PROFUME® IN AUSTRALIA

Peter Williamson, SA Rural Agencies Pty Ltd

SA Rural Agencies is a 100% privately owned Australian company established since 1984. Over the years SA Rural Agencies has built up a strong position as the leading supplier of a comprehensive range of pest management and fumigation products and services to established agents and distributors in all regions of Australia and many countries in the Asia Pacific region. SA Rural Agencies is well regarded as being the most proactive company in the region developing new, alternative and innovative products to expand its range, and continues to experience rapid organic growth in all divisions of the company whilst maintaining an exceptional history of compliance and performance.

In conjunction with Dow Agrosciences, SA Rural Agencies saw the potential of Telone®, Chloropicrin and ProFume® as the way forward to introduce viable replacements for Methyl Bromide in Australia.

ProFume® is currently awaiting registration which is expected by October 2007. However, in the trials to date under APVMA permits the results have been outstanding.

In Australia we have fumigated 3 mills, a number of houses, almonds warehouses, timber and dried fruit. All have proven ProFume® to be a viable alternative to Methyl Bromide.

Our first trial in March 2007 was a flour mill in Brisbane, Queensland which is a subtropical region. Because of the Methyl Bromide phase-out the mill hadn’t been fumigated since 2005. Hence the costs of cleaning and other systems were rapidly escalating.

After entering the area volume, target pests, half loss time, exposure time and temperature on the Fumiguide (program for ProFume gas fumigant), the program calculated the dosage thus providing a customised fumigation blueprint for the job.

The mill comprised 6 floors totalling 8,910m³ in volume. Monitoring and induction lines were set up on each floor. The induction line ended with a copper tube over an industrial fan. The building was built to be fumigated therefore it was a simple process to seal off explosion vents, exhaust vents, windows and doors. The area was cleared and signage and security were put in place. After a final walk through was completed the ProFume was introduced into each floor from outside the building.

Monitoring was conducted at 1 hour, 6 hours, 12 hours and before final release at 24 hours. Aeration was done by opening doors on each floor from external stairs. At 24 hours, we completed a final walk through with an SF-ExplorIR ™ which is a rugged,

portable monitor to detect low level (0-5ppm) concentrations of ProFume® allowing safe re-entry to fumigated structures and fumigated commodity areas. The monitor's unique infrared fingerprint eliminates any false readings. Calibrations are fixed and require no user adjustments. A zero reading was found on each floor.

This mill was fumigated on March 23rd 2007; the Mill Manager was very pleased with the results and is still pleased 7 months later.

In Australia we will use ProFume to target existing infestations of insects such as borers, bedbugs, cockroaches, clothes moths, carpet beetles and drywood termites in the following situations; Dwellings (including mobile homes), Buildings, Construction materials, Furnishings (household effects), Shipping containers (including those containing pallets, machinery and non-food items) and Vehicles (including cars, buses, surface ships, rail cars and recreational vehicles).

In addition we will target all life stages of stored product pests including; Indian meal moth (*Plodia interpunctella*), Mediterranean flour moth (*Ephestia kuehniella*), Confused flour beetle (*Tribolium confusum*), Rust red flour beetle (*Tribolium castaneum*), Warehouse beetle (*Trogoderma variabile*), Saw-toothed grain beetle (*Oryzaephilus surinamensis*), Dried fruit moth (*Ephestia cautella*), Drugstore beetle (*Stegobium paniceum*), Tobacco beetle (*Lasioderma serricorne*), Hide beetle (*Dermestes maculatus*), Grain weevil (*Sitophilius granarius*), Rice weevil (*Sitophilius oryzae*), Rust red grain beetle (*Cryptolestes ferrugineus*) and Lesser grain borer (*Rhyzopertha dominica*) in the following situations; Commodity storage and non-residential structures not containing food commodities including food handling and processing facilities, pet food facilities, mills, warehouses, stationary transportation vehicles (railcars, trucks *etc*.), temporary and permanent fumigation chambers. Commodity storage structures containing the following food commodities: Cereal grains (*eg*. barley, corn or maize, millet, oat, popcorn, rice, sorghum, spelt, triticale, wheat, wild rice and polished rice), Dried fruits (*eg.* apricots, dates, figs, prunes, raisins, sultanas), Nuts (*eg.* almonds, beech nuts, brazil nuts, cashews, chestnuts, hazel nuts, hickory nuts, macadamias, peanuts, pecans, pine nuts, pistachios and walnuts), Baled hay for animal feed and pet food, Seed storage facilities holding seeds of additional plant varieties stored for propagation purposes only.

We have concluded from personal experience in trials that the ProFume® package including the Fumiguide and Dow Agrosciences Precision Fumigation training program offers a technically and economically a viable alternative to the use of ozone depleting methyl bromide.

We would like to gratefully acknowledge the professional assistance of Dr Paul Hughes, George Saville and Scott Boothey from Dow Agrosciences Australia & Dr Suresh Prabhakaran from Dow Agrosciences USA in helping SA Rural Agencies develop ProFume® in Australia.