



Entomological Notes

Department of Entomology

FOREIGN GRAIN BEETLES

Ahasverus advena (Walti)

Several fungus feeding insects are commonly found in grains stored on the farm in Pennsylvania. One of the more common species is the foreign grain beetle. This insect does not feed on the grain itself, but on fungi. Its presence in grain is an indication of moldy grain.

DESCRIPTION

The adult is a small, reddish-brown beetle (one-tenth inch long) with a conspicuous rounded lobe on each front corner of the thorax (area immediately behind the head). A microscope or land lens is needed to see distinguishing characteristics. The larvae are similar in appearance to other stored grain insects and are not easy to identify without training.

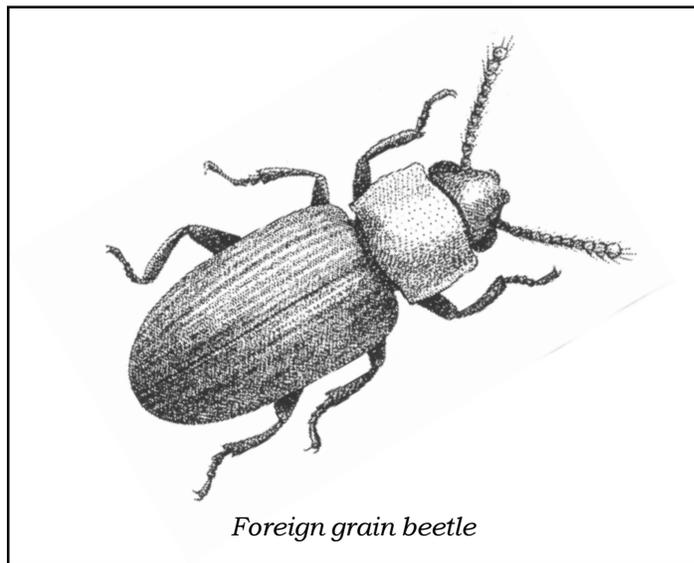
LIFE HISTORY

Adults of the foreign grain beetle are attracted to mold grains, where females deposit their eggs singly or in small clusters. Larvae emerge in four to five days at optimal temperatures (eighty-ninety degrees F). The larvae develop through four to five larval instars in about fifteen days. The adults have an average lifespan of 215 to 250 days. In their natural environment, both the larval and adult stages feed on molds growing on the grain. The insect is a strong flyer and, from long distances, can easily locate moldy grain in bins and in fields.

DAMAGE

The foreign grain beetle does not damage stored grain. Its presence in a bin is in response to mold growth on the grain. The real problem in the grain bin is poor management. When grain is placed in storage and not monitored periodically, moisture can accumulate in the bin and molds then develop. This can occur even if the grain was originally dried below thirteen to fifteen percent moisture. The presence of molds and insects in the grain can result in rejection of sale or reduced market value.

Current government programs and low crop values encourage on-farm, long-term storage of grain. Grain in storage over extended periods of time requires good



Foreign grain beetle

management practices to prevent mold grain and fungus-feeding insects. The presence of fungus feeding insects in grain is an indication of the need to control grain temperature and moisture. Fumigation may be needed in infested bins.

MANAGEMENT

Control of this insect begins with good management. Before new grain is placed in a bin, the bin should be thoroughly cleaned to remove old grain from the walls, floors, and augers in the bin. Harvest equipment should also be cleaned before use. If possible, the grain should be screened to remove broken kernels and other contaminants.

After placing in a clean bin, check the grain at two week intervals during warm months and one month intervals during cooler months for the presence of hotspots, mold areas, and/or insects. If any of these conditions exist, the grain should be aerated to lower the moisture level and temperature.

Fumigants should be used only as a last resort. Because of the high toxicity of registered fumigants and technical knowledge needed for their proper use, a qualified applicator should be contacted if fumigation is required.

WARNING

Pesticides are poisonous. Read and follow directions and safety precautions on labels. Handle carefully and store in original labeled containers out of the reach of children, pets, and livestock. Dispose of empty containers right away, in a safe manner and place. Do not contaminate forage, streams, or ponds.

Dennis Calvin
Associate Professor
Dept. of Entomology
October 1988
SG-7

© The Pennsylvania State University 2001

This publication is available in alternative media on request.

Where trade names are used, no discrimination is intended and no endorsement by The Pennsylvania State University or Pennsylvania Department of Agriculture is implied.

Entomological Notes are intended to serve as a quick reference guide and should not be used as a substitute for product label information. Although every attempt is made to produce Entomological Notes that are complete, timely, and accurate, the pesticide user bears the responsibility of consulting the pesticide label and adhering to those directions.

Issued in furtherance of Cooperative Extension Works, Acts of Congress May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture and the Pennsylvania Legislature. T.R. Alter, Director of Cooperative Extension, The Pennsylvania State University.

The Pennsylvania State University is committed to the policy that all persons shall have equal access to programs, facilities, admission, and employment without regard to personal characteristics not related to ability, performance, or qualifications as determined by University policy or by state or federal authorities. It is the policy of the University to maintain an academic and work environment free of discrimination, including harassment. The Pennsylvania State University prohibits discrimination and harassment against any person because of age, ancestry, color, disability or handicap, national origin, race, religious creed, sex, sexual orientation, or veteran status. Discrimination or harassment against faculty, staff, or students will not be tolerated at The Pennsylvania State University. Direct all inquiries regarding the nondiscrimination policy to the Affirmative Action Director, The Pennsylvania State University, 201 Willard Building, University Park, PA 16802-2801, Tel 814-865-4700/V, 814-863-1150/TTY.