



Pest Alert

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NOTE: BEGINNING JANUARY, 2001, PEST ALERT WILL ONLY BE AVAILABLE ON THE WEB. HARD COPY ISSUES WILL NO LONGER BE MAILED. FOR ELECTRONIC NOTIFICATION, PLEASE EMAIL YOUR ADDRESS TO bspm@lamar.colostate.edu

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UNUSUAL ARMYWORM PROBLEMS

Phil Sloderbeck (KSU Extension Entomologist at Garden City) reports some unusual beet armyworm activity in seedling corn. There have been no such reports from Colorado, but the situation is unusual enough that growers and consultants might want to pay a little more attention to seedling corn this spring. Also, there have been reports from further east regarding greater than normal true armyworm activity, mostly in small grains and grass pastures.

Some of Phil Sloderbeck's comments on the beet armyworm problems are as follows:

"Small lepidopterous worms are reportedly feeding on seedling corn plants in several counties south of Garden City (Meade, Seward, Haskell, Grant and Stevens counties).

Early reports indicated that they were beet armyworm larvae. I have now gotten in at least two samples that appear to support that diagnosis, even though that would be extremely unusual as far as I know.

The beet armyworm is a light green to black larva with four pairs of abdominal prolegs and a dark head. There are many fine, white wavy lines along the back and a broader stripe along each side. There is usually a distinctive dark spot on each side just above the second pair of true legs.

Colorado State University, U.S. Department of Agriculture and Colorado counties cooperating.
Cooperative Extension programs are available to all without discrimination.

Infestations apparently are varying greatly from field to field. Some people are reporting only very light infestations of 1 to 5 percent, while others have reported as high as 80 percent infestations. Many have reported finding multiple larvae per plant. However, many have also reported finding lots of plants showing feeding injury where the larvae had apparently moved on to another plant or disappeared.

Multiple larvae per plant are probably expected with early instars since the eggs are laid in masses. Plants with damage and no larvae may signal that some of the larvae are not surviving (possibly do to the hot dry winds that we have had the last couple of days on the seeding corn plants) or that they are moving from plant to plant.

Females lay their eggs in masses and they are covered with hairs and scales from the body. These hatch in a few days into larvae that feed for about 3 weeks, sometimes spinning slight webs over the foliage.

Most of the reports have indicated that the larvae are still relatively small - from 1/4 to 3/8 inch in length. The feeding injury is apparently very noticeable. The smaller larvae are causing window paneing while the larger larvae are beginning to chew holes clear through the leaf tissue. Some light webbing is being reported along with lots of frass.

I have been looking for information on beet armyworms on corn for the last few hours, but have not come up with much. While beet armyworms are a recognized pest on corn, to have them this early, especially this far North, appears to be very unusual.

So far I have not found any specific treatment thresholds for beet armyworms on field corn. The closest thing that I have found so far has been a treatment threshold for beet armyworm on seedling sweet corn in Florida of 10% and a threshold for true armyworm on seedling corn from Illinois of 25% of the plants being infested.

Thus, I would guess that it is fairly safe to say that a treatment threshold is probably somewhere between 5 and 50%. Some of the unknowns in this equation are really going to be what kind of efficacy can we expect when treating and exactly what kind of damage can we expect from these larvae in a few days. Luckily we have caught the infestation while the larvae are still small. However, beet armyworms are notoriously difficult to control.

One new option that we now have would be Tracer (spinosad). Recommended rate is probably going to be 1.5 fl. oz. per acre. While this product has reportedly been fairly effective with beet armyworms on alfalfa, it will be interesting to see how it works on these larvae feeding down in the whorls. It will also be interesting to see if populations vary between Bt and non-Bt corn. While we may see some suppression from the Bt corn, we probably will not see good control because the beet armyworm is known to be resistant to many formulations of Bt. Another big unknown is just what type of damage we can expect from larvae feeding on this small of corn. If it is confined to leaf feeding then the corn will probably rapidly out grow the problem, however if they move deep into the whorls, then there might be a chance for deadheart. If the corn were a little bigger, I would think that this would probably not be much of a problem, but I am just not sure what is going to happen on this little corn. Hopefully with good weather the corn should be growing rapidly and may out grow much of the damage." (Peairs)

PHOSPHINE AGREEMENT RELEASED BY EPA

EPA has released an agreement to reduce the exposure risks from aluminum- and magnesium-phosphide fumigants, which are widely used to control insects and rodents in storage, transport and processing facilities for agricultural commodities. The exposure assessment performed for the reregistration eligibility document (RED) determined that the risk to workers without respirators was unacceptable, and that the risk to bystanders without respirators was potentially of concern.

Used throughout the United States, the fumigants have few viable alternatives. Aluminum phosphide was first registered in 1958; magnesium phosphide followed in 1979. Both of these compounds react with ambient moisture to form phosphine gas, the active ingredient registered for phosphine fumigants.

To address the risks of phosphine exposure, a number of traditional mitigation measures will be required. Phosphine applicators will also be required to develop site specific fumigation management plans (FMP's)—the first time OPP has required such plans for a pesticide registration. At the same time, registrants will be required “to develop additional data and information to better characterize risks to workers and bystanders,” OPP says. “EPA will use these new data in the future to update the current risk mitigation measures as necessary.” The goals of FMPs are specified but the guidance for them still must be developed. In general, however, each plan will need to describe the suitability of a site for fumigation and include safety measures, emergency procedures, and monitoring and notification requirements, as appropriate.

Other requirements:

- Application sites must be monitored to ensure that they are sufficiently aerated before re-entry and that levels of hydrogen phosphide are acceptable. Re-entry before these levels are acceptable is prohibited without a respirator.
- Applicators must provide to the Local Emergency Planning Committee the material safety data sheet (MSDS) for the product(s), applicator's manual and other safety materials. This review should be conducted annually or, if required by an FMP, more frequently.
- Phosphine fumigants may be sold only to persons who hold a certified applicator's license. These products may be used only by those persons who hold a certified applicators license or trained persons under the direct supervision of a certified applicator. There must be at least one certified applicator physically present and responsible for each fumigation. The certified applicator must maintain visual and/or voice contact with all fumigation workers during the application of the fumigants.
- The aeration of railcars, railroad-boxcars, containers and other vehicles is prohibited en-route.
- Written notification must be provided to the receiver of railcars, railroad-boxcars, shipping containers and other vehicles that are being fumigated in-transit. Notification must be made prior to the actual receipt of a fumigated vehicle or a container by a consignee. A copy of the applicator's manual must accompany all transportation containers or vehicles. Proper handling of treated railcars at their destination is the responsibility of the consignee. The consignee must be familiar with the properties of phosphine fumigants, worker exposure limits and first-aid treatment. Upon receipt of the railcars or other

containers, a trained person must perform the aeration process and document in writing that the monitoring has been performed and that aeration has been completed.

- Phosphine fumigants must not be applied to rodent burrows that open under or into a building, especially a residence, that is, or may be, occupied by humans or animals. Before treating a burrow on property with a habitable structure, the applicator must supply the customer with an MSDS or the applicable sections of the applicator's manual. (McDonald)

NOTICE TO RETAILER ON PESTICIDE PRODUCT CONTAINING CHLORPYRIFOS

In June 2000, EPA announced an agreement with pesticide manufacturers that will remove many uses of chlorpyrifos, currently one of the most widely used insecticides in the United States. The agreement stops the sale of virtually all home use products, and many other indoor and outdoor non-residential uses where children could be exposed, as of December 31, 2001.

The registrants have asked EPA to amend end-use product registrations to delete the following uses:

- All termite control uses (these will be phased out);
- All residential uses (except for ant and roach baits in child resistant packaging (CRP) and fire ant mound drenches for public health purposes by licensed applicators and mosquito control for public health purposes by public health agencies);
- All indoor non-residential, non-agricultural uses (except ship holds, industrial plants, manufacturing plants, food processing plants, containerized baits in CRP, and processed wood products treated during the manufacturing process at the manufacturing site or at the mill);
- All outdoor non-residential, non-agricultural sites (except golf courses, road medians, industrial plant sites, fences posts, utility poles, railroad ties, landscape timbers, logs, pallets, wooden containers, poles, posts, processed wood products, manhole covers, and underground utility cable and conduits; and fire ant mound drenches for public health purposes by licensed applicators and mosquito control for public health purposes by public health agencies);
- And use on post-bloom apple trees (except for tree trunk use).

In addition, the companies agreed to:

- Limit the maximum chlorpyrifos end-use dilution to 0.5% active ingredient (a.i.) for termiticide uses that will be phased out,
- Limit the maximum label application rate for outdoor non-residential use on golf courses, road medians, and industrial plant sites to 1 lb/a.i. per acre,
- And either classify all new/amended chlorpyrifos products (except baits in CRP) as Restricted Use or package the products in large containers, depending on the formulation type, to ensure that remaining chlorpyrifos products are not available to homeowners. (McDonald)

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Where trade names are used, no discrimination is intended, and no endorsement by the Cooperative Extension Service is implied.

Sincerely,

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