MUSCODOR: A NEW BIOFUMIGANT AS AN ALTERNATIVE TO METHYL BROMIDE

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Muscodor albus is an endophytic fungus isolated from a cinnamon tree from Honduras. It was isolated and identified by Professor Gary Strobel of the Montana State University and licensed to AgraQuest, Inc. It produces a number of ester and alcohol derivatives that control bacteria and fungi. The current formulation of choice is autoclaved rye grit. *M. albus* requires a carbohydrate source to grow on and produce volatiles. In practical use, the formulation is hydrated, thus activating the fungus, resulting in the production of volatiles. In the greenhouse and in field soil, the dry formulation is applied, incorporated into the greenhouse mix or field soil, and irrigated to activate the fungus. In postharvest situations, sachets of the formulation are hydrated and placed in cartons of fruit or vegetables.

Muscodor albus gives off its array of volatiles over a wide range of temperatures, giving if wide flexibility of use. It is effective at temperatures at least as low as 31^{o}F. For fumigation at 31^{o}F, a short incubation period following re-hydration of sachets enhances volatile production, as opposed to re-hydration directly at 31^{o}F.

Upon registration, organic certification of the suite of *M. albus*-based products is anticipated. In addition to its organic designation, M. albus products exhibit little risk to mammals and the environment.