK.

Establishing a vineyard on extremely shallow, rocky soils has been made possible by the application of slow release nitrogen, according to contract vineyard manager Greg Koch.

Greg;s Compay, terra Rossa Viticulture management Pty Ltd, manages a 44 hectare vineyard at Wrattontully on behalf of a group of Adelaide investors, Sanguine Pty Ltd.

According to Greg the vineyards site is 'very challenging viticulturally', but was chosen deliberately for its potential to produce high quality Shiraz and Cabernat Sauvignon wines.

He says establishment in 1998 was very difficult, as there was very little top soil present. The existing soil is a distinct 'terra rossa' soil over very shallow limestone.

On one block with a particularly shallow soil profile, Greg used a slow release liquid nitrogen fertilizer NITRO 37, from SprayGro Liquid Fertilizers as well as a regular nitrogen fertilizer.

Nitro 37 is a poly diuera, developed in the late 90's by Growth Products USA, its true solution liquid is 85% Slow Release Nitrogen containing 37% w/v Nitrogen. Nitro 37 molecule is held together by a strong methylene bank (CH₂) that will not release all of the nitrogen at once, but rather must be broken down one band at a time. These properties allow nitrogen to be slowly released through the effects of heat, hydrolosis, microbial activity and UV radiation.

"We used the slow release nitrogen so the vines could access it all the time, otherwise with normal nitrogen it would leach very quickly and probably be lost", Greg says.

In the second year, the slow release nitrogen was applied every four weeks during the growing season, from October through January.

The Nitro 17 was mixed in a tank and metered through the drip irrigation system by a computer, at the recommended rates for vines.

"I believe that given how the vines were in 1998 (growth was not brilliant as they planted later than usual in December) I found that NITRO 37 gave the vines a noticeable controlled boost in growth" Greg says.

"It is obvious they received a fair bit of benefit from the fertigation program as there was just not the quantity of soil available for proper root development. Many grape growers will also be attracted to the environmental benefits of NITRO 37, including its ability to eliminate nitrate leaching even when soil applied is tacky and sticks to soil particles due to it chemical structure which is more complex than other nitrogen sources. Elimination of any nitrogen leaching or volatization plus a reduction in soil salinity stops groundwater pollution. Nitro 37 virtually has a zero salt index rating compared to other nitrogen sources such as urea and nitram which have salt indexes of 75.0 and 104.7 respectively. It has an extremely low biuret (0.18) content thus it

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can be used on all crops sensitive to biuret toxicity. Foliar applications also suit this form of nitrogen wonderfully well. Even under extreme heat Nitro 37 works wonderfully because it will not cause phytotoxicity or burn. The end result was that NITRO 37 bought the vines right back on track and now having filled wire, we are on target to meet our budgeted production"

The fruit from the Sanguine vineyard is contracted to Haselgroves at McLaren Vale, where the winemakers are demanding super premium fruit. Therefore, low vigour and reasonably low yielding vines are desirable, Greg says, his target is to produce somewhere between 7 and 7.5 tonne per hectare. I only used Nitro 37 for establishment of vines, but I may use it again on this particular block". "During the fruiting season I will monitor the block and assess nitrogen levels using petiole analysis, if necessary I would give the vines another does of slow release nitrogen".

"There is definitely a challenge to be met when it comes to balancing grape tonnages and profitability in relation to wine quality," Greg says.

"It's a fine line keeping both the investors and the winemakers happy, but in this case it is the investors aim is to provide a super premium product for their long term gain. In terms of wine quality, it's still too early to tell, but I am very optimistic, given the attributes of the site. The block has developed better than I first expected, largely due to the use of NITRO 37".

For further information, contact **SPRAYGRO LIQUID FERTILIZERS**
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