

Grape

Trial Sheet Hawkes Bay Grape Plant Nursery Trial



A Mycorrcin trial was conducted by Geoffrey Smith of Vine Nursery New Zealand Ltd, on his commercial grapevine nursery in Hastings. The trial showed that regular applications of Mycorrcin over a 6-month period increased the average root mass per vine by 42% over the control vines when the vines were lifted in June 2016.

Method

The trial was on Sauvignon Blanc Mass Selection cane grafted on to Schwarzmann rootstock that were planted into a silt loam soil. A slow-release fertiliser (200 kg/ha) was applied to all of the newly planted vines in spring.

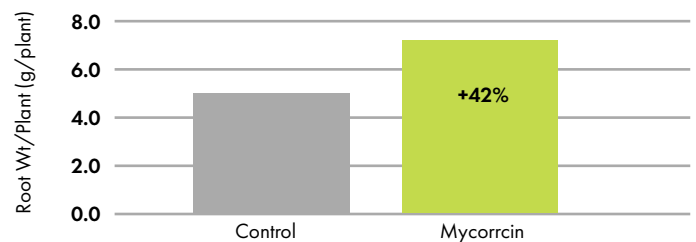
- Mycorrcin was applied fortnightly at 1 L/ha through a Venturi System attached to the irrigation line. Applications started in mid-December 2015 and continued until the end of March 2016.
- Seventy one control and treated vines were lifted in June 2016 and the vines were scored for plant vigour and root mass per plant was weighed.

Results

Mycorrcin increased root weight per plant (g/plant) by 42% versus the control. See Appendix (next page) for raw data.



Effect of Mycorrcin on root mass of nursery grown plants



Mycorrcin increased root mass of all vines regardless of plant vigour. Root mass was +30% for strong plants and +98% for weak plants versus the control.

Mean Root Mass (g/plant)

| Category | Control | Mycorrcin Treated | Increase |
|------------------------|---------|-------------------|----------|
| Strongly fibrous roots | 11 | 14.3 | 30% |
| Strong plants | 5.8 | 7.6 | 30% |
| Weak plants | 2.7 | 5.4 | 98% |
| Total | 5.2 | 7.3 | 42% |

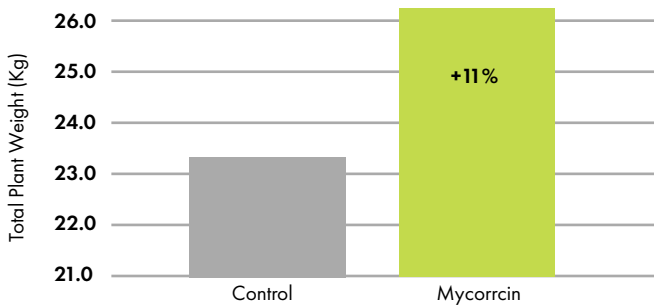


Total Plant Weight Harvest Measurement

Vine Nursery New Zealand harvested 1,500 vines from the control and Mycorrcin-treated groups in order to measure a larger number of plants. All of the pruned roots and shoots from the vines were bagged and weighed.

- The Mycorrcin treatment increased total plant weight by 2.5 kg (+11%), from 23 to 25.5 kg for control and Mycorrcin-treated plants, respectively.

Effect of Mycorrcin on plant weight of nursery grown ants



About Mycorrcin

Mycorrcin is a soil microbial stimulator which activates indigenous beneficial bacteria and mycorrhizal fungi in your soil. Mycorrhizal fungi colonise the roots and, in exchange for carbon, provide phosphorous, nitrogen and micronutrients to the plant which, in turn, improves

plant health. Mycorrcin also stimulates new root growth, thereby increasing root mass which supports plant growth and survival during times of stress like drought. Mycorrcin is suitable for all crops and soil types and is generally applied from spring onwards.



Mycorrcin Grapevine Nursery Programme

| Timing | At planting | After planting | Mid-December |
|-------------|---|------------------------|---|
| Application | Soak root stocks in a 1:100 Mycorrcin (1 L/100L water) solution for 20 minute | Apply 4 L/ha Mycorrcin | Fortnightly apply Mycorrcin 1 L/ha via Venturi System |

Compatibility: Mycorrcin is compatible with commonly-used herbicides, fertigation nutrients and suspension fertilisers.

Appendix:

Trial distribution of plant vigour & total root weight of trial sample

Distribution of plant vigour

| Category | Control | % | Mycorrcin Treated | % |
|------------------------|---------|------|-------------------|------|
| Strongly fibrous roots | 2 | 3% | 6 | 8% |
| Strong plants | 54 | 76% | 50 | 70% |
| Weak plants | 11 | 15% | 10 | 14% |
| Dead plants | 4 | 6% | 5 | 7% |
| Total | 71 | 100% | 71 | 100% |

Total root weight (g)

| Category | Control | Mycorrcin Treated | Increase |
|------------------------|---------|-------------------|----------|
| Strongly fibrous roots | 22 | 86 | 291% |
| Strong plants | 314 | 378 | 20% |
| Weak plants | 30 | 54 | 80% |
| Total | 366 | 518 | 42% |

“I am amazed by the results. I did not expect a significant difference in root mass between control and treatment. I had some scepticism about the product used in the trial as I did not know a lot about the Mycorrcin product. I will be implementing the use of Mycorrcin into my management programme. This is due to the results showing confirmed benefits for plant growth.”

– Geoffrey Smith, Vine Nursery New Zealand