PROFUME MOVING FORWARD IN AUSTRALIA

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The international agreement to phase out Methyl Bromide initiated works on Sulfuryl Fluoride as a possible replacement for fumigation of buildings and structures and later for food product disinfestation purposes. This later work was to provide a viable alternative to Methyl Bromide in the quarantine and pre-shipment (QPS) fumigation of durable commodities.

Dow Agrosciences introduced Sulfuryl Fluoride under the Profume label into Australia in 2005. It became available for use in Australia in 2006.

In Australia, the Profume product is championed and distributed by SA Rural Agencies, who are also responsible for product stewardship which includes product specific training of fumigators and the policing of compliance of use for the product.

Profume application rates and methods for the various commodities, pests and conditions as well as the necessary dose rates are accessed via the Dow Agrosciences' Fumiguide computer program. The Fumiguide is focused on achieving the best result in the time available. As the initial data on efficacy was designed to provide data which compared with that achieved with Methyl Bromide, Profume was initially focused on high dose rates with short term exposures.

Although, the practical use of Profume in the field has proved successful without exception when used correctly, in Australia, the acceptance of Profume as a Methyl Bromide replacement in QPS uses has been not yet been approved by the Australian Quarantine and Inspection Service.

To date, Profume in Australia has been used to fumigate a variety of products including nuts, dried fruits, cereal grains, grain products, space, mills, wood (requires acceptance of ISPM15 data by AQIS), and hay (requires AQIS approval of Profume for this product).

These fumigations have been carried out in a variety of structures including houses, mills, shipping containers, buildings, ships, bag stacks, silo bags, silos sheds, grain bunkers.

In Australia, as highlighted earlier, Profume was initially introduced to the Grain Industry for QPS to replace Methyl Bromide, however, opportunity to develop came from another area. In Australian eastern grain growing areas, resistance to Phosphine in target species of stored grain insects reached a level where label rates no longer afforded any measure of control. Profume was introduced to provide an eradication strategy in areas where resistance could not be controlled.

The growth in Profume usage in Australia has been due to it being able to provide a viable break strategy for Phosphine.

Profume has proven to be a resounding success in both, the resistance eradication programs and as a Phosphine break strategy.

This has provided more opportunities for development of the product in the general fumigation area and the QPS markets as confidence and familiarity with Profume increases.

The benefits of Profume as a fumigant are based on the product characteristics, the product stewardship program and the Fumiguide. Specifically

- the flexible dose and duration of fumigations,
- the ease of application,
- ability to easily “top up” a fumigation and
- the ability to vent quickly,
- very little significant sorption with the product.

The issues of concern with Profume are based around the relative newness of the product and the speed of acceptance of its credentials. Specifically,

- cost (which is concentration and time dependent).
- lack of monitoring devices OHS (personal monitors, fumigation monitors).
- Presence and significance of fluoride residues in commodity.