

# Improved growth and resilience in tree crops

**EndoPrime**<sup>®</sup> from Sumitomo Chemical is a plant and soil enhancement product that contains arbuscular mycorrhizal fungi (AMF). Mycorrhizae are beneficial fungi that naturally exist in soils colonising the root systems of plants. EndoPrime includes 4 high performing endo-mycorrhizae species that have been proven to increase tree resilience, productivity and overall tree and soil health.

#### KEY AREAS ENDOPRIME HAS BEEN SHOWN TO IMPACT:

- Improved resilience under stress conditions
- Increased yield
- Root and shoot biomass
- N, P, K and trace mineral uptake
- Water uptake during moisture stress
- Improved resilience against disease and pest attack
- Soil health

EndoPrime comes in convenient 500 g packs or a 10 x 500 g shipper





## Increased nutrient uptake

In addition to increasing the surface absorbing area of roots, Mycorrhizal fungi also release powerful chemicals that dissolve tied up nutrients such as phosphorous, zinc and other tightly bound soil nutrients. Mycorrhizal fungi form an intricate web capturing and assimilating nutrients, thus better utilising the nutrient capital already in soils.

## Improved water uptake and irrigation efficiency

The same extensive network of fungal filaments important to nutrient uptake are also important in water uptake and storage. Trees treated with mycorrhizae often exhibit far less moisture stress compared to non-treated trees and in irrigated systems applied water is more efficiently utilised.

## Easy application

EndoPrime is easy to apply to tree crops with multiple effective methods available. The ideal way to apply to new transplants is via a bare root spray or dip or via an injection into the planting hole. Alternatively, EndoPrime can be applied through drip irrigation or as an in-field drench to new or established trees.



EndoPrime can be applied through drip irrigations systems although it is recommended that it only be applied through 50 mesh or coarser filters



An ideal way to apply EndoPrime is into the planting hole at planting time





#### ENDOPRIME – IMPROVED GROWTH AND RESILIENCE IN TREE CROPS

### Results

#### Orange transplant trial at Moree, NSW

Treated trees analysed via NDVI drone imagery showed 18% increased tree volume and superior evenness at 2 years post treatment and planting.



Untreated orange trees with uneven establishment



EndoPrime inoculated orange trees showed superior establishment and growth

#### Almond transplant trial at Carrathool, NSW

EndoPrime treated trees showed 100% transplant survival vs 4% loss in the untreated trees (6 months post-planting). The value of EndoPrime in this trial is demonstrated through removing the labour requirement for replanting and through negating any lost productivity in replaced trees.



EndoPrime treated almond trees at Carrathool, NSW, showed 100% transplant survival and excellent growth

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# Features and benefits

Features	Benefits
Ensures early mycorrhizal colonisation in transplants	Improved early tree establishment, reduced transplant losses and shorter time to first production
Aids nutrient scavenging	Improved yield and fertiliser efficiency
Better utilisation of soil water	Improved moisture stress tolerance, yield and improved irrigation efficiency
4 high performing endo-mycorhizae strains	Confidence symbiotic relationship will be maximised across a range of conditions
High quality In-Vitro WP (Wettable Powder) formulation	Easy to use and confidence drip irrigation systems will not experience blockages



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