

PROJECT NUMBER: 1101
PROJECT TITLE: Entomological Research
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I. ECOLOGY

- A. Objective: Relate cigarette beetle (CB) ecology to the tobacco process and CB control.
- B. Results: The installation of a CB monitoring program in Brazil under the auspices of Tobaccos Brasileiros and PM Brazil was reported (1).
- C. Plans: Continue studies, submit a proposal for the 1989 season, and relate results from ongoing studies to current CB control programs.
- D. References:
 - 1. Ryan, L. Report on Visit to Brazil, January 8-14, 1989. Memo to F. Johnson; 1989 February 14.

II. FUMIGATION

- A. Objective: Investigate the use of controlled atmospheres to fumigate tobacco.
- B. Results: The third field trial where 7 warehouses were treated with 40% CO₂ for 8 days were reported. These fumigation parameters with a tobacco temperature >80°F resulted in 100% CB mortality (1,2).

Potential alternatives for methyl bromide fumigation to obtain phytosanitary certification for export cut filler were addressed (3).
- C. Plans: Replace methyl bromide with an acceptable alternative and investigate the use of CO₂ on a small-scale.
- D. References:
 - 1. Ryan, L., Lehman, R. and Faustini, D. L. 1989. The Application of Carbon Dioxide to Control Cigarette Beetles in Bulk Storage Warehouses - Third Trials. Completion Report 89-015.
 - 2. Ryan, L. and Faustini, D. L. CO₂ Fumigation of Tobacco Warehouses - USDA's Acknowledgment of PM's Priority. Memo to C. K. Ellis; 1989 February 28.