

# THINK YOU NEED A FUMIGATION?

Jerry Heath, BCE



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Fumigation is the ultimate tactic to penetrate into the most protected harborage, within equipment, and sometimes into packaging, products and commodities, to **kill all life stages of insects and rodents**. Fumigants are distinguished from other pesticides by being active in the gas phase rather than liquid spray droplets, or solids. At the conclusion of a fumigation treatment the fumigant gas typically diffuses back into the atmosphere **leaving behind no meaningful residue**. In the atmosphere fumigant gasses become diluted to harmless concentrations and are broken down to ordinary elements by ultraviolet light. There are several different fumigant gasses particularly suited to different pest organisms and situations.

All fumigations fundamentally require certain temperatures and gas concentrations throughout the target space, and certain durations of exposure. **This in turn requires spaces that can be adequately sealed to hold gas** whether it be a sealed structure, truck trailer, barge, railcar, bin,

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processing equipment system, or something encased under a gas-tight tarp. Fans are often employed within fumigated spaces to efficiently achieve penetration of effective concentrations, and sensitive gas analyzers to assure the quality of treatments throughout the space. In addition to holding gas, **allowances need to be made for thorough and safe exhaust of the fumigant**.

**Safety is a huge aspect of fumigations.** Fumigants are highly toxic, but when used by experienced and highly professional fumigators the safety record has been excellent.



**Regulatory requirements associated with fumigations are also extremely robust** to help assure safety.

Many different

steps and techniques are employed to prevent applicator, client personnel or neighborhood exposures to fumigants. Depending on the situation, all or parts of a facility may need to be evacuated for a period of time. Sensitive instruments are utilized to assure atmospheres are safe for

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re-entry. Extraordinary safety precautions extend to the transportation of fumigants, and even waste disposal.

Needless to say, **fumigations require expert assessments and planning.** Very few companies have fumigation expertise and the capability to offer these services.

**Fumigation is a routine and cost effective tactic** in the pest management programs for certain commodities and food processing facilities, but in others **it may only be considered in emergencies.** It does not require a runaway pest infestation to be an emergency. Sometimes a limited but elusive infestation of insects or can be intolerable. Fumigation is a great tactic to **solve certain problems or reset pest populations to zero** so that integrated and sustainable pest management programs can maintain acceptable conditions. Fumigation is just one tactic among many utilized in modern pest management. Careful assessment of pest situations should be made in every case.

**It is important to get professional advice.** Some of the first things to assess are the pest identification and circumstances of the infestation and site. **Not all pest situations call for fumigation.** There could be alternatives to fumigation, or ways to limit the scope of a

fumigation to minimize expense and disruption to business operations. As with any professional service, a little time may be necessary for scheduling and preparations, plus for fumigation possibly shipment of extraordinary supplies and regulatory compliance. Clients may need to devote time and labor to some deep cleaning, opening equipment, moving products, and other site preparation tasks.

Finally, it is important to remember that as great as it is for eliminating pests, **fumigation has no residual efficacy.** Strive to get to the root of the problem.

**Commodities and structures are susceptible to immediate re-infestation!** So, take advantage to the extent possible of the reset afforded by a fumigation to maximize the performance of a solid **Integrated Pest Management (IPM) program.** A wide variety of tactics can be utilized to minimize down time and expense. **Strive for prevention.** Finding and correcting the source and root cause of pest problems is the most effective approach to prevent infestations. Often there are structural deficiencies with exclusion and pest harborages, or sanitation practices that might be improved to break pest life cycles or deprive pests of food and harborage. Monitoring and inspection programs can help keep pesticide use at a minimum, and as low-impact as possible when needed.

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Jerry Heath, Board Certified Entomologist, is Staff Entomologist serving a broad range of technical service needs for IFC's food industry clients. With nearly forty years of experience, Jerry's career has focused exclusively in the fields of entomology and pest management in academic and several industrial settings. Since 1937, IFC is the only national pest management company focused solely on the food industry. For more information, visit [www.indfumco.com](http://www.indfumco.com) or call **800-477-4432.**