

Influence of Sanitation on Post-Fumigation Pest Rebound

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DOI: 10.5073/jka.2010.425.264

Abstract

Food processing plants often conduct thorough cleanings prior to fumigation, but sanitation practices post fumigation are quite variable. We conducted a study in several real-world fumigations in commercial flour mills to examine the influence of post-fumigation sanitation practices as well as other factors such as facility age, construction material, fumigant type, CT, door policy, and exterior pest pressure on the rate at which pest problems rebound to pre-fumigation levels. We found that although facility age, construction material and door policy were important, the most important factor was facility sanitation. Regardless of fumigant type, or time of year the fumigation occurred the facilities that maintain the highest sanitation levels, achieved the longest rebound time and thus received the maximum fumigation benefit. Those facilities that had poor sanitation practices, rebounded very quickly, sometimes within months, to pre-fumigation levels. Our findings support the use of sanitation as a pest management tool in flour mills and points out the importance of an IPM program.