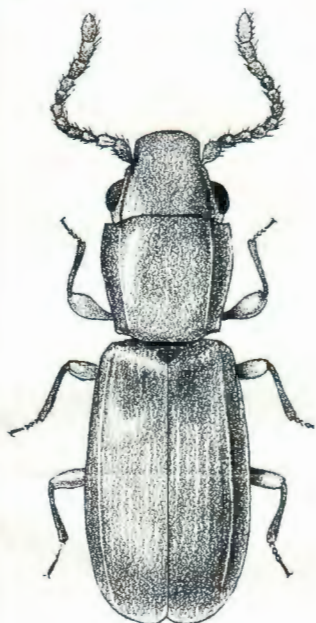


# Grain & Seed News

A Newsletter for the Grain & Seed Industry • Number 3

## Fungus Feeders

By Nathan Stocker



Flat Grain Beetle

With grain grading standards getting more stringent, grain elevators should shift their focus on the site as well as the commodity when directing cleaning and chemical applications. The past two harvest seasons have been great for fungus feeders in the Midwest. Fungus feeders are often misidentified throughout the U.S. as a Red or Confused Flour beetle, and take more time to positively identify. Fungus feeders do not feed on damaged whole dry grains. Their ideal food source is moist grain (above 16%), the mold formed on moist grain, and milled by-products. Flat Grain Beetles are sometimes referred to as “Baby Flour Beetles.” Fungus feeders are beetles which are naturally occurring in nature and feed on many different sources of fungus and mold. They are more attracted to light and appear out of hiding in late summer to early fall. This is the peak of filling bins and silos. Fungus feeders are very mobile and great fliers.

### How do I know when fungus feeders are prevalent at my specific location?

Simply hang a glue board, or preferable a diamond glue trap at 3-5 locations around your operation. Check periodically, especially after a rain.

### What can I do to combat fungus feeders?

1. Keep all grain below 15% moisture, and a close eye on bin top moisture/condensation.
2. Keep water drained away from site, no standing water or to a minimum.
3. Grain spillage to an absolute minimum.
4. Kill all vegetation 18 in. out from the bin and install rock.
5. Keep the junction between the bin side and concrete sealed with tar or other sealing material.
6. Grain legs/augers blown out, dry, sprayed with Tempo™.
7. Bin interior blown down and sprayed with Tempo prior to filling, paying special attention to the aeration ducts and false floor.
8. Spray around bin exterior 4 ft. up and 4 ft. out.

Fungus feeders feed on moldy, wet, grains. By having as little moldy, wet grain as possible, the less attractive your site is to Fungus feeders.

### In this Issue:

- Storcide II™
- Insect ID
- Warehouse Aeration
- Fear No Weevil
- Seed Conference

## FSS

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**FOOD  
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Storcide II insecticide may also be used in conjunction with registered fungicides or other insecticide seed protectants. Seed treated with other seed protectant products may be required to be colored and tagged. Requirements for coloring and tagging can be found on the product labels. Seed treated with Storcide II insecticide alone is considered grain.

### Key Pests Controlled

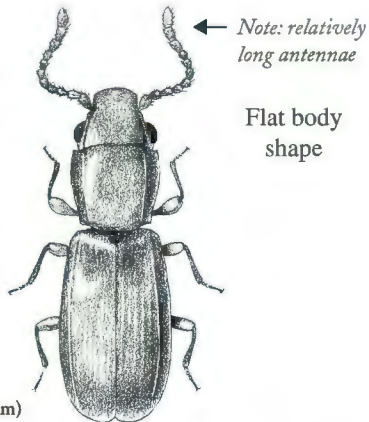
- Red & Confused flour beetle
- Dermestid beetle
- Saw-toothed grain beetle
- Lesser & Larger grain borer
- Indianmeal & Angoumois grain moth
- Tobacco moth
- Bean weevil
- Granary, Maize, and Rice weevil

### Registered Crops

- Barley (Seed Treatment)
- Oat (Seed Treatment)
- Rice (Seed Treatment)
- Sorghum (Seed Treatment)
- Wheat (Seed Treatment)
- Warehouse
- Warehouse Bin

### Flat Grain Beetle

(*Cryptolestes pusillus*)



**AKA:** 'Bran Bug' or 'Baby Flour Beetle'

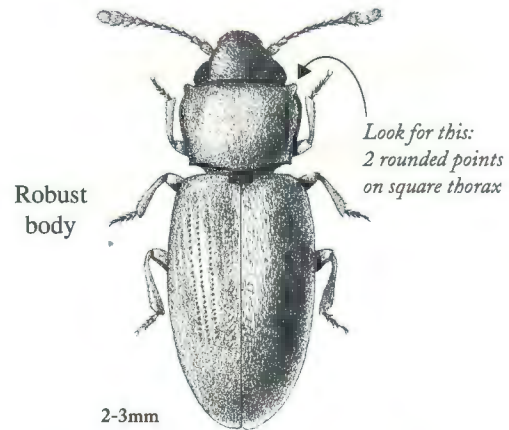
**Favorite Food:** Out of condition grain or grain that has already been attacked by Rice weevil. Often found in damp grain legs, boot pits, or anywhere there is moist grain/meal.

**Appearance:** One of the smallest beetles commonly found in stored grain. This beetle is flattened oblong, reddish brown about 1/16 of an inch. They are very good fliers, smaller and flatter than a foreign, while the foreign is more oval in appearance. Rusty Grain beetles also look similar.

**Life Cycle:** 45 days from egg to adult. Adults may live up to a year.

### Foreign Grain Beetle

(*Ahavervus advena*)



**Favorite Food:** Out of condition grain mold—does not damage grain. Often will be found in grain over 16% moisture.

**Appearance:** Strong flier, reddish brown, flattened 1/12 inches in length, two rounded projections at the front corners of the thorax and the antennae have a 3 segmented club.

**Life Cycle:** 30 days from egg to adult.

# New Innovations in Warehouse Aeration

By Pete Mueller

## PROBLEM:

More times than not, a seed warehouse is constructed with a roll door for forklift entry on one side and a man door on the adjacent wall to meet fire code. In the past, fumigation companies have relied on opening up all the doors and placing small portable fans around the warehouse to move the other wise stagnant gas out which could take days.

The last thing that is to be seen after doing a quality fumigation are

insects and birds flying into your briefly pest free warehouse.

## SOLUTION:

This year marks the first year of using aeration doors. These are heavy duty steel doors that are put in place of a normal man door without the need or removal of the existing door. A large five and a half horse power electric fan locks in place and is plugged in. A small box allows the fumigator once the fumigation is completed to remotely start the fan without the need to enter the gas filled room. These



aeration doors clamp into place at the bottom and the top providing a more secure fit than the pre-existing door. Another advantage is that it now prevents any pests from entering the building during the aeration stage of the fumigation. With

the use of cylinderized fumigants becoming more commonly used in the seed industry and the advent of new aeration practices, we can all gain confidence in the shortened time and quality of today's modern fumigations.

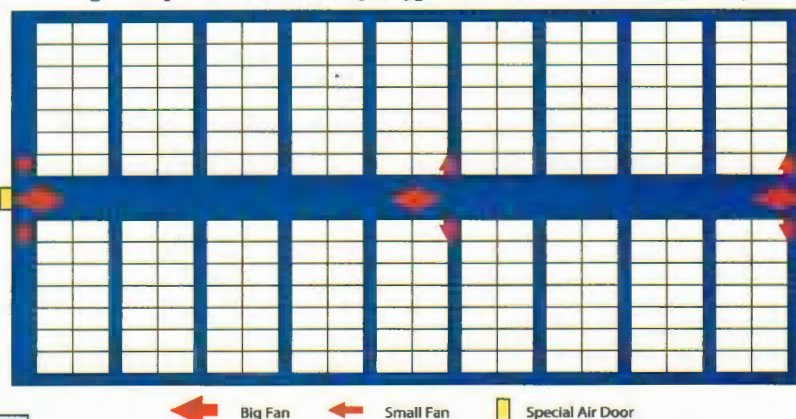
## Instructions for venting seed warehouses...

- Always ventilate with the wind direction.
- Monitor inside the bags. Gas levels must be at or below the PEL before product can be shipped over the road.
- Watch out for excessive condensation when venting cold storages.
- Turn on all linked ventilation in connected structures and open all doors from fumigation and fan / exhaust.
- Rapid ventilation formula = Rate to compare to cfm chart.

### Seed Warehouse Fumigant Aeration Flow Chart

Factor Range	
1.0	Unrestricted
1.01 - 1.3	15,000 cfm / 500,000 cubic feet
1.31 - 1.45	7,500 cfm / 500,000 cubic feet
1.46 - 1.59	5,000 cfm / 500,000 cubic feet
1.60 and above	Do not ventilate

Diagram of the aerial view of a typical seed warehousing facility.



The purpose of this table is to provide suggestions and guidance as to how to safely ventilate a seed warehouse without causing fogging / wetting of bags. This condition will slow aeration and potentially damage product.

products • service • education • • • • •



# We Fear No Weevil

## Pest Control and Fumigant Product Sales:

- Fumigants
- Foggers & Materials
- Sprayers
- IGR (insect growth regulator)
- Pheromones
- Tempo™ — other residual insecticides
- ILT (insect light trap)
- Rodent Control
- Bird Control
- Ant Bait



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## Seed Fumigation Training

On Tuesday, June 24, 2008 a Seed Specific Pest Control and Fumigation Conference is being offered by Fumigation Service & Supply, Inc at the Iowa State Center in Ames, IA. Many changes have recently occurred in the seed industry—namely Fumigation regulations and Treatment. Topics that will be covered are Pest Control Implications, Stored Grain Insects, ProFume®, Fogging, Applicator Safety, and Rodent Control. We are pleased to have speakers from Dow AgroSciences, Iowa State University, and Fumigation specialists.

Please contact Kalah at (800) 992-1991 or [k.stocker@insectslimited.com](mailto:k.stocker@insectslimited.com) if you are interested.

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