

The Use of Methyl Bromide to Control Insects in Country Hams in the Southeastern United States

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Introduction

Consumers and producers of country hams know that flavor and aroma become more intense the longer the ham is aged. In addition, country ham producers can add value and distinguish themselves from the competition by aging hams longer to develop characteristic flavor and aroma. However, aging dry-cured country hams in temperatures above 80°F provides an ideal environment for ham/cheese mites and other insects that feed on protein and fat. Once an infestation is discovered, ham curers will fumigate the hams with methyl bromide, a Food and Drug Administration (FDA)-approved food insecticide. Recently, concerns have been voiced in relation to the effects of methyl bromides on the stratospheric ozone layer. A survey of country ham plants was conducted to determine the use of methyl bromide.

Significance of the Issue

A recent survey of country ham plants was conducted to determine mite prevalence, the use of methyl bromide as a corrective action, and possible alternatives. Of the 34 plants surveyed, 20 of those were directly audited by meat scientists from Mississippi State University, North Carolina State University, and the University of Kentucky.

Figure 1.

Country ham plants surveyed

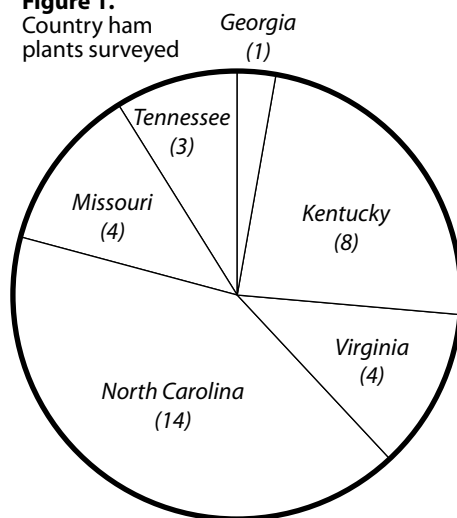
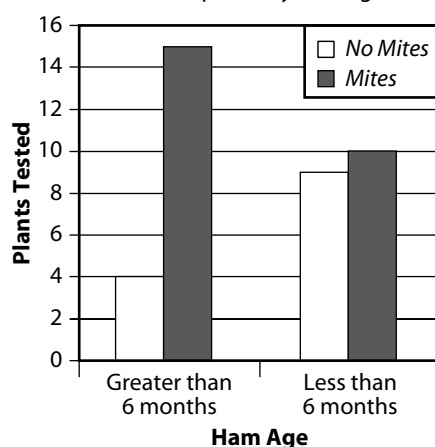


Figure 2.

Mite occurrence in plants by ham age.



Twenty-two plants reported using methyl bromide one to five times a year, depending on the severity of the infestation. It appears that mite infestation occurs more frequently in longer aged hams (>5 months); however, the reason for this has not been determined. Many ham producers theorized that proper sanitation and pest control were useful tactics to minimize mite infestations. Plants that experienced mite infestations found that methyl bromide was the only effective means of control.

Ways to Prevent Insect Infestations in Country Hams

Some country ham curers reported that sanitation and fly control were keys to preventing mite and Dermestidae beetle infestation. However, some curers with excellent sanitation and fly control programs still had problems with insects. No one method can prevent infestation, but a combination of practices can be employed to help prevent their occurrence.

- Keep the areas outside the plant clean and free of garbage, debris, and old equipment. In addition, keep the area around the outdoor trash receptacle clean and away from the ham aging houses.

- Do not plant trees and shrubs directly around the ham aging houses, as trees and shrubs can harbor insects and mites. In fact, a gravel dead zone (no grass or landscaping) 2 feet immediately around the building will help prevent insect infestation.
- Grass and weeds should be mowed and trimmed weekly to prevent overgrowth that could harbor insects.
- The areas inside the ham plant should be kept clean and sanitized.
- The floors and walls inside the aging rooms should be cleaned regularly. Country hams will continue to lose weight, and moisture and fat will accumulate on the floor, which can attract mites and insects.
- Maintain an effective pest control program in the ham plant. Although the exact entry of mites into a plant is unknown, it is thought that they could be carried in by rodents and other insects.
- Limit the movement of plant personnel through the aging house, as employees can carry mites and insects into the aging rooms. Require an employee who discovers an infestation to change clothing and shower. This will help prevent cross-contamination in other ham aging houses.
- At the end of the ham aging period, the aging house, storage racks, and other equipment should be thoroughly cleaned and sanitized before the next ham season.

Contact your state's Cooperative Extension meats specialist for more information:

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