

Use of mycopesticides as a means of reducing organophosphate pesticide and methyl bromide usage in the control of stored food pests - LK0914

Sponsor: DEFRA

Partners: CSL; CABI Bioscience; ADAS; HGCA; L'Anson Bros Ltd; NPP Calliope; Weetabix Ltd; Marks & Spencer; BOCM Pauls Ltd

Total project cost: £378k

Contact: Dr N Price, Central Science Laboratory, Sand Hutton, York,
YO41 1LZ0 Tel: 01904 462000 Fax: 01904 462111

ABSTRACT

Organophosphorus (OP) insecticides are the major group of residual pesticides used to treat the fabric and structure of a range of stores and other buildings used in the storage and processing of cereals. In addition annual or biennial fumigations with methyl bromide are often carried out to remove persistent infestations of stored product insects and mites. With the current review of OPs and the imminent ban of methyl bromide, allied to the public demand for safer and more benign pest management systems, there is a need to develop alternative strategies.

Biological control using insect specific microorganisms is becoming accepted in many situations previously thought unlikely, and the use of safe, insect specific fungi which would not proliferate in the absence of host insects is now considered to be more benign than synthetic chemicals which have primary action on the central nervous system as well as many undefined chronic effects.

The main objective of the proposed project is to evaluate the use of naturally-occurring insect specific fungi as a means of reducing OP pesticide and methyl bromide usage for the control of invertebrate pests of storage premises, while at the same time maintaining high standards of pest control. The results of this work will be used directly by the arable farming industry, including farmers, commercial grain storers and processors including flour millers.