

Proposal No. _____

**The Anderson Research Grant Program
2003 – 2005**

**Project Title: Development and implementation of a thermal death kinetic model
for management of Indianmeal moth and red flour beetle in food
processing environments**

Principal Investigator(s):

Name	Institution/Agency/Other
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Period of Proposed Project Dates:

Beginning: October 1, 2003

Ending: September 30, 2005

Amount Requested (maximum \$20,000 per year for two years):

Year 1: \$20,000.00

Year 2: \$20,000.00

Authorized Kansas State University Official:


Paul R. Lowe

Asst Vice Provost for Research

Problem Identification and Related Research

Methyl bromide, a space fumigant used since the 1930s to control insect pests in food processing environments will be phased out in the United States by 2005 because of its adverse effects on the stratospheric ozone. Organophosphorous (OP) insecticides, such as chlorpyrifos, diazinon, dichlorvos, and malathion, are used in such environments as space sprays, aerosols, or for crack and crevice treatments (Subramanyam et al. 1993). All these OP insecticides face an uncertain future and are at risk of being canceled under the 1996 Food Quality Protection Act (Anonymous 1997).

The use of chemical insecticide in food processing environments can contribute to product contamination if improperly used, and may lead to worker exposure to residues. Therefore, effective pest management strategies, especially those based on non-chemical tactics that are environmentally benign, should be explored. Effective pest management and a reduction in pesticide load in these environments will enhance food quality and security and could improve global competitiveness of US commodities.