**Special Interest Articles:**
- Horn Fly Insecticide Resistance Management
- Cattle Theft Penalty Upgrade
- Feral Swine Flu?

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**Insect Updates**

**Horn Fly Insecticide Resistance Management**

Some important guidelines to help prevent resistance:

1. Begin horn fly control procedures in the Spring when cattle average approximately 200 horn flies.

2. If ear tags are used, the insecticide classes must be rotated between pyrethroid and organophosphates or any of the new classes of ear tags. Continuous use of ear tags in the same insecticide class will eventually result in horn fly resistance.

3. Remove ear tags at the end of the fly season or when they lose their effectiveness. Do not tag cattle more than once per fly season, regardless of insecticide class.

4. If additional horn fly control is needed later in the year, use sprays, pour-ons, dusts or back-rubbers. If possible, alternate insecticide classes when changing control methods.

5. If pyrethroid ear tags have failed to control horn flies in the previous year, pyrethroid insecticides in any form should not be used for at least two years. In the meantime, use non-pyrethroid ear tags, sprays, pour-ons, etc.

Ear tags on the market include: OPs Patriot, Terminator II, Warrior, Optimizer, Dominator and X-terminator; Pyrethroids PYthon, PYthon MAGNUM, Gardstar Plus, CyLence Ultra, Saber Extra and Super Deckem; Organochlorine Avenger and Macrocyclic Lactone XP 820.

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**Maggot therapy similar to standard care for leg ulcers**

Maggot would therapy is being considered more often for debridement of leg ulcers as opposed to the use of hydrogel. Some believe the maggots allow for faster healing times and lower bacterial levels. A study shows that this is not the case. Although maggots would therapy is effective and allowed for slightly quicker healing times, the larvae are painful and do not lower bacterial levels. Therefore this does not make them a miracle alternative to the common practice of using hydrogel for leg ulcers.

Of course this does not rule them out either as an effective way to care for leg ulcers.

Cattle Care

TSCRA: Cattle Theft Bill Passes Texas Legislature

As of today (May 12, 2009), the SB1163 bill introduced by Senator Kel Seliger (R-Amarillo) and Representative Lois Kolkhorst (R-Brenham), unanimously passed the House and is on its way to the Governor to be signed or vetoed. If it passes, the bill will increase the penalty for livestock theft in Texas.

“Texas is the number one cattle producing state in the nation, but the penalty for cattle theft in Texas is more lenient than the neighboring states of Oklahoma, New Mexico and Louisiana,” TSCRA President Dave Scott, of Richmond, TX, said.

Texas cattle theft has more than doubled in the past year. For protection of the industry, stricter penalty is needed. SB1163 increases the penalty for cattle theft from a state jail felony to a third degree felony.

Pesticides Update/Outlook

List of Disinfectants Registered for Use against Influenza A Viruses

In response to the emerging threat posed by the spread of the H1N1 Flu, EPA has provided a list of disinfectants registered for use against influenza A viruses in pdf form at http://www.epa.gov/oppad001/influenza-disinfectants.html

The list contains over 500 antimicrobial products registered by EPA for use against influenza A viruses on hard surfaces.

Pesticide contaminated fruits & vegetables


Have you ever been curious as to how much pesticide residue is actually on that head of broccoli or those ripe strawberries? Well, now you can find out.

The listed website contains the Environmental Working Group listing of the most and least pesticide contaminated fruits and vegetables.

Nearly 70% of US farmers & ranchers surveyed have taken steps toward implementing sustainable agricultural practices.

3 out of 4 US farmers are aware of sustainable practices and most have used direct seeding, minimized the use of chemicals or employed crop rotation.

http://www.greenbook.net/viewStory.aspx?StoryID=835
Carbaryl: Amending product registrations to terminate uses and eliminate certain application methods

This notice announces the amendment set forth by the EPA to terminate uses and eliminate certain application methods for carbaryl products, as requested by registrants, of certain end-use and / or manufacturing – use carbaryl products registered under section 3 of FIFRA.

Product Name - Uses being terminated

Ortho Sevin Dust – Poultry & premises; manufacturing – use carbaryl products registrants, of certain end-use and / or for carbaryl products, as requested by and eliminate certain application methods set forth by the EPA to terminate uses

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**Human & Animal Disease & Health**

Drug-Resistant Bacteria Dispersed near Broiler Houses

http://esciencenews.com/articles/2009/03/15/flies.may.spread.drug.resistant.bacteria.poultry.operations

Researchers at the John Hopkins Bloomberg School of Public Health have found house flies near broiler houses dispersing drug-resistant bacteria. The collected flies tested positive for antibiotic-resistant enterococci and staphylococci bacteria. The bacteria isolated from the flies had similar resistance characteristics and resistance genes to bacteria found in the poultry litter. These results suggest that flies in intensive production areas could efficiently spread resistant organisms over large distances.

**TAHC: Wild Hogs – No Indication of Flu Danger**

According to Texas Animal Health Commission you are more likely to catch the flu from your sick hunting buddy than from domestic or wild hogs. This disease is spread from person to person.

If you are hunting wild hogs or know people who are, it is more critical to protect oneself against potential exposure to swine brucellosis than H1N1 influenza. 10% of wild hogs carry swine brucellosis, a bacterial disease, not related to the flu in any way.

Protection is necessary “when processing or butchering a wild hog against the blood and bodily fluids,” Dr. Bob Tillman says, Texas state veterinarian and head of TAHC. The swine brucellosis bacteria are destroyed when the meat is cooked.

Trappers who catch wild hogs and owners of domestic swine should practice biosecurity to prevent spreading the flu to pigs. Stay away from swine if you become ill and avoid visitors near your pigs. Have someone else feed the pigs when you are ill with flu-like symptoms and always wash your hands after handling animals.

**Purdue experts speak out on livestock and antibiotic resistance**

Two Purdue University experts speak up about a NY Times opinion piece that establishes pigs as a source of MRSA infection for humans. Drs. Paul Ebner, a livestock microbiologist, and Ching Wu, a veterinary pathobiologist and microbiologist call the piece "highly speculative."

MRSA (methicillin-resistant staphylococcus aureus) or antibiotic resistant staph, is found in nature and more commonly spread among humans from humans than animals, although they can be carriers.

The piece was written off of a pilot study that only looked at two farms, and only one of them had the organism. The Drs. Say that because MRSA is so prevalent, the best way to avoid infections is to always use proper hygiene.

**Journal Reviews**


Researchers in Australia have discovered that applying phloxine B to horn fly larvae renders them unable to develop into adults when combined with phototoxic levels of 5000 lux. Phloxine B is an environmentally friendly xanthenes derivative that is safe for mammals but toxic for dipterans. Thus far administering PhB in the field has yet to be worked out but there is potential to prevent horn fly development without the use of insecticides.

This article discusses the important role of the anticlotting protein thrombostasin (TS) in the salivary gland and its significance in horn fly feeding. Through their research efforts, the authors discovered that the TS isoform plays a significant role in blood volume uptake by horn fly adults during feeding. As stated by the authors, “host immune response to salivary proteins may play a pivotal role by either facilitation or diminishing feeding success in response to different structural epitopes.” Further understanding and research of TS will benefit efforts to develop an effective antifeeding vaccine for horn flies.


Researchers investigated whether or not dairies in south central Ontario, Canada were maintaining stable fly populations throughout the winter. They found that there were three farms that were refuge for stable flies. In the winter and that adult and larval stages could be collected indoors during the winter at these farms.

Therefore, it was concluded that seasonal recolonization of dairy farms was mostly due to the populations located at these refuge farms. Adults would leave these farms in the spring and move to another farm for the season. None of the other dairies had overwintering colonies.


This article looked at the potential of house flies transmitting Microsporum canis, a dermatophyte of dogs and cats that cause skin lesions. It was discovered that house fly adults have the ability to carry the dermatophyte mechanically (on their bodies) for up to five days. The eggs, larvae, pupae, feces and vomitus tested negative for the dermatophyte, therefore ruling out other means of transmission.

This just adds another pathogen to the long list of those transmitted mechanically by house flies.


The research conducted in this paper looked at the efficacy of cuticular hydrocarbons and visual attractants as effective lures for adult house flies. The ending results showed that there were no cuticular hydrocarbons or visual color stimulations that maintain attraction to house fly male or female adults. These results support commonly observed inconsistencies associated with lure-and-kill systems.


The authors looked at the efficacy of metaflumizone (BAS 3201; BASF) bait on house flies from feedlots in Kansas. Metaflumizone (BAS 3201) was compared to methomy-based bait (Golden Malrin), commonly utilized bait in livestock facilities. The metaflumizone was significantly more slow-acting than the methylv alcohol bait but just as effective cumulatively later in the bioassay. These results show that metaflumizone is an affective candidate for incorporation into IPM and integrated resistance management programs against houseflies.


The toxicity of essential oils (eucalyptus, mint, orange, lavender and geranium) and monoterpenes (eucalyptol, limonene, linalool, menthone, and methyl acetate) on house flies was observed. Researchers found an LD50 of less than 0.20 for all the essential oils and less than 0.15 for the monoterpenes. These results suggest that the studied essential oils and monoterpenes are potential tools for controlling house flies.
Eprinomectin and doramectin were administered to steers by daily oral capsules for 28 days. Results showed both insecticides to be 100% effective against estimated larvae of Amblyomma americanum throughout the entire 28-day study period. The authors note that eprinomectin could be utilized as an effective method of medicated bait for controlling ticks on white-tailed deer due to its effectiveness at lower serum levels and rapid elimination rate. Thus helping assist in the Cattle Fever Tick Eradication Program.


It was determined that cattle are capable of developing antibody responses to 13 antigens in paralyzing tick saliva. Therefore preventing tick paralysis to occur simultaneously in the same cattle. These results indicate that the immune response of cattle to tick paralysis is more complicated than was originally expected.

What to look for in next month’s issue – August 30, 2009

• What’s new with Livestock Insect Workers
• Fighting late horn fly outbreaks
• Pesticide Recommendations for beef & dairy cattle
• Insects of Interest