Serenade Prime is the beneficial bacteria *Bacillus subtilis* (also known as *Bacillus amyloliquefaciens*) strain QST713 delivered as viable dormant spores. This type of beneficial bacteria lives on plant root surfaces and in the soil around the plant root system in a zone called the rhizosphere. QST713 is an extremely vigorous strain of this bacteria which colonises very rapidly and tends to dominate young plant root surfaces.

When the bacterial colonies on the roots are active they function as a dynamic biological link between the soil and the plant roots. This means that resources required for growth such as nutrients and water become more available, particularly during the early growth stages of the crop. Serenade Prime has consistently resulted in significant benefits to plant establishment and early growth.

Serenade Prime is designed to be applied early as a colonising agent to kick-start the soil/root/microbe inter-relationships in the rhizosphere to a highly activated state early in the crop.

**NUTRIENT UPTAKE CAPABILITIES**

Colonising the soil-root interface with QST713 beneficial bacteria provides a dynamic biological link which enables better access to nutrients from the surrounding soil. Applying Serenade Prime from the start of the crop allows the highly effective QST713 strain of *Bacillus subtilis* to ameliorate the soil resources in the vicinity of the plant roots and set the plants up for early establishment and growth. Serenade Prime is an extremely dominant colonising strain and consistently assists in providing measurable differences in nutrient uptake. The benefits generally show as better establishment and early growth continuing through to improved crop quality and uniformity at harvest.
CRITICAL FACTORS TO GET RESULTS

Timing

Serenade Prime is most beneficial to plants when new root tissue is colonised very early after formation. Consequently it is best used to prime plants for EARLY GROWTH. For baby leaf crops, the first in-field application just after planting is the most important. Repeat after 3-4 weeks if application is feasible e.g. multiple cut crops.

Placement

Do not apply outside root zone. If microbes do not sense the biochemical root exudates which are the signal for root colonisation, then they will not be attracted to root structures and successful colonisation will not occur.