

IT'S THAT TIME OF YEAR AGAIN...

It's that time of year again when mites become a nuisance. This flyer is to remind you about how to recognize them and how to keep them at bay. You may find it useful to read this post regarding storage of feed in stores and warehouses.

The most common mite is the grain mite (*Acarus siro*).

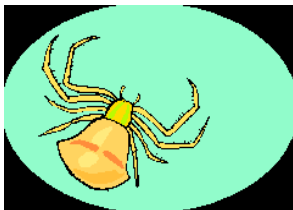
Grain/flour mites can be a definite problem in feed storage during periods of higher temperature and humidity. Mites can be found when the commodity moisture is above 12 - 12 1/2% (60-65% relative humidity) and temperatures are above 50 degrees F. They **thrive** when the moisture content is above 14% - 17% and the temperature is warm.

Mites are generally not a problem if the commodity or feed is below 12% or the temperature is below 50 degrees F. Temperature changes, condensation and poor ventilation may produce areas with sufficient moisture to encourage mite infestation. If mite-free feed above 12% moisture is shipped to a facility that is infested, the feed may become contaminated. This can be awkward if a competitor's feed is below 12% and does not become infested. This may be more likely to occur when ingredients are coming into a mill at higher than average moistures. Unusually wet conditions may cause mites to be a problem where they have not been a problem before.

High moisture content in feed may lead to insect and mold problems. Mites, mold, and fungus feeding insects (hairy fungus beetle and foreign grain beetle) often can be found together. The grain mite can feed on fungi associated with stored grain. Heavily infested grain and feed quickly become tainted and mite infestations have been reported to cause reduced nutrient levels, palatability problems and allergic reactions. Companion animals are most susceptible.

Female mites can lay up to 30 eggs a day and their life cycle is 9-28 days, depending on conditions

Mites can be detected under magnification or by placing a suspect sample in a container with a transparent cover. Put the container over a radiator or heating element for a few hours. Small, light gray/yellow organisms crawling on the top confirm infestation.



Contamination during storage must be avoided (cleansing and disinfection of stores, prevention of breaking packaging seals, etc.). **Sanitation is the key to prevention.**

Synergized pyrethrins can be applied to structures (mills, surfaces of bagged commodities, bins) through mechanical aerosol, ULV generators, foggers, as well as conventional spraying equipment (read the label for specific restrictions for each product). Fumigation with appropriate materials may be used. Check with state and federal regulations and recommendations for specific products to insure correct usage.

BEST MANAGEMENT PRACTICES/CONTROL OF INSECTS, MITES AND RODENTS FOR STORES



A) Follow a good housekeeping program in the store.

- Remove any torn bags. They attract rodents and customers will not buy them.
- Regularly schedule sweeping and cleaning the entire feed area-weekly!
- Sweep up spills immediately.
- Rotate stock, if needed, when you do weekly cleaning.

B) Follow a good housekeeping schedule in the warehouse and storage areas.

- Keep storage areas clean and neat, and move in feed stock in the warehouse first, before moving in newly uploaded product on the display floor.
- Do not stack old pallets, cardboard or junk along the side of the store because this is a key nesting area for rodents.
- Mow all grassy areas and eliminate any weeds where rodents can nest or hide.
- In the fall, seal all doors and warehouse areas to keep rodents out when the weather gets cold.
- Inspect all incoming products for rodents and mites prior to stacking in warehouse.

C) Practice F.I.F.O. (First In, First Out)

- Always practice the first in first out rule and be sure to check the warehouse, storage area and in-store display areas.
- Know and understand the date code system. If unfamiliar, call your feed mill for explanation.
- Keep inventory to a minimum from June through September.

D) Know and have an agreement with a professional exterminator in your area.

- Hire a professional to handle poisons, traps and baits.
- Tracking powder works best if placed inside a plastic pipe and placed along the interior walls.
- A **licensed professional** should do spraying for mites and insects with an insecticide.

E) Mite Control and Prevention

- Look at bagged feed daily. Mite infestation will appear as dust on the bags. If you wipe “dust” off a bag and it reappears two days later, you will need to check closer for mites.
- When mites are spotted, remove the feed immediately and either dispose of it or place it in a secure area for it to be sprayed. Check the remaining warehouse stock for infestation and take appropriate action.
- Sweep, clean and wash entire area where feed was and disinfect with appropriate product. If warehouse can be closed off and contains **NO** food items, have a licensed applicator spray w/ 3% pyrethene. Larger quantities of feed can be placed in a van and a licensed applicator can apply a fumigant called methyl bromide.
- In warmer weather, remove shrink-wrap from products as soon as they arrive so that the product can breathe and air can circulate. This will cut the life cycle of mites and stop them from developing.
- Have good ventilation in the summer to keep air moving around the feed. Keep temperature as cool as possible.