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Kansas Insect Newsletter

For Agribusinesses, Applicators, Consultants, and Extension Personnel

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In the garden.....

With the recent rains and moderately warm daytime temperatures, gardening activities are on the increase. Cabbage and broccoli transplants and seeded radish are favorite early springtime vegetables. Imported cabbageworms and flea beetles are associated with cole crops and radishes, respectively.



Cabbage transplant



Imported cabbageworm butterfly



Imported cabbageworm eggs



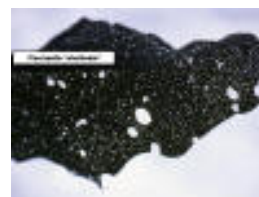
Cabbageworm growth stages

The familiar white imported cabbageworm butterflies are seen flitting about in gardens. Elongated yellow eggs are deposited mainly on lower leaf surfaces. Newly emerged larvae are very small and seldom are observed. However, as the increase in size, they are the highly recognizable “fuzzy green” caterpillars which cause holes in leaves. As cabbage heads form and broccoli florets are produced, the caterpillars feed on and decrease the quality of the produce. Controlling imported cabbageworms is dependent upon the time commitment a gardener is willing to make, as well as the acceptable type of chemical used. Organic growers

will periodically inspect plants for the presence of eggs and crush and any that they encounter, and crush or remove any larvae which may have hatched from undetected eggs. The number of plants and their size will dictate the practicality of this method. If insecticidal sprays are the selected method for controlling imported cabbageworms, an organically acceptable choice would be a *Bacillus thuringiensis* (Bt) product. Otherwise, any one of a number of synthetic insecticides will effectively eliminate imported cabbageworms.



Flea Beetles



Flea beetle "shotholes"

Flea beetles are tiny “jumping beetles” which overwinter as adults. Direct sunlight on soil surfaces and warm air temperatures cause flea beetles to become active even before seeds have been sown. Thus, “hungry beetles” immediately attack newly emerged seedlings. Plants may be killed before leaves emerge from between cotyledons. Or if leaves are produced and small plants become established, high populations of flea beetles may riddle leaves and cause plants to be stunted. “Pinholes” are the typical evidence of the presence of flea beetles. Insecticidal control is the only practical method for managing flea beetles.

And on the trees.....

As reported last week, European pine sawfly and eastern tent caterpillar activities had begun. The warm temperatures have abetted the hatch which most certainly has been completed for both pests. It is up to homeowners to individually inspect trees and landscape plantings for the presence of either pest.



Early developmental stage European pine sawfly larvae



"Dried" needles

If inspections are done during cooler portions of the day or on cool days, European pine sawfly larvae will not be evident as they will be huddled at the base of needle bundles. The best time to look for European pine sawfly larvae is when temperatures are warm and larvae are out feeding on the entire length of the needles. Larval clusters encircle individual needles, and their heads point towards needle tips. Their black head capsules shine/glisten in the sunlight. Another indicator of European pine sawfly presence is “dried needles”. You will not find larval clusters at these points. But look to adjacent twigs to which the sawfly larvae migrated in search of a new/acceptable food source. If there are but several localized sawfly-infested twigs, simply prune them out and discard. Where infestations are widespread, an insecticidal treatment is warranted.



"Hidden" Eastern tent caterpillar web mass



Exposed web mass

Eastern tent caterpillar “tents” have rapidly increased in size, but may not be readily visible in the lush current flush of flowers. And under this “camouflage” tent caterpillars have been feeding “unseen”. With their increase in size, there is a corresponding increase in the size of their protective “web home”. The easiest method for eliminating eastern tent caterpillars, simply use your fingers to pull out/remove and dispose of the web mass. Do this when caterpillars are not actively foraging but rather resting in their tent. If there is an aversion to touching the web mass, use a gloved hand, a stick/pole, or, prune out and dispose of the branch with the tent. If the choice/method of control is to use an insecticide, it will be unnecessary to spray the whole tree ---- rather, treat only the branch with the leaves being fed on.

Some insecticide choices for controlling imported cabbageworms (ICW), flea beetles (FB), European pine sawfly (EPS) and Eastern Tent Caterpillar (ETC) include:

American Brand Thuracide Concentrate (IMP, ETC), Bayer Advance Mosquito Killer (leaf-feeding caterpillars), Bayer Advance Power Force Multi-Insect Killer (FB, ETC), Bayer Advance Rose & Flower Insect Killer (sawfly larvae, leaf-feeding caterpillars), Concern Multi-Purpose Insect Killer (cabbageworm, FB, ETC,), Bonide Rotenone-Pyrethrins (IMP, FB), Bonide Thuracide (IMP, ETC), Ferti.lome Borer, Bagworm, Leafminer & Tent Caterpillar Spray (IMP, EPS, ETC), Ferti-lome Mal-A-Cide (ETC), Ferti.lome Triple Action (IMP, FB), Ferti.lome Triple Action Plus Neem Oil Extract (beetles) GardenTech Sevin Concentrate (IMP, FB, EPS, ETC), Green Thumb Multipurpose Insect Killer (IMP), HiYield Indoor/Outdoor Broad Use Insecticide (ICW, FB, EPS, ETC), HiYield Malathion (ETC), Monterey 70% Neem Oil (beetles), Natural Guard Multipurpose Neem Oil (caterpillars, sawfly), Natural Guard Rotenone/Pyrethrin (IMP, FB), Ortho Basic Solution Lawn and Garden Insect Killer (IMP), Ortho Basic Solution Malathion Insect Killer (IMP, beetles, ETC), Ortho Bug B Gon Garden and Landscape (IMP, EPS, ETC), Ortho Bug B Gon MAX Lawn and Garden Insect Killer (IMP, FB, EPS), Ortho Malathion Plus (ETC), OrthoMAX Garden and Landscape Insect Killer (IMP, FB, EPS), OrthoMAX Garden Insecticide Dust (IMP, FB), OrthoMAX Lawn and Garden Insect Killer (IMP, FB, EPS, ETC), Ortho Systemic Insecticide Killer (EPS, ETC), Safer Insecticidal Soap (sawfly larvae), Safer Insect Killer Soap (ETC, sawfly larvae), Schultz Garden Safe Fruit and Vegetable Insect Spray (IMP, FB, sawfly, ETC), Schultz Garden Safe Insecticidal Soap (EPS, ETC), Spectracide Triazicide (EPS, ETC), Sunspray UltraFine Year-Round Pesticidal Oil (EPS).

Bob Bauernfeind

THE END OF APRIL - BEGINNING OF MAY IS TIME FOR ANNUAL BOOSTER FOR HORSES AGAINST

THE WEST NILE VIRUS IN KANSAS

West Nile virus is present in the United States, including Kansas and therefore it is very important to vaccinate your horses. Spring is the time to give the annual booster again. There are two vaccines on the market:

a) Fort Dodge offers has the vaccine West Nile-INNOVATOR™. The manufacturer also recommends 2 initial doses of this killed virus product, given intramuscularly, 3-6 weeks apart, and then annual booster vaccination. Protection from disease is reportedly achieved about 6 weeks after the second initial vaccine dose.

b) Merial Company has equine vaccine called RECOMBITEK• Equine West Nile Virus vaccine. Recombitek contains recombinant canarypox vectored West Nile Virus that has been modified to express the desired antigens capable of stimulating a protective response to the West Nile Virus. Manufacturer recommends two initial doses, 4-6 weeks apart as well as a single annual booster.

West Nile-Innovator and Recombitek vaccines work in completely different ways and cannot be used interchangeably. Horses previously vaccinated with West Nile-Innovator would need to start their vaccination series over again with 2 initial doses if using the Recombitek vaccine this year. Horse owners are advised to consult their veterinarian concerning WNV vaccination of their horses. Vaccinated horses can be differentiated from infected horses on laboratory tests.

Horses vaccinated against EEE, WEE, and Venezuelan Equine Encephalitis **are not** protected against infection with WNV.

Link to Information on the Fort Dodge West Nile-Innovator™ Equine Vaccination <http://www.equinewestnile.com/default.htm>

Link to Information on the Merial RecombiTEK™ West Nile Virus Equine Vaccination <http://www.equinewnv.com/>

Ludek Zurek

Kelthane Phase Out:

Dow AgroSciences has decided to initiate a voluntary phase out the miticide Kelthane. Manufacturing will stop in June of 2006. Supplies of Kelthane WSP or Kelthane MF can under our current understanding be distributed, sold, and applied legally until all supplies are exhausted. Dow AgroSciences intends to support our U.S. Federal and State registrations to facilitate depletion of Kelthane inventory by end users. Kelthane is a trademark of Dow AgroSciences LLC. Always read and follow label directions.

Phil Sloderbeck - Garden City, KS

New biotype of RWA detected in Hays:

A sample of Russian wheat aphid collected in Hays, KS on March 23 tested positive as 'biotype 2' in a preliminary trial. The sample is being amplified and will undergo further testing to confirm this result. This is the first detection of the new biotype of RWA this far east in Kansas, and is perhaps an indication it is continuing to spread. Samples of RWA collected by county agents or growers may be sent for biotyping to ARCH in Hays. Please contact J.P. Michaud, 785-625-3425 x212 BEFORE sending a sample.

Biotype 2 Russian wheat aphid (RWA2) is more damaging than the original biotype (RWA1) to all wheat cultivars and varieties expressing the Dn4 gene (Ankor, Prairie Red, Halt, Yumar) are not resistant. Laboratory studies have revealed higher reproductive rates and tolerance of higher temperatures in RWA2 compared with RWA1. Progression of damage to wheat is also faster, especially in warm conditions.

Now is a good time for wheat farmers to be alert for signs of RWA damage in their fields. Symptoms include white and purple streaking on leaves (Fig. 1), rolled up leaves, and prostrate tillers. Farmers should estimate their projected wheat yield in a field before determining an aphid treatment threshold (higher yield > lower threshold). For example, in wheat projected to yield 20 bushels per acre, the action threshold is considered to be '20% of tillers with damage and/or live aphids', whereas for 40 bushel per acre wheat, treatment may be justified when 10% of tillers are infested.

Information on treatment options can be found on our web site at: <http://www.entomology.ksu.edu/DesktopDefault.aspx?tabindex=191&tabid=490> and more information on the Russian wheat aphid can be found in our Extension Bulletin MF2666 at: <http://www.oznet.ksu.edu/library/entml2/mf2666.pdf>



Russian wheat aphid

J.P. Michaud - Hays, KS

Capture® LFR™ Registration and Launch:

FMC has announced the launch of Capture LFR insecticide, which has just received EPA registration for use on corn (field, sweet, and popcorn) in the United States. Capture LFR is an enhanced Liquid Fertilizer Ready formulation allows Capture LFR to be mixed directly with fluid fertilizers. This means growers can plant, fertilize, and control seed and seedling pests in corn. This new formulation is labeled for control of wireworms, grubs, seedcorn maggot, and corn rootworm larvae.

Phil Sloderbeck - Garden City, KS

Alfalfa:

Alfalfa weevil spraying continues throughout the central part of Kansas. Sampled alfalfa fields in Republic Co. with highly variable populations of very small larvae on 11 April. Very few aphids were present in any of these fields. Weevil populations need to be monitored, even after treatment, until pupation and pre-harvest intervals need to be adhered to for any insecticides utilized.

Jeff Whitworth

Wheat:

Also checked several wheat fields with no apparent insect pest problems. Hessian flies are still in the pupal (flax) stage but will probably be emerging as adults over the next couple of weeks. They will then mate and start egg-laying which may result in larval feeding behind the leaf sheaths and may ultimately result in lodging. There are no remedial treatments for infested fields but you need to be aware of the Hessian fly potential in your area.

Jeff Whitworth

Brand names appearing in this publication are for product identification purposes only. No endorsement is intended, nor is criticism implied of similar products not mentioned.

Sincerely,

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