

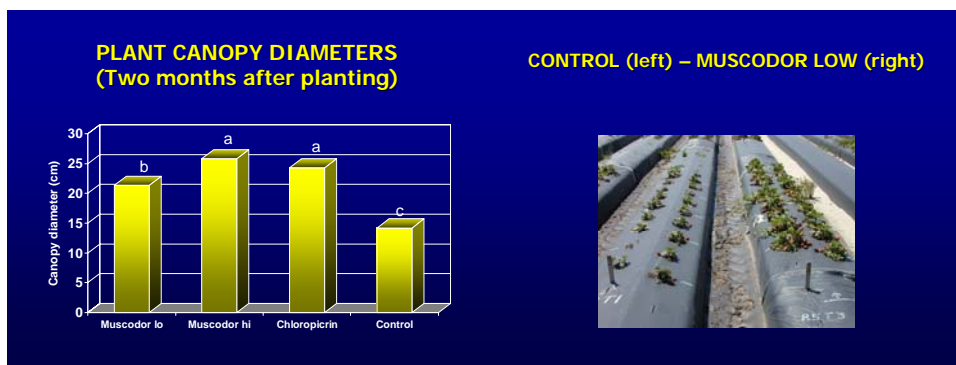
MUSCODOR BIOFUMIGANT- AN UPDATE ON A PROMISING METHYL BROMIDE ALTERNATIVE FROM AGRAQUEST, INC.

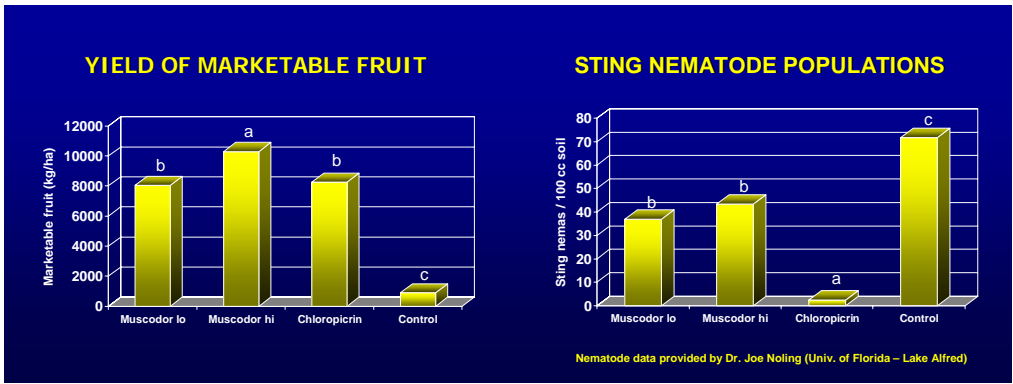
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The biofumigant (common name Muscodor, experimental number QRD 300, proposed trade names Andante, Glissade, Arabesque) is composed of the fungus *Muscodor albus*, and the and active ingredients it produces. Originally an endophytic fungus isolated from the internal bark of a cinnamon tree in Honduras, this fungus is a naturally occurring biofumigant that will be used in field and greenhouse vegetable, ornamental and fruit production as a soil fumigant. It is a biologically based product and the active ingredient (*Muscodor albus*), produces a series of natural volatiles that negatively affect plant root pathogens and nematodes, and can be used in field bedded production as a methyl bromide replacement product. QRD 300 is non toxic, environmentally benign, will be safe for workers, and will have a short re-entry interval. Target organisms that Muscodor has been shown to have extremely effective activity on include *Rhizoctonia*, *Pythium*, *Phytophthora*, *Fusarium*, *Ralstonia* and *Sclerotinia*. Trials are being continued to evaluate its efficacy on nematodes species, and activity has been shown on the root knot nematode *Meloidogyne incognita*, sting and lesion nematodes. The product has received EPA section 3 approval for use, and final stability and formulation studies are now being conducted. Anticipated commercial sales are third quarter, 2007.

Recently in a 2005-2006 strawberry trial in Florida, Muscodor was tested for effect on plant growth and control of the sting nematode *Belonolaimus longicaudatus*. Muscodor was applied at a rate of 2100 or 4200 kg/ha, versus chloropicrin at 340 kg/ha with an untreated control. Plant canopy diameter, plot harvests, and nematode samples, as well as pathogen isolations, were performed.

In this strawberry trial, Muscodor applications increased plant growth, increased plant yields, and decreased nematode numbers compared to the untreated control (Personal communication, J. Mertley, J. Noling, and N. Perez, University of Florida, 2006, see below).





This trial is illustrative of the effect of Muscodor on soil pathogens and soil nematodes, and the positive growth effects that can occur with use. The effect is immediate and local, some soil moisture will be necessary after treatment, and the product can be used in a variety of soil types and soil temperatures. Plastic use on beds will not be a requirement with this product, but the effect of bedding plastic on the activity of Muscodor is now under investigation.