HACCP AND PEST CONTROL

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Abstract—Hazard Analysis Critical Control Point (HACCP) has been around for quite a long time but only now are its principles extended, by law, to all sectors of the food industry in Europe and many other parts of the World. It is a pro-active and cost effective system which, if properly implemented, can guarantee safe food unlike the traditional method of end product testing which is not only expensive but also fairly ineffective. This paper discusses briefly the threats and opportunities for the pest control industry resulting from this revolution in the food industry and concludes that there are many opportunities for the far sighted and few threats.

INTRODUCTION

Hazard Analysis Critical Control Point (HACCP) is a system used by the food industry, in either it's pure form or a derivative, in order to ensure the safe production of food. The food industry are now, throughout Europe, being required by law to introduce the "principles used to develop HACCP".

This paper describes, briefly, the meaning of HACCP, its history, legal basis and its significance for the food industry. Such a major change in both the food industry and the way it is controlled obviously has a knock-on effect with those who deal with the food industry. The main focus of this paper will be to examine the interaction with the pest control industry and the threats and opportunities for that industry.

However the significance of HACCP to the pest control industry cannot be explored without a brief description of what HACCP is, where it came from and what it does.

SOME HACCP DEFINITIONS

Before discussing HACCP it is useful to have definitions for some of the terms associated with the system. There are many variations on these definitions but these are thought to be the most helpful for this paper.

"HACCP is the simplest possible control applied at the point where it matters most."

(Mitchell, 1996)

"HACCP is a systematic way of analysing the potential hazards in a food operation, identifying the points in the operation where the hazards may occur, deciding which are critical to food safety, monitoring these points and taking prescribed action when predetermined tolerances are exceeded."   (MacDonald and Engel, 1996)

"A hazard is anything - microbiological, chemical or physical - that might cause harm to a consumer."   (MacDonald and Engel, 1996)

"A CCP is a step in a system at which a loss of control would lead to an unacceptable risk to health."   (MacDonald and Engel, 1996)

"Risk is the estimate of the probability of a hazard occuring."   (Bryan, 1992)

HISTORY

The origins of HACCP lie in the American Space Programme. The difficulties being faced by astronauts were comprehensive enough without the potential problem of food poisoning in space. Apart from the obvious health problem there was the practical problem of dealing with the 2 most

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common symptoms of food poisoning, vomiting and diarrhoea, in the confines of a space craft in conditions of zero gravity! At the same time it was neither practical or desirable to present the astronauts with only sterilised foods. A method had to be found of producing food which was guaranteed safe without relying on end product testing in a laboratory which, no matter how high the sampling rate of the food, could give no such guarantee.

The system of HACCP was the result of this research and it proved so successful, particularly in the control of microbiological hazards, that eventually the American food industry in general started to use the system.

In recent years the system has also become popular with the food industry in Europe, particularly the manufacturing side of the industry. In the past 5 years some of the principles used to develop HACCP have been enshrined in European legislation - most recently in the Council Directive 93/43/EEC on the hygiene of foodstuffs, a Directive which covers most of the food industry.

LEGAL BASIS

This Directive, and most of the product specific Directives, require food businesses to have regard to the following principles which were used to develop HACCP:

(a) Analysing the potential food hazards in a food business operation
(b) Identifying the points in those operations where food hazards may occur
(c) Deciding which of the points identified are critical to food safety - the critical points
(d) Identifying and implementing effective control and monitoring procedures at those critical points
(e) Reviewing the analysis of food hazards, the critical control points and the control and monitoring procedures periodically and whenever the food business operations change

SIGNIFICANCE FOR THE FOOD INDUSTRY

The general food hygiene Directive came into force on the 15th December 1995 and for the first time the food businesses and those responsible for food control have a legal obligation to pay attention to risk assessment and the HACCP principles mentioned above. This is a departure from the previous legal requirements which were more prescriptive and placed a stronger emphasis on the structure of a premises rather than the safety of the processes. Some parts of the industry are covered by other Directives e.g. milk and milk products, meat and meat products, fish and fish products and so on, but they too have to look at HACCP principles.

The types of premises covered by this Directive are everything that is not covered by the product specific Directives. It therefore covers Food Retailers, Hotels, Catering Premises, Wholesalers, Manufacturers, Transport Vehicles, fast food stalls and so on.

SIGNIFICANCE FOR THE PEST CONTROL INDUSTRY

The significance for the pest control industry can be summarised as follows:
  − expanding market
  − awareness of HACCP systems
  − consequences of HACCP for pest control

Expanding market

This Directive requires that each food premises has effective pest control measures. In a way that is not an entirely new concept - the significance of pests in the food industry has long been understood and appreciated. What is new is that the HACCP considerations will have to include the provisions which are made for pest control. In other words effective pest control is an inescapable part of any HACCP considerations that a food business may make.

This can only be good news for the pest control industry. At present many food businesses have contracts with pest control companies - the future should see a lot more.

Some cleaning and disinfection companies have already realised the potential for new business - because these procedures are also an essential part of any HACCP considerations - and are offering to help small and medium sized companies with the implementation of HACCP principles. Is this not something the pest control companies could offer as well?

Awareness of HACCP systems

Even if pest control companies do not or cannot take advantage from this potentially expanding market all pest control operators will have to be aware of what HACCP means for the food industry and what it means for the pest control industry.

Why?

Pests can cause a hazard in food premises and therefore must be controlled. However entering controlled premises with chemical, biochemical or biological substances has the potential to *create* a hazard whilst in the act of trying to *control* a potential hazard.

THEREFORE all pest control operators should have a knowledge of and be aware of the importance of the following:

(a) food hygiene
(b) the basic meaning of HACCP
(c) personal hygiene
(d) eliminating/minimising food contamination
(e) taking care in the selection of preparations
(f) taking care in the selection of sites
(g) avoiding "open" baits

In Germany ABLI GmbH offers, *inter alia,* a selection of food hygiene courses and an introductory course on HACCP. The highest percentage attendance from any individual industry in the last year on HACCP courses has not been from the food industry but from the pest control industry and in the intermediate food hygiene courses they have also been well represented. ABLI GmbH are already working with pest controllers in Germany to bring together food safety and IPM. A case of enlightened members of an industry getting ahead of the rush from the food industry when the EC Directive finally becomes a German regulation!

Consequences of HACCP for pest control operators

When food businesses start to think seriously about their responsibilities to follow HACCP principles what will the consequences be for the pest control industry?The following is not an exhaustive list but merely some of the more common situations which will have to be faced:

(a) the need for a clear explanation to management of premises about the treatments which have been carried out and agreement reached about their suitability, siting, potential for causing food hazard and any action which needs to be taken by the staff
(b) the need for clear advice to the management of the premises about the types of pests identified and their possible effect on food safety
(c) restrictions on use of materials
(d) restrictions on entry times to premises
(e) regular and systematic cleaning could make it more difficult to detect, trace and identify pests
(f) possible destruction of preparations by cleaning materials
(g) need to account for all preparations when any specific treatment is completed
(h) documentation

Much of this is not new to the pest control industry especially to those who operate with or are familiar with Integrated Pest Management and also the requirements of COSSH. COSSH is about the safe use of chemicals whereas HACCP is about the safe production of food but there is a relationship between them. Both are documented systems and as COSHH forms part of pest control it therefore also relates to HACCP.

It also means that most pest controllers are already aware of systematic controls therefore HACCP should present few problems conceptually.

CONCLUSION

The application of HACCP principles is a revolutionary step for the majority of the food industry and one which, if approached sensibly and with the conviction to make it work, should make food safer with a consequential reduction in the number of people becoming ill and dying from food poisoning.

Pest control has an important part to play in this revolution. It may be that some practices which have become the norm in food premises will have to alter but the pest control industry should see this as an oppurtunity and not a threat. Provided that in their working partnership the food and pest control industries are aware of each others priorities and systems this should prove to be a benefit to both and, more importantly, it will prove to be a positive benefit for the consumer by the production of safer food.

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