



SMART ROTATIONS 1

treating crops & soils

SR1 contains soil dwelling Arbuscular Mycorrhizal Fungi (AMF) and Plant Growth Promoting Rhizobacteria (PGPR) that act to increase the effective root area of treated plants. This enhances plant efficiency through the increased acquisition of nutrients and water, up-regulation of natural plant defences and the development of a framework for other beneficial soil microbes.

AMF	PGPR
<i>Funneliformis, Claroideoglomus, Rhizophagus</i>	<i>Gluconacetobacter, Azospirillum, Bacillus, Pseudomonas</i>
Increased N and P availability and uptake	Nitrogen fixing
Improved crop quality and yield	Phytohormone production
Improved systemic resistance of plants	P-solubilisation
Increased water use efficiency	Enhanced plant systemic resistance
Enhances soil microbial communities for follow-on crops	

MODE OF ACTION

The application of SR1 ensures that inoculated plants can benefit from the association with AMF throughout their lifetime, acting as a vast secondary root system, increasing the root capacity up to 700 times. The beneficial bacteria within SR1, through enzymatic reactions and the production of organic acids, help to break the chemical bonds of soil compounds to release nutrients, to fix nitrogen and to produce plant growth promoting hormones.

TREATED PLANTS	SOIL TREATMENT
Inoculation of vegetables, pulses and maize at time of planting through direct drilling allows for early association of the germinating seeds with a high biodiversity of AMF and beneficial bacteria. This relationship will develop during the growing period, allowing the fungal network to grow through the soil and explore niches not easily accessible by the plant's own root system.	During the growing season the fungus will continue to develop hyphae (fungal roots) and sporulate throughout the soil, in effect seeding the soil for the next season.

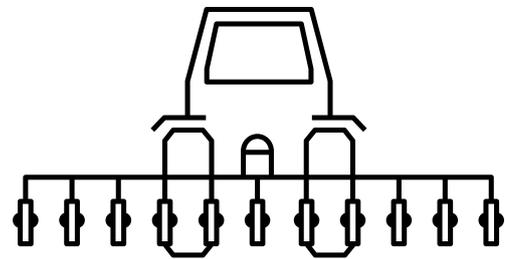
VEGETABLES PULSES & MAIZE

PRODUCT FORMULATION

A proprietary blend of UK cultivated AMF & PGPR. This product comprises inoculated microbial carriers in the form of dry granules in the fraction 1-3mm. The AMF component contains spores, mycelium and dried colonised root fragments at MPN >500K/L. The bacteria are provided at CFU/ml >10⁸.

RECOMMENDATIONS

SR1 is highly recommended for use with vegetables, pulses and maize after non-mycorrhizal crops such as Brassicaceae and Amaranthaceae to ensure a highly active soil environment for these crops.



DIRECTIONS FOR USE

Suitable for seed drilling using micro-applicators including Stocks AG and Technat (see manufacturers' recommendations for settings and roller specification). We recommend a one off application at time of planting. Apply within rotation programme to build soil function or directly after a non-associating AMF crop.

SMART ROTATIONS seek to maintain a carbon link between microbial communities and host crops during commercial production of food and forage, through intervention with inoculum products and prudent rotation management.

A highly biologically active soil is a farmer's ally in the quest to reduce fertiliser inputs, increase plant health, enhance yields and mitigate pathogen attack.

