PROFUME* GAS FUMIGANT: A SUCCESSFUL FIT AS A METHYL BROMIDE ALTERNATIVE

Robert E. Williams*[1], Jim Garrett[2], Ed Hosoda[3], and Ken Phelps[4]

[1]Dow AgroSciences LLC, Atascadero, CA; [2]Fume Tech, Inc., Sacramento, CA; [3]Cardinal Professional Products, Woodland, CA; [4]Dow AgroSciences LLC, Granite Bay, CA

Methyl bromide has historically been the fumigant used for postharvest insect control in processing plants, mills and warehouses in Northern California. However, in recent years, restrictions in the form of mandated dosage-dependent buffer zones have significantly limited the use of methyl bromide at some of these facilities.

At one such rice mill in which methyl bromide could no longer be practically used, ProFume* gas fumigant was used under a California Research Authorization to control a known insect infestation in the Spring of 2003. ProFume is being developed by Dow AgroSciences LLC for stored product insect and rodent control in cereal grain mills and storage as well as dried fruits and tree nut processing plants and storage.

Hidden commercial adult beetle bioassay cards placed by both the miller and the fumigator demonstrated complete control following the fumigation. Additionally, no insect problems were observed at the mill during the months between the Spring and early Fall fumigations.

The mill was successfully fumigated a second time in the Fall of 2003 following the mill's historical two methyl bromide fumigations per year fumigation schedule. The positive results achieved at this rice mill are consistent with the successful pest control achieved with ProFume at another rice mill in Northern California. At that mill, the historical 1-2 methyl bromide fumigations per year have been successfully replaced by precision fumigations with ProFume for five consecutive years.