Implementing FSMA Rules for Pest Prevention & Corrective Actions

Whether it is microbial or pest concerns to be addressed in a FSMA compliant food safety program, the goal is to build a preventative program based on identified risks. A risk based analysis is required as the first step in establishing a plan to address food safety hazards. The analysis will constitute the foundation of the food safety plan. After conducting the risk analysis, and preventive controls are in place, monitoring, corrective actions and verification with a stout documentation program will complete the program elements.

Electronic documentation can help facilitate the decision-making process in both program development, verification and maintenance. Sufficient inspection time for establishing the risk assessments, preventive controls, monitoring and any corrective actions is also required under FSMA. Just as prevention is considered a cornerstone of the food safety plan, inspections are a cornerstone of achieving the goal of preventive pest management.

McCLOUD
PEST SOLUTIONS SINCE 1904

Risk Analysis and Preventive Controls

A risk analysis should be performed initially and reviewed periodically for modifications. This is accomplished through a thorough inspection and data review of past pest pressures. Pest management professionals will provide this site assessment to prospective and existing food facility clients. When hiring a new pest management company, it can be helpful to allow the pest management company to view the site's past pest history. Occasionally, food facilities are reluctant to allow new contractors to review this information but it can be helpful in predicting future issues. In particular, trending reports which summarize pest activity by area and monitoring device can be especially useful as predictors of future pest pressures. Electronic data capture systems can be helpful in accessing the information needed in making these assessments whether it is for past or present pest management contractors.

Buildings going through renovations, additions or completely new buildings, should consider pest potential in building plans as well. Preventing pests and minimizing risks should be part of the building design process. It can also be useful as early as the site selection decision. This is important since many of the structural pests we encounter, including stored product pests, can come from the exterior. Involving the pest management company in the process can also help reduce structural related pest conducive conditions in the future. It is far easier to build it right in the beginning than structurally modify, later.

Program Monitoring

As with original risk analysis, a visual inspection will be important in assessing program effectiveness overtime. There must be sufficient time built into the program for inspection of both physical monitors and beyond the monitors. The concept of pest vulnerable zones (PVZ) can assist with the inspection and monitoring process. A pest vulnerable zone, or sometimes called pest vulnerable area (PVA), are areas that are identified as particularly conducive to pest activity. They are designated for inspection at a set frequency and may be assigned a bar code for recording the inspection results electronically.

In addition to the visual inspections, pest capturing equipment will be used as part of the monitoring process. Pheromone traps, insect light traps and multi-catch rodent traps are examples of pest monitors.Types and numbers of equipment will be based on the site assessment.

Corrective Actions

Despite our best efforts at prevention, pest problems can still occur. How we respond to a pest problem is key in providing long term control results. Whether it is an internal stored product pest like the granary weevil, or a phorid fly infestation, finding and controlling the source through root cause analysis is essential in long term program success.

What should be done if a pest infestation is found? When a pest occurs, it is a symptom that something has gone wrong with system. The use of insecticides or supplemental traps is only addressing the symptom and not the cause of the preventive controls failure. A more detailed look as to why the pest problem occurred is needed. This analysis can take time and requires assistance from the food plant staff working with the pest management firm. As George Carlin states, *"Some people see things that are and ask, why? Some people dream of things that never were and ask, why not? Some people have to go to work and don't have time for that*." We need to make time for the "whys". Asking repeated "whys" is part of the pest solving process and we must make time for the investigation to get to the solution. Asking "why?" is not a luxury when it comes to problem solving.

Let's take an example of cigarette beetles in a dry processing plant. The pest management service professional finds some cigarette beetles in piles of product spillage underneath storage racks in the finished products warehouse. The cigarette beetles are a symptom that something is not working in the pest prevention system. One of the reasons is there is product spilled, which allows them to easily capitalize on the readily available food. But why is the spill there? There could be a variety of reasons including, packaging and racking design or cleaning schedules. It could also be due to staff procedures and how they load and unload pallets. Are there procedures contributing to damage? Exploring the root cause will lead to a more effective long term prevention program as the causes are uncovered and resolved.

If we only cleaned or applied an insecticide, the problem would likely continue. Ultimately a change in the rack design would need to be made to solve the problem in the long term. Other options to consider are modifying the bag construction or driver procedures and in some situations, these may need to be considered. This root cause example only addressed the resources that allowed the beetles to prosper. How the beetles entered the facility would and should be part of a separate investigation. Additional pest proofing on a change in the inspection of incoming shipment process may be required. Modifications in the preventive controls may ultimately be required after the corrective action process is complete.

Summary

Two components which will help facilitate the success of the pest management program under FSMA rules include the incorporation of electronic documentation and establishing sufficient time for inspection. Electronic documentation can assist with data assessment and record keeping storage. Inspection time is essential for monitoring the program's effectiveness and for trouble shooting should corrective actions be necessary.

Exploring the Root Cause

Exploring the root cause will lead to a more effective long term prevention program as the causes are uncovered and resolved.