

Donahaye, E.J., Navarro, S., Bell, C., Jayas, D., Noyes, R., Phillips, T.W. [Eds.] (2007) Proc. Int. Conf. Controlled Atmosphere and Fumigation in Stored Products, Gold-Coast Australia. 8-13th August 2004. FTIC Ltd. Publishing, Israel. p. 427.

PRECISION FUMIGATION WITH PROFUME™ GAS FUMIGANT AS AN IPM TOOL IN STORED PRODUCT PEST MANAGEMENT

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ABSTRACT

As methyl bromide is being phased out, several alternatives products and procedures have been researched to manage stored product insect pests in grain storage, mills, and processing plants as a part of IPM approach to pest control. Substantial research has been conducted on heat, fumigants, residual insecticides, modified atmosphere and pest monitoring. One such IPM tool is ProFume gas fumigant, developed by Dow AgroSciences. ProFume has been developed with an emphasis on Precision Fumigation™. Precision Fumigation can be defined as optimizing fumigant use to maximize efficiency and minimize risk. Under this concept, fumigation factors such as pests to be controlled, temperature, half loss time (gas confinement) and exposure period are taken into consideration in customizing a fumigation plan and execution. Proper fumigant introduction, circulation, aeration and worker safety are also emphasized under this concept. A case study is presented discussing how Precision Fumigation concept was implemented during a research trial with ProFume gas fumigant. By implementing Precision fumigation, an enhanced level of professionalism is being accomplished and should be a standard practice for any new fumigant being developed.