IMPACT OF STRUCTURAL FUMIGATION ON PEST POPULATIONS IN FOOD PROCESSING FACILITIES

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Stored-product insects in food processing and storage facilities are difficult to manage because they often occur in cryptic habitats, such as in the equipment and structure of the building, and move from these sources into the food product. Methyl bromide has been widely used as a management tactic against stored-product insects occupying structures, but worldwide its use has been or is being phased out under the Montreal Protocol. Other structural treatments such as high temperature and the fumigant sulfuryl fluoride are potential replacements, and more effective integrated pest management programs may reduce or eliminate the need for structural treatments. All of these strategies will require better information on pest populations and the impact of the treatments on these populations to make them technically and economically viable alternatives. Pheromone baited traps can provide a good measure of insect activity in a facility, but these programs are not always implemented optimally and information from these programs is often not used to its maximum potential. In this presentation, insect counts from pheromone monitoring programs obtained from multiple food facilities will be used to evaluate the change in insect captures from one monitoring period to the next in the presence and absence of structural fumigation. The potential for using this information to guide fumigation programs, specifically, and pest management programs, more generally, will be discussed.