

GRO-PERFECT SR

PLANT GROWTH PROMOTING BACTERIA & SOIL REMEDIATION



The build-up of phosphates, nitrates and other pollutants in soil, through the use of fertilisers, pesticides and herbicides can cause plants to grow poorly and even die, as well as creating other environmental issues. Soil nutrient bioavailability is reduced and the plants ability to absorb required micronutrients is adversely affected, even when soil tests show that there are adequate amounts existing in the soil.

GRO-PERFECT SR is an all natural, environmentally friendly biological solution, containing Plant Growth Promoting Bacteria (PGPB), formulated to promote biological activity in soil and enhance soil nutrient bioavailability. PGPB occupying the rhizosphere have significant beneficial effects on plants and crops, improving health, growth and quality. GRO-PERFECT SR is proven to significantly increase crop yields and shorten the crop grow time in both soil and hydroponic applications. Using PGPB can also help to reduce the use of fertilisers, fungicides and pesticides. Some key functions include:

- **NITROGEN FIXATION** – Converts atmospheric nitrogen into a bioavailable form that can be used by plants for growth.
- **PHOSPHOROUS SOLUBILISATION** – Enhances soil nutrient bioavailability converting existing phosphorous to orthophosphate, for plant uptake.
- **SIDEROPHORE PRODUCTION** - Assists the absorption of iron & other minerals from the rhizosphere into plants, improving vitality & health.
- **PHYTOHORMONE PRODUCTION** – Provides key hormones that regulate & boost plant & crop growth & development.
- **ANTIBIOTIC & HYDROLYTIC ENZYME PRODUCTION** – Controls fungal pathogens & enhances resistance to plant pests & diseases.

OPTIMISE CROP YIELD & QUALITY

FEATURES & BENEFITS

GRO-PERFECT SR contains a unique blend of live microorganisms that deliver a broad-spectrum of PGPB that are function-focused and beneficial, formulated to inoculate planting soils and hydroponic mediums.

- **PROMOTE PLANT GROWTH** – Enhances plant uptake of nitrogen and phosphorous, stimulating seed germination, increasing biomass & optimising root growth and healthy plant development, as well as reducing grow times.
- **ENHANCE PLANT HEALTH** – Improves plant vitality & resistance to stress, enhancing the plants ability to naturally resist pressure of plant diseases & pests, as well as increasing drought resistance & fungal control.
- **OPTIMISE CROP YIELDS & QUALITY** – Achieve yield increases of 20% plus, as well as increasing fruit size, quality & Brix levels.
- **RESTORE SOIL HEALTH & STRUCTURE** – Increases bioactivity & soil organic matter in soil, rapidly restoring & sustainably maintaining soil health.

HIGH-LEVEL PERFORMANCE & QUALITY – Has selectively grown and stabilised bacteria species, forming a potent biologically active product. Each bacterial species is grown separately and then formulated for consistency and quality control. Once brewed, a super concentrated culture count of over 10 billion CFU/ml is achieved. Many other bacterial products have a culture count of only 5 million CFU/ml, with a limited variety of bacteria species and functions.

BACTERIA SPECIES & FUNCTIONS - Our blend of bacteria includes five of the most effective PGPB, which are function-focused for greater capabilities and benefits.



Nitrosomonas europaea - Converts ammonia to nitrate & solubilizes phosphates



Bacillus subtilis - Solubilizes phosphates & siderophore production



Rhodospseudomonas palustris - Enhances soil bioactivity & nitrogen fixation



Bacillus licheniformis - Enhances bioactivity & provides plant growth hormones



Nitrobacter winogradskyi - Converts nitrite to nitrate & solubilizes phosphates

SAFE – The microbial species are completely safe to use and are non-toxic, non-pathogenic and non-GMO. The formulation contains Biosafety Level 1 bacteria.

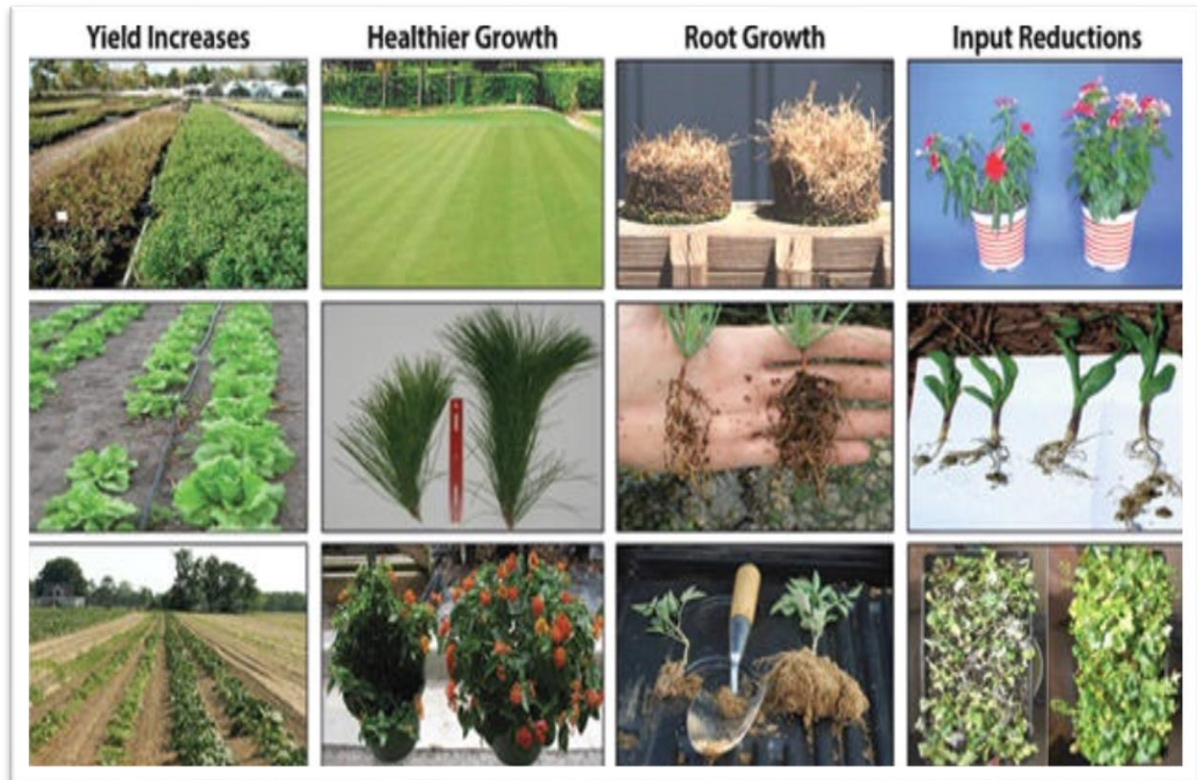
ECO-FRIENDLY – The all natural and organic bacteria species are non-toxic and harmless to the environment.

ECONOMICAL – Brewing produces a beneficial blend of bacteria at super high concentrations, lowering input costs and make large scale applications practical and affordable. The cost benefit ratio is very positive.

EASY TO USE – GRO-PERFECT SR can be brewed days before application. The brewing process is extremely simple and can be done on-site or in one of our brewing facilities. The final “brewed” product is diluted with non-chlorinated water and applied as a soil drench or as a foliar. This formulation is easy to apply without altering your existing plant-care regimen.

TYPICAL APPLICATIONS

GRO-PERFECT SR is a biological soil inoculant used in a variety of agricultural and horticultural programs to restore and sustainably maintain the health of planting soils and hydroponic mediums, to ultimately optimise plant health and growth, maximising crop yields and reducing crop grow times on fruit and vegetable crops, field crops, plant nurseries and paddocks, as well as in tunnel houses and in hydroponic facilities.



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“Brewed” and marketed in New Zealand by:

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As the actual conditions of use and storage are out of our control, no liability is accepted for any loss or damage caused directly or indirectly through the use of our products. Intending users should satisfy themselves as to the suitability of this product for any particular purpose, by carrying out appropriate tests. For more information, usage instructions and health & safety directions please refer to our website. ALWAYS READ THE LABEL AND SDS BEFORE USE.

DIRECTIONS FOR USE: GRO-PERFECT SR is brewed before use to create a super concentrated live dose of PGPB. Apply PGPB during the early morning or evening to avoid high UV reaction with the bacteria. Diluting with 5-10 parts non-chlorinated water is recommended for ease of application. Do not mix with fungicides, herbicides, pesticides or other toxic chemicals. If mixing with compatible products, always add GRO-PERFECT SR to the tank last and keep contact time as short as possible. The solution may be applied as a soil drench or as a foliar.

RECOMMENDED APPLICATION RATES: Total dosage during the growing season should be between 35 to 75 litres per hectare, depending on the crop value. Generally, the higher the value the crop, the higher you would dose, which will typically result in positive responses and additional net gain. However, as a starting point for almost any project, good results will be obtained using a total of 50 litres per hectare per growing season. Typically, as one kit produces 1000 litres, at 50 litres per hectare per growing season, one kit will treat 20 hectares of crop for a season. This can be applied in one, two or three doses, as follows:

- **If dosing once** – Apply as close to the seeding time as possible
- **If dosing twice** – Apply 1st dose as close to seeding time as possible, and reapply between $\frac{1}{3}$ to $\frac{1}{2}$ way through the growing period
- **If dosing three times** – Apply 1st dose as close to seeding time as possible, and dose a 2nd time $\frac{1}{3}$ to $\frac{1}{2}$ way, and then dose a 3rd time between $\frac{1}{2}$ way and $\frac{3}{4}$ way through the grow period

If the cost of application (labour, etc.) is high, some farms use one dose about 2 weeks after seeding. Others split applications based on various factors such as crop type, weather, etc.

BREWING: Our patented brewing process and culturing software is extremely simple to use and can be done on-site using our Bacteria Culturing Systems, or in our brewing facilities. The brewing process creates an optimal environment for the bacteria to reproduce quickly right before applying, ensuring a gold standard of quality control, and for a super concentrated live dose. Each brew kit requires a 72 hour brew time, and once brewed apply GRO-PERFECT SR as soon as possible, but absolutely within 7-14 days.



STORAGE & HANDLING: Store GRO-PERFECT SR out of direct sunlight. DO NOT FREEZE. Use of rubber gloves and eye protection is recommended. Do not permit contact with open wounds and do not ingest. Spilled product is safe to put in a drain or sewer. Wash spilled area with water. The product has a useful shelf-life with practical storage conditions.