



**BioWorks®**  
How You Grow Matters™



# CEASE® for Disease Management in Greenhouse Grown

CEASE® is a biofungicide that is effective for the management of foliar and soil borne pathogens. CEASE contains resting spores of *Bacillus subtilis* (strain QST 713) and secondary metabolites with fungicidal and bactericidal activity. CEASE is not a curative but is used in a preventive disease management program. CEASE has both foliar and soil activity, providing a broad array of uses.

## Foliar Applications

For maximum effectiveness apply soon after emergence or transplant and when conditions are conducive for disease development before the onset of symptoms. CEASE applications are made with a 1-2% spray solution (see rate chart below). In most instances a 1 % solution will provide adequate control on a 7-10 day schedule with thorough spray coverage. Under conditions of severe disease use the shorter interval and tank-mix or rotate with other registered fungicides.

CEASE can be used to manage many common fungal diseases such as Anthracnose (*Colletotrichum* spp.), gray mold (*Botrytis cinerea*) and powdery mildew (various spp.). It is effective on bacterial diseases caused by *Xanthomonas* spp. and *Pseudomonas* spp. It is best employed in an integrated program alternating with other registered biological or synthetic fungicides. In particular, bacterial diseases are controlled best when used in a program with copper-based products or potassium bicarbonate such as MilStop®. CEASE can be tank-mixed with a wide range of other pesticides or fertilizers. It has a high level of safety to plants.

## Soil Applications

CEASE has its origins as a soil borne bacteria. Thus it provides additional benefits when employed as a soil drench to greenhouse vegetables. Unlike foliar applications, Cease will colonize the roots of plants as they grow and produce the same fungicidal and bactericidal products present in a jug of CEASE. This colonization provides a zone of protection, reducing the incidence of common soil diseases caused by species of *Pythium*, *Phytophthora*, *Rhizoctonia* and *Fusarium*.

CEASE should be applied as a soil drench at or right after seeding or transplanting vegetables. To maintain optimal performance repeat the drench with a 1-2% solution every 21 – 28 days. In most instances 1% will provide adequate control. If severe conditions are anticipated, use the 2% rate. CEASE is compatible with a wide range of nutrients. It is not known to interfere with mycorrhizal organisms. It has a high level of safety to plants.

**CEASE Application Rates**

Concentration	Amount / 100 gallon	Amount / 1 gallon	Amount / Liter
1%	4 quarts	1.3 fl oz (2 Tbs+1 ½ tsp)	10 ml
2%	8 quarts	2.6 fl oz (¼ cup + 1 Tbs)	20 ml