

**STUDIES OF PHOSTHOXIN FOR CONTROL OF GRANARY WEEVIL (1)
AND CONFUSED FLOUR BEETLE (2) UNDER LABORATORY AND
NATURAL CONDITIONS.**

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Summary

Experiments with phostoxin were performed under laboratory and natural conditions.

A. LABORATORY

Air tight boxes with a capacity of 134 kilograms were filled with wheat and the test insects were placed on the top, in the middle and at the bottom of the boxes. The insects were fumigated with 1, 2 and 3 grams of phostoxin per ton of wheat. Fumigation period was 72 hours. Applied doses killed all adult insects of Granary Weevil and Confused Flour Beetle and larvae and pupae of Confused Flour Beetle.

B. NATURAL CONDITIONS

The period of fumigation was 72 hours in all experiments.

1. Sacked wheat:

Inside the middle of gunny sacks containing 75 kilograms of wheat, the test insects in small cloth sacks were placed. Individual gunnies were treated with 1.5 grams of phostoxin and covered with plastics. All insects were killed by this treatment.

2. Piled wheat:

Inside the piles of 2250 kilograms of wheat ten small cloth sacks containing test insects were placed.

1) *Coleoptera: curculionidae: Sitophilus granarius L.*

2) *Coleoptera: Tenebrionidae: Tribolium confusum Duv.*

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Piles were treated with 6 and 9 grams of phostoxin per ton and were covered with plastics. Both doses controlled the insects one hundred per cent.

3. Storages

Inside mud made and wooden roof storages with diameters of $1.5 \times 1.5 \times 2$ meters which contained 1150 kilograms of wheat small cloth sacks of test insects were placed, and treated with 6 or 9 grams of phostoxin per ton. The treated storages were covered with plastics. Using 6 grams of phostoxin per ton killed all adult insects, 97.4 percent of larvae and 96 percent of pupae. Increased dosage to 9 grams, controlled all insects.

4. Underground Pits

Nine cloth sacks having test insect were placed on the top, in the middle and at the bottom of under-ground pits which contained 3 tons of wheat. Nine grams of phostoxin per ton killed all insects. The results of these experiments suggest that, infested wheat by Granary Weevil and Confused Flour Beetle could be controlled effectively under similar conditions of these experiments.

References

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