



FOOD AND AGRICULTURAL RESEARCH AND EXTENSION INSTITUTE

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COMMERCIALY AVAILABLE BIOLOGICAL CONTROL AGENTS (BCAs) IN PLANT DISEASE CONTROL

Products	Active ingredient	Mode of action	Disease	Timing of application	Treatment method	Dosage /L water	PHI* (days)	Supplier
Fungus Leaf Control	Different types of enzymes (Liquid based)	- Degrades fungus cell wall and prevents spread of spores	Powdery Mildew and Rust	Before infection as preventive treatment and at beginning of disease onset	Foliar spray	0.5 mL	1	Roger Fayd'herbe & Co Ltd
Mildew Control	Geraniol (Natural extracts of geranium plants)	- Deactivates the growth of spores - Retards spore germination, germ tube growth	Preventive and curative effects against Powdery and Downy Mildews	Before infection as preventive treatment and at beginning of disease onset	Foliar spray	0.5 - 1.5 mL	1	Roger Fayd'herbe & Co Ltd
PF Control 83	Natural plant oil extracts - Oxymatrine (<i>Sophora</i> roots) and Thymol (<i>Thymus vulgaris</i>).	- Oxymatrine causes paralysis of insects' nerve while thymol inhibits fungal spore germination and mycelial proliferation.	Downy mildew and other diseases. <i>Also acts against chewing, sucking, piercing insects.</i>	Before infection as preventive treatment and at beginning of disease onset	Foliar spray	1.3 mL	1	Roger Fayd'herbe & Co Ltd
Companion 2-3-2	<i>Bacillus subtilis</i> GB03 Concentrated fermented plant extract. <i>Classified as plant growth promoting Rhizobacteria</i>	- Prevention and suppression of soil and foliar diseases. - Colonisation in plant root hairs and leaves preventing growth and antagonistic effects of soil borne and foliar pathogens	Many diseases on foliage, soil, roots, rots, spots, blight, cankers, wilt	Before infection as preventive treatment and at beginning of disease onset. <i>Sow seed immediately after treatment</i>	Foliar spray or soil drenching Seed treatment	4 - 8 mL	1	Blychem Ltd
Tricho Life	<i>Trichoderma viride</i> (<i>Tricho</i>)	- Disintegrates hyphae by enzymatic action - Used as seed dressing and root zone treatment	Many diseases on foliage, soil, roots, seeds and seedlings. Active colonisers of toxic environment	Before infection as preventive treatment and at beginning of disease onset. Also as dusting on seed before sowing.	Foliar spray and soil drenching Seed treatment	4 - 6 g 5 g per kg seed	1	MCAF Chemical House

* Pre Harvest Interval

Disclaimer: FAREI shall not be liable to any loss, damage or injury arising from the use of above products.

Note:

- (i) Wear protective equipment during mixing and application
- (ii) Do not mix BCAs with chemical pesticides or fertilisers
- (iii) Avoid mixing of BCAs with bio insecticides
- (iv) Avoid use of wetting agent/sticker/spreader in the spray mix
- (v) Use BCAs preferably at dawn or at dusk
- (vi) Ensure proper coverage on all plant parts during application. The number of applications will depend on the crop cycle and the targeted disease
- (vii) In case of soil or seed treatment, the soil must be enriched with organic matter and moistened prior to BCAs application
- (viii) Treated seeds must be used as soon as possible
- (ix) Once a container is opened, the product must be used preferably within 12 months.
- (x) BCAs are to be stored at 0 – 4 °C to maintain shelf life and viability of the conidia/bacteria for longer periods
- (xi) BCAs should not be used when expired

For more information on the use of BCAs contact our Crop Extension Offices listed below on Mondays, Wednesdays and Fridays from 13:00 to 16:00

Extension Office	Phone number
<i>Montagne Longue Sub Office</i>	<i>245 5759</i>
<i>Solitude Sub Office</i>	<i>261 9216</i>
<i>Mapou Model Farm</i>	<i>266 2087</i>
<i>Goodlands Sub Office</i>	<i>282 0563</i>
<i>Rivière du Rempart Sub Office</i>	<i>412 9969</i>
<i>Bon Accueil Sub Office</i>	<i>418 9482</i>
<i>Flacq Model Farm</i>	<i>4138125 / 4134617</i>
<i>L'Unité Sub Office</i>	<i>416 9209</i>

Extension Office	Phone number
<i>St Pierre Sub Office</i>	<i>433 9350 / 433 4378</i>
<i>Quatre Bornes Sub Office</i>	<i>466 4109</i>
<i>Maison Des Eleveurs (Henrietta)</i>	<i>684 1228</i>
<i>Wooton Sub Office</i>	<i>670 7453</i>
<i>Union Park Sub Office</i>	<i>677 1419</i>
<i>St Félix Sub Office</i>	<i>5256 1308</i>
<i>Rivière des Anguilles Model</i>	<i>626 2554</i>
<i>Plaisance Demonstration Centre</i>	<i>637 8112</i>