



MacroBoost Pty Ltd

Based in Southern Tasmania, MacroBoost provides a range of environmental probiotics and advanced biological inputs designed to regenerate soil, water, and plant health and have a positive impact on the environment for generations to come.

The company leverages more than 25 years of experience in controlled fermentation technology by founder Brian Horsley to specialise in "live culture" microbial formulations that challenge traditional, high-input synthetic fertiliser management. The company operates within the horticulture, viticulture and dryland farming sector throughout Australia and has a special interest in supporting Tasmanian agriculture.

The opportunity to demonstrate this capability at a commercial scale came in 2023 when a leading Australian horticultural consultant recommended that JCLM Farming founder Jack Beattie, contact MacroBoost to explore biological options. At the time, JCLM Farming was beginning its transition from propagating traditional, in-ground bare-root strawberry plants to misted-tip propagated plug seedlings in a polytunnel environment.

The shift required a strong focus on rapid root initiation, strict disease prevention, and consistent plant vigour. Seeking to increase sustainable, environmentally farming friendly techniques and decrease its reliance on conventional chemical inputs, JCLM Farming enlisted MacroBoost to develop a targeted biological program to support its operational shift.

Engineering root resilience

For JCLM Farming, producing plug seedlings in high-density trays creates different challenges from traditional field nursery production. Unlike bare-root plants, which rely on soil volume, plug plants must develop a dense, efficient root system within a confined substrate. The high-humidity conditions of misted-tip propagation in polytunnels can further increase disease pressure by creating favourable conditions for opportunistic fungal pathogens.

To overcome these vulnerabilities, MacroBoost implemented a programmed biological inoculation strategy and programmed application of biologicals from its proprietary suite of products.

“We started with a trial, and after a month Jack told me he was seeing a significant and encouraging result. It showed the strength of the symbiotic relationship between a plant’s root zone and its biology — and he was seeing that relationship translate into plant performance,” MacroBoost founder and managing director Brian Horsley says.



“A key component of this production system is the integration of MacroBoost’s biological products throughout JCLM Farming’s propagation and growing cycle to establish and maintain beneficial microbial populations within the plant environment.

“Beneficial microorganisms are introduced to both the root zone (rhizosphere) and foliage from day one through regular applications, allowing them to colonise plant surfaces and occupy ecological niches before opportunistic pathogens (such as root zone-attacking fusarium and phytophthora and leaf-attacking powdery mildew) become established.

“The process, commonly referred to as ‘competitive exclusion’ provides a natural level of biological suppression while supporting a balanced and resilient microbial ecosystem.”

The JCLM Farming program uses MacroBoost’s key products, including BioBoost+, BioCal+, Foliar Defence and GreenTop, with LiftOff and Lift+ applied at critical stages to further stimulate root activity, nutrient cycling and overall plant performance. These proprietary nutrient formulations are manufactured in Tasmania and designed specifically for Australian soils, production systems and environmental conditions, he says.

“In addition to microbial inoculation, MacroBoost formulations contain biologically active, highly plant-available nutrients that support rapid root initiation, healthy vegetative growth and reduced physiological stress. By minimising nutrient deficiencies and maintaining an active rhizosphere, plants are better able to express their genetic potential throughout propagation and establishment.”

He says the program also offers a defence against nutritional deficiencies such as calcium which strawberry plants are susceptible to.

“Calcium is a very heavy element for young plants to move up from the root zone so a foliar application of a biologically active calcium formulation such as BioCal+ acts as a supplement, and ameliorates short-term deficiencies perhaps brought about by environmental conditions such as heat,” he says.

Tailored **Solutions** for Growth

“Each crop type at JCLM Farming has specific needs to achieve optimal production results. To target these needs, we work closely with the team to provide feedback on how the plants are growing so we can adjust the use of particular products to suit the given circumstance. This provides greater assurance and control to the grower.”

Because the root zone is the primary driver of plant health, applying biologicals directly to this area – through fertigation or foliar application – helps trigger the plant’s immune response, he says.



Plug plants produced under the MacroBoost program show extraordinary growth within 12 days.

Commercial outcomes and blueprint

Brian says the quality of plants JCLM Farming is producing today through the MacroBoost collaboration has given both partners greater confidence in the value of their collaboration and ability to strengthen their market positions.

“The excellent root development, overall seedling vigour and disease-free status of the plants are a reflection of JCLM Farming's high management standards,” he says.

“Our advanced formulations, which harness the power of live microbial cultures to boost nutrient efficiency, enhance crop performance, and regenerate soil and water health, have made an exponential difference in plant health across JCLM Farming's operations.”

“Our partnership has evolved into one of great mutual respect and a working relationship built on tangible results,” he says.



Stay connected!

-  jclmfarming.com.au
-  jack@jclmfarming.com.au
-  +61(0)429497223
-  “Cluny”, 294 Dawson Rd
Ouse, TAS 7140 Australia