NONCOMPLIANCES WHICH LEADS TO AN INEFFICIENT PEST CONTROL IN MEAT PROCESSING PLANTS

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Abstract

The aim of this study is to avoid the mistakes which lead to an inefficient pest control in meat processing plants. Pest control programme are an essential part of maintenance and sanitation. Pest poses a major threat to the safety of the food products.
Unfortunately, in many cases I found that the pest control programmes were not correctly created and applied, so I met a lot of mistakes which should be avoided for an efficient prevention.
Pests (insects, rodents, birds, dogs, cats) entering or infesting food plants are a significant potential source of microbiological, physical and chemical hazards (use of pesticides). Pests are carries for many microorganisms, pests are source of foreign bodies (insects themselves, hair, larvae etc.) and insects can transfer contamination from dirty areas to clean areas.
The target of pest control is to prevent the pest ingress in the plant and not to combat them inside. Prevention is critical in pest control.

Keywords: *contamination, hazards, pest control.*

INTRODUCTION

Pests (insects, rodents, birds, dogs, cats) entering or infesting food plants are a significant potential source of microbiological, physical and chemical hazards (use of pesticides). Pests are carries for many microorganisms, pests are source of foreign bodies (insects themselves, hair, larvae etc.) and insects can transfer contamination from dirty areas to clean areas.
Food business operators have the responsibility to control pests:
„Adequate procedures are to be in place to control pests. Adequate procedures are also to be in place to prevent domestic animals from having access to places where food is prepared, handled or stored (or, where the competent authority so permits in special cases, to prevent such access from resulting in contamination)" - reg. 852/2004, Annex II, Foodstuffs, Chapter IX, point 4.

MATERIAL AND METHODS

The study was carried out since 2004 to 2012. During this time, I worked with many plants from meat industry (slaughterhouses, deboning plants, meat processing plants). A chapter of the foods safety assessments in these plants was the pest control. Unfortunately, in many cases I found that the pest control programmes were not correctly created and applied, so I met the following mistakes which shall be avoided for an efficient prevention:

The pest control has not been taken into account in the layout, design and construction of the premises, for example:
Many storages designed for auxiliary materials were built without a sluice or a receiving area. The existence of warehouse doors that open directly outside it is not appropriate because of the high risk contamination through pests. In the receiving area shall be made the control regarding the integrity or packaging or the presence of any trace of pest infestation in dry auxiliary materials. If the pests (insects, mice) are present in these materials, the materials will be rejected from the beginning and they will not be sent into the storage;
The external doors (especially in the receiving and delivery areas) were not tight fitting, the light was visible around the frame when closed;
The dock shelters were to big comparing with the trucks sizes. In this situation, the rainwater, dust, insects could enter very easy into the plant and also cannot prevent interior cold air from leaking out;
Doors without self-closing devices, if the doors are left open the pest can go inside;
External windows without insect proof screens or the screens were fitted to the windows but these were not cleaned and not maintained in a good state of repair;
Holes, drains and other places where pests are likely to gain access, were not be kept sealed;
The fence was not adequately built, without concrete foundation, so the animals (rats, dogs) made holes and channels to can enter in the yard;
The garbage platform was not enclosed and was not provided with water source for sanitation and drainage, so whole area including the garbage containers cannot be cleaned properly. The accumulated filth generates unpleasant smells which are attractive for pests.
The yard was not kept clean and tidy, for example:

The vegetation was not removed, in many outside areas were found bushes, tall grass, weeds and other plants which give to pest the possibilities for harbourage. Some plants and bushes were planted too close to the factory building;
Many objects are inadequate store (construction materials, wooden pallets, broken crates and bins etc.). Such materials may provide nesting places for rodents;
The yard drainage for rain water was not cleaned from leaves, sand and other wastes. Not all effluent drains were properly covered;
The garbage was put in inadequate containers, the garbage was not disposed quickly and correctly, so this attracted the pests. In some plants, the containers from the garbage platform did not have lids and because of wastes from the canteen, the animals and insects were attracted.
There were problems regarding pest monitoring, detection and eradication procedures, for example:
The location and the number of the bait stations were established without the neighbourhood assessment;
Bait stations made from inadequate materials ex. cardboard stations which were destroyed after first rain. Or the baits were not put into the stations, so birds or other animals had access of them;
The small amount of baits were too low (the amount of toxic substances) and the monitoring frequency of the bait stations was also too low;
Boxes with toxic baits inside of the plant (in the storages rooms, receiving and delivery areas etc.). The baits station must not be placed in the plant, they should be placed outside, along walls and fence, near main entrance, doors and loading docks;
Fly-killers devices installed in the production areas (food handling areas), that mean that insects are present there. Fly-killers devices should be sited in a good position, at each entrance and each exit from the plant, to prevent the insects access in the production areas;
Other problems were lack or poor personnel training regarding the food safety hazards associated with pest infestation, so:
The dogs were fed by the personnel and other dogs were attracted to come in the premises area, more than that, the peoples from the neighbourhood were encouraged to abandon the puppies near the factory;
The personnel from security services allowed the dogs access in the factory yard;
The personnel responsible for outside cleaning changed the location of the baits stations;

In many situations the personnel did not report the signs of pests presence to the pest operator, in other situations they were not trained to recognize and to report any kind of sign which can be pests associated;
The absence of control regarding the integrity of packaging or the presence of any trace of pest infestation in dry auxiliary materials;

RESULTS AND DISCUSSIONS

All situations described above leads to an inefficient pest control. The problems regarding the design and the construction of the premises, an inadequate maintenance of the building and facilities, an inadequate cleaning and tidiness of the yard, poorly executed pest control programmes and lack or poor personnel training regarding the food safety hazards associated with pest infestation, leads to an inefficient pest control.

CONCLUSIONS

The target of pest control is to prevent the pest ingress in the plant and not to combat them inside.
If it is waiting until there is evidence of pests within an establishment, this may already have a major infestation.
Prevention is critical in pest control.

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