THE PROFUME™ FUMIGUIDE™ – A NEW AND NOVEL TOOL TO MANAGE AND IMPROVE FUMIGATIONS

R.E. Williams*, Dow AgroSciences LLC, Atascadero, CA
B.M. Schneider, Dow AgroSciences LLC, Indianapolis, IN

ProFume gas fumigant has been developed by Dow AgroSciences (DAS) as an alternative to methyl bromide for post-harvest control of stored product pests in food processing, packaging and storage facilities. ProFume is currently registered in the U.S. with established tolerances for cereal grains and dried fruit and tree nuts. Registrations for empty mills have been approved in Switzerland, Italy and the U.K. Registrations are pending in Germany and France.

The Fumiguide program for ProFume gas fumigant (ProFume Fumiguide) has also been developed by DAS as part of the ProFume labeling and is a new and novel tool for managing and improving fumigations. The ProFume Fumiguide is available to fumigators certified by DAS to use ProFume through an extensive DAS stewardship training program. As a MS Windows™-based computer program, the ProFume Fumiguide offers extensive "Help" files and "drop-down" instruction/clarification boxes. It can be used with either English or metric units and is backed by DAS technical support.

The ProFume Fumiguide enables calculation of target dosages specific to the species, life stage, temperature and HLT conditions, then calculates the exposure time-specific quantities of ProFume to be used. In addition, the ProFume Fumiguide can be used before the fumigation to rapidly evaluate "What if?" scenarios using variable fumigation conditions of temperature, HLT and exposure time to optimize the fumigation to meet the fumigator's or miller's needs. Finally, the ProFume Fumiguide provides for optional on-site gas concentration monitoring. This enables "real-time" decisions to precisely adjust the fumigation as necessary in response to the actual HLT and corresponding CT accumulation.

The ProFume Fumiguide is a novel tool that enables the fumigator to develop and document a complete fumigation management plan and fumigation performance. The documented area-specific CT accumulation and HLT can provide insight into needed improvements in sealing and/or air circulation strategies to improve future fumigations.