Armicarb® - a new bio-fungicide for use in grapevines, fruit and vegetables in Europe

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What is Armicarb®?
Armicarb® is a bio-fungicide being developed in Europe by Agronaturalis Ltd. for use in a wide range of crops; grapevines, hops, pome fruit, soft fruit, stone fruit, vegetables and ornamentals. Armicarb® is a specially optimised formulation of potassium bicarbonate, the result of extensive testing by researchers at Cornell University, USA, for use as an agricultural fungicide.

Efficacy of Armicarb® against Botrytis cinerea in grapevines
In 3 trials conducted in Austria in 2010, Armicarb® gave very good levels of disease control, comparable to the conventional fungicide standard. Armicarb® performed well, independent of disease pressure, whereas unformulated potassium bicarbonate, applied at 2.3 times the active substance rate, was significantly less effective under medium to high disease pressure conditions.

What makes Armicarb® special?
The proprietary wetting system ensures a complete and thorough coverage of plant surfaces, whilst at the same time limiting wash-off of the highly water-soluble active substance by rain. It is this critical balance of ‘sticking’ and ‘spreading’ by the formulation that delivers a level of field performance, outdoors as well as in protected conditions, equivalent to conventional fungicide standards.

Results with timed post-infection applications of Armicarb® against apple scab
A high level of control of Venturia inaequalis (>90%) was obtained with Armicarb® applications made up to 8 hours post-infection on apple seedlings. Disease severity was well controlled for at least 12 hours, while disease incidence started to increase beyond 8 hours. The results suggest that there may be some flexibility in application timing with respect to weather conditions in the field, and fit with Armicarb®’s mode of action as a fast-acting contact fungicide causing collapse of spores and fungal mycelium on the plant surface.

Conclusions
Armicarb® provides good levels of control of many economically important fungal diseases, including apple scab, Botrytis cinerea in grapes, and powdery mildew in soft fruit and vegetables. With its exemption from EU MRLs, and authorisation for use in organic production by the European Commission, Armicarb® will be especially suitable for use in programmes with conventional fungicides, as well as in organic fruit, wine and vegetable production.