

TwinN in Grapes

TwinN is a microbial biofertiliser that is used in wine and table grapes in Australia, Italy and Chile. **TwinN microbes:**

- Fix N_2 from the atmosphere into your vines
- Produce Plant Growth Factors (auxins) that drive development of **bigger root systems** with more secondary and fine roots to capture nutrients and water better (see pictures over page)



Grape vines store N through the season and new shoot growth comes from last seasons N accumulation. This 'store N for later use' growth pattern makes grape vines ideally placed to use TwinN's day-by-day steady supply of N to build N stores for when needed. Better root efficiency means vines also capture more of the applied N (synthetic or organically sourced)

Grape growers use TwinN:

- to reduce applications and costs of synthetic N
- supply N in an environmentally sustainable form
- improve evenness of bunch filling

TwinN is applied once in spring when vine growth is underway. For table grapes 2 applications are sometimes used. TwinN is usually applied by fertigation. N fertiliser reductions range from 15 – 50% depending on N rates.



Root growth effects – Chile 2010

Cherry – No TwinN



Cherry - 120 days after TwinN



Strong secondary roots and dense root hairs

TwinN on grapes – Griffith NSW 2008



TwinN on cv Prosecco, Cecchetto Farm
San Polo di Piave TV, Italy 2010



TwinN at Angoves' Nanya Vineyard, Murtho, South Australia.

Angoves have a commitment to sustainable vineyard practices and have used TwinN over three seasons (2009 -10-11) over a 32 ha block to enable a 45% reduction in application rates of synthetic nitrogen. TwinN is applied via drip irrigation in the 2nd or 3rd week in October after vine growth has commenced. Reasons for use are better vine growth, lower input costs and improved sustainability of production.

Comments from Angoves viticulturist:

- As a rule we wet the soil profile down to the root zone before the fertigation of TwinN begins then we apply the TwinN at the recommended rate and keep the irrigation going after the fertigation of the TwinN until we are satisfied that the TwinN would have reached the root zone.
- Using TwinN is like having nitrogen on demand, when the vine needs it, it uses it...
- Single, easy application done by fertigation once per season makes it time and cost effective, much cheaper and more beneficial than using/applying more synthetic products

TwinN at Yalumba's Oxford Landing Estate, South Australia

Yalumba have a strong environmental management program and used TwinN on 40 ha of vines to enable an average ~50% reduction in synthetic nitrogen with equivalent yields in the 2011-12 season. TwinN was applied by fertigation in late October, at growth stages 15 – 17 (pre-flowering).

Comments from Yalumba's viticulturist:

- Positive comments would be its low carbon footprint, costs and the ease of use



MAB would like to thank Angoves and Yalumba for providing their results to us



robber@mabiotec.com mob 0458989282 www.mabiotec.com Mapleton Agri Biotec Pty Ltd

TwinN trial and commercial use in Italy – wine grapes, 2010

- One TwinN application, various N reductions across farms
- cv Prosecco & cv Raboso del Piave,

Trial results - cv Prosecco

	Avg. weight of 70 clusters	Babo degree	yielding % incr.
Check	Kg. 20,8	13,7	0
Twin N	Kg. 24,5	13,1	+ 18%

TwinN on cv.Prosecco



Check plot on cv.Prosecco



TwinN (right) less Mg deficiency symptoms

