

Label Expansion for Rhapsody ASO Biofungicide for new crops and new diseases granted registration

J. Chaput, OMAFRA, Provincial Minor Use Coordinator

AgraQuest Inc., UAP Canada and the Pest Management Regulatory Agency recently announced the registration of a significant label expansion for Rhapsody ASO Biofungicide for suppression of a number of commonly occurring diseases including *Botrytis*, powdery mildew, downy mildew, bacterial diseases and fungal leaf spots. Rhapsody ASO is derived from the bacterium *Bacillus subtilis* and offers growers the first biological control alternative for these diseases.

Rhapsody ASO is a broad spectrum, preventative biofungicide that can be applied as a foliar spray alone, or in an alternating spray program with other registered crop protection products. For maximum effectiveness it should be applied prior to or in the early stages of disease development. The biological mode of action of Rhapsody ASO means that it is suitable for use in a disease resistance management program with other registered fungicides.

The following table provides a **summary** of the new crop and new disease registrations on the Canadian label for Rhapsody ASO Biofungicide. For detailed instructions consult the full Rhapsody ASO label.

New Crop(s) addition	Disease(s) addition	Rate (litre/ 100 litres of water)	Application Instructions
Crop group 9 (cucurbits) in the greenhouse including transplants	Gummy stem blight, Cercospora leaf spot, Downy mildew, Powdery mildew	1.0 - 2.0	Begin applications soon after emergence or transplant when environmental conditions in the greenhouse and plant stage are conducive to rapid disease development. Repeat as necessary on 7 to 10 day intervals. Thorough coverage is essential.
Crop Group 4 (Leafy vegetables): in the greenhouse including transplants	Sclerotinia rot	1.0 - 2.0	Head and leaf drop: Apply as a directed spray with multiple nozzles to each seed line in sufficient water to ensure thorough coverage of lower plant leaves and surrounding soil surface within 7 days of thinning or transplanting. Repeat applications on 10-14 day intervals if conditions for disease development persist.

New Crop(s) addition	Disease(s) addition	Rate (litre/ 100 litres of water)	Application Instructions
Crop Group 4 (Leafy vegetables): in the greenhouse including transplants	Grey mould	1.0 - 2.0	For suppression, begin applications soon after emergence or transplant and continue as necessary on a 7 to 10 day interval. When environmental conditions in the greenhouse are conducive to rapid disease development, use Rhapsody in a rotational program with other registered fungicides. Thorough coverage is essential.
	Powdery mildew	1.0 - 2.0	Begin applications when conditions are conducive to disease development. Repeat as necessary on a 7 to 10 day interval. Apply in sufficient water to ensure complete coverage of entire plant.
Lettuce only	Downy mildew (<i>Bremia lactucae</i>)	1.0 - 2.0	Begin application soon after emergence or transplant and when conditions in the greenhouse are conducive to disease development. Repeat as necessary on a 7 to 10 day interval.
Crop Group 5 (Brassica vegetables): in the greenhouse including transplants	Downy mildew (<i>Peronospora parasitica</i>)	1.0 - 2.0	Begin applications when environmental conditions in the greenhouse are conducive to rapid disease development and repeat as necessary on 7 to 10 day intervals. Thorough coverage is essential.
	Pin rot (<i>Alternaria/Xanthomonas</i> complex)	1.0 - 2.0	
	Powdery mildew	1.0 - 2.0	Begin application soon after emergence or transplant and when conditions in the greenhouse are conducive to disease development. Repeat as necessary on a 7 to 10 day interval.

New Crop(s) addition	Disease(s) addition	Rate (litre/ 100 litres of water)	Application Instructions
Peppers in the greenhouse including transplants	Grey mold, Bacterial spot, Bacterial speck	1.0 – 2.0	Begin application soon after emergence or transplant and when conditions in the greenhouse are conducive to disease development. Repeat as necessary on a 7 to 10 day interval.
Crop Group 8 (Fruiting vegetables): in the greenhouse including transplants	Bacterial blight	1.0 – 2.0	Begin applications when environmental conditions in the greenhouse are conducive to disease development and repeat as necessary on 7 to 10 day intervals.
Ornamentals (greenhouse and outdoor)	<i>Rhizoctonia, Pythium, Phytophthora</i>	1.0 – 2.0	Apply finished mixture as a DRENCH to thoroughly soak the root zone. Begin applications during or after seeding, sticking of cuttings or after transplanting to propagation beds, containers, pots or trays. Optimal performance is obtained with preventative treatments repeated every 21 – 28 days throughout the growing season.
Roses (greenhouse and outdoor)	Black spot	1.0 - 2.0	Apply on a 7 day schedule. Under high disease pressure, use higher rate or in a rotational program with other registered fungicides. Thorough coverage is essential.

New Crop(s) addition	Disease(s) addition	Rate (mL/ 100 square metres)	Application Instructions
Turf, sod, lawns, golf course fairways, roughs, greens, tees	Brown patch, dollar spot, Anthracnose	125 mL to 250 mL per 100 m ²	Begin applications when conditions are conducive to disease development. Continue applications as necessary on 7 to 10 day intervals. Apply in sufficient water to provide thorough coverage. Under moderate to severe disease pressure, use higher rates and minimum spray intervals and use Rhapsody in a program with other registered fungicides.

Rhapsody ASO biofungicide should be used in an integrated disease management program and in rotation with other management strategies. Follow all other precautions and directions for use on the Rhapsody ASO label.

This minor use project sponsored by the Minor Use office of OMAFRA was submitted in June 2008 in response to minor use priorities identified by producers and extension personnel. Because of the size of the submissions, PMRA converted the submission to a Category B submission; however we worked very closely with the registrant and PMRA to maintain the review as though the projects were still label expansion submissions.

We also wish to thank the personnel of **Agraquest Inc. and UAP Canada Inc.** for their support of this registration and the personnel of the **Pest Management Regulatory Agency** for evaluating and approving this important pest management tool.

For copies of the new labels contact Jim Chaput, OMAFRA, Guelph (519) 826-3539 or visit <http://www.uap.ca>