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# **Veterinary Entomology**

#### Special Interest Articles:

- · Horn fly and Stable fly control
- Zika Virus
- New Ear Tag RECALLED!
- Bovine Anaplasmosis



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# **Insect Updates** Horn fly Control for Cattle

Even as summer starts to wind considerable nuisance. Efforts down, the flies are not gone. Cattle can be seen swatting at flies all over the state and will continue until winter.

The horn fly is a biting fly that causes considerable economic loss to cattle. In addition there are stable flies in the spring early summer, house flies that transmit disease pathogens to humans and animals, horse or deer flies, heel flies (or cattle grubs) and mosquitoes.

Texas fly season is in full swing. All can be of great concern and must be taken to control these flies to below threshold levels horn flies 200/animal, stable flies 2-4/leg.

> Late season treatment for horn flies might be needed but could be very important. The available products for midseason treatment include using pour-ons, the VetGun, dust bags and back rubbers, or sprays. Treatment should be administered according to the

Heel flies are managed by using dewormers regularly (once or twice a year).

Mosquitoes are managed by eliminating breeding sites (standing water).



For more information go to http://livestockvetento.tamu.edu

### Mosquitoes and Zika Virus – What you need to know

I know, I know, we have been hearing about Zika virus for months now but it is of concern until we see what is going to happen in the US.

Zika virus is not a new disease, it dates back to 1947. but it has stayed in Africa and Asia for decades. Increased human travel has been implicated for the reason we are now seeing outbreaks in the Western Hemisphere.

It is still unknown what will happen in the US. We do have the mosquito Aedes aegypti



(and have for hundreds of years) but we do not have local transmission of the virus pathogens. This means our native mosquitoes are not

carrying Zika pathogens.

Zika is noted to be fairly mild for the 19% who have outward clinical symptoms, 80% will never know they are sick. There is a small 1% who get more severe symptoms and outcomes.

The largest concern is to unborn babies (in utero). Moms that become infected with Zika while pregnant or at conception risk a chance or the fetus developing microcephaly, or a small head, due to damaged brain cells.

So what can you do?

Drain standing water Dress appropriately Defend with repellents

Use screens

In addition, DO NOT travel to Zika endemic areas if you are pregnant or are planning to get pregnant.

If you do, wait 8 wks before getting pregnant and use repellents continually when you return to the US.

If you are a male and travel to Zika areas, have protected sex for 6 months (!) upon return to the US and use repellents. If your partner is pregnant, do not have unprotected sex for the entire duration of the pregnancy.

Unlike other mosquito transmitted diseases, Zika can be spread by men and women during sexual interaction. It can remain in the semen for a longer period of time than in the blood.

For more information on Zika and mosquito management visit http://preventingzika.org or www.texaszika.org

Photo credit to Dr. Gabriel Hamer, TAMU.



"At high enough levels of nitrite, the oxygen carrying capacity of the red blood cells is reduced to the point that the animal will asphyxiate."

# **Pesticides** Bayer's new insecticide ear tag - Tolfenpro RECALLED

The newly develop Bayer insecticide ear tag Tolfenpro has been voluntarily removed from the by the company.

On Bayer's recall notice, they

suggest that many cattle that were using the Tolfenpro tags last year began to develop eye irritation.

I have heard that this irritation might be more extensive then is being discussed.

I will not make any speculation but if you used Tolfenpro ear tags last year and had any issues with the tag, please visit Bayer's website.

## Cattle Care Feeding drought-stressed crops to cattle

When drought conditions occur, farmers do what they can to salvage some value but it is important to consider the potential for nitrate toxicity.

All plants contain nitrates, but when plant growth is slowed because of drought or hail,

nitrates have a potential to accumulate to high levels to cause losses, especially if high rates of nitrogen fertilizer have be applied.

If there is too high of intake of nitrates, toxic levels are absorbed proper management decisions. into the bloodstream. At high

levels of nitrite, oxygen carrying capacity of the red blood cells is reduced.

These plants can still be fed to animals but the nitrate level needs to be known to make

### Minimize heat stress when working cattle

Although most do not work cattle in the summer heat, sometimes it is necessary. Heat and humidity are two deadly environmental conditions that producers need to be aware of.

Some summer handling tips:

- Only handle cattle in early mornings

Cattle core temps peak 2 hrs after the environmental temp hits a daily high

- Make it short

Don't move cattle great distances

- Work cattle in smaller groups

Avoid overcrowding holding pens, alleys and working facilities

- Update facilities

Shade and sprinkling systems installed in feedyards can greatly reduce the impacts of heat stress

# **Human & Animal Disease & Health**

### Fighting Pink Eye in Cattle

Pink eye can still be a concern even as the summer starts to wind down. Weaned calves can potentially lose up to 10% of their body weight as a result of pink eye.

In addition, the disease could lead to blindness and possibly even death due to starvation, thirst, and accidents due to loss of sight.

Pink eye is caused by several factors; the main cause is the bacteria. Moraxella bovis. An infected animal can have many subtypes of the bacteria making it difficult to treat.

Other factors can include UV light, tall foliage such as grass or weeds and dust which acts as a direct irritant.

Pink eye can be spread by flies feeding on the eye secretions and from the flies flying directly into the eyes. The feeding flies can pick up the bacteria and take it over to another animal and infect other animals.

Visible symptoms of pink eye occurring are discomfort, tears, straining to pen the eye, and possibly the eye staying shut.

One guaranteed sign is increased tearing and this is especially visible in light colored cattle.

Progressive pink eye develops an ulcer typically in the center of the eye and these can either heal or it builds up pressure on the inside of the eye form inflammation.

The biggest treatment option recommended is to work with a veterinarian and treating with antibiotics.

In addition a patch can be glued over the infected eye to minimize solar radiation exposure and other irritants to the eye. Also prevents flies from getting into the infected secretions.

There are several options for vaccines to control pinkeye. Sometimes vaccines are given too close to when the animal becomes infected. It takes two doses and several weeks to build immunity.

Proper nutrition can assist in preventing pinkeye.

### **TAHC Passes Rules at Commission meeting in 2016**

New rules for 2016 from the Texas Animal Health Commission:

#### Chapter 33, Fees, Repeal Lab & Herd Status/Certification Fees

TAHC was not renewed the authority to collect Laboratory fees (Rule 33.4) and Herd Status/Certification fees (Rule 33.5), therefore they must discontinue setting and collecting certain fees as of Sept 1.

#### Chapter 49. Equine, EIA Testing

This new section was added to require that a person or laboratory who performs an official Equine Infectious Anemia (EIA) test in the State of Texas must meet and be in compliance with the requirements found in Title 9, CFR 75.4, "Approval of Laboratories, and Diagnostic or Research Facilities."

#### Chapter 41. Fever Ticks. Fever **Tick Vaccine**

The amendment to this Chapter was proposed in February to add the fever tick vaccine requirements for beef cattle in quarantine area and will clarify the different requirements for dipping, treatment, and vaccination. This was passed see more below about the vaccine.

### New website to highlight ag's preparation for 2017 antibiotics rules

Livestock groups have begun educating producers and consumers on the impending veterinary feed directive changes coming in January 2017.

The Animal Health Institute, National Pork Producers Council, National Cattlemen's Beef Association and the Animal Agriculture Alliance launched a new website:

www.togetherABX.com.

The website was set up to provide information about the Food and Drug Administration's new policy changes for antibiotics used to keep food animals healthy.

"Farmers, veterinarians and the companies that make medicines for animals have collaborated with the FDA to implement guidelines that maximize animal health and wellbeing, while providing consumers with the safest food possible," said Alexander Mathews, President and CEO of the Animal Health Institute.

### **Watch for Anaplasmosis**

Anaplasmosis has historically been most prevalent in the South, but recently when Kansas State University Extension planned a one-day seminar on the cattle disease, registration quickly filled and exceeded seating capacity.

Anaplasmosis is being found more often in the Midwest and Plains states in that past few years.

Anaplasmosis, a tick-borne disease associated with the bacteria Anaplasma marginale, can spread by some biting insects such as flies and mechanically through the use of syringes, blood transfer.

In the past, the disease has been more prevalent in the Gulf Coast region and other wet, tick-friendly environments. More recently it has appeared and is causing economic losses in beef and dairy herds around the country include the Midwest and arid West.

Clinical signs, in adult cattle older than 2 yrs, tends to appear within 6 to 70 days following infection, with an average of 28 days.

Clinical signs include:

- Adult cows or bulls found dead in the pasture
- Lethargy
- Difficulty breathing (especially when moved)
- Aggressive behavior
- Abortion
- Icterus or jaundice
- Fever
- Weight loss
- Constipation

# **Special Topics of Interest**

### **Bayer Buys Monsanto**

Just announced on Sep 14, Bayer and Monsanto have signed "a definitive merger agreement" selling Monsanto to the German-based company for \$66 billion, or \$128 per share.

If and when approved by anti-trust regulators, the deal would create the world's biggest supplier of crop protection products and seed, dominating more than 30% of the market.

"We are pleased to announce the

combination of our two great organizations," Bayer CEO Werner Baumann said in the prepared release. "This represents a major step forward for our Crop Science business and reinforces Bayer's leadership position as a global innovation driven Life Science company with leadership positions in its core segments, delivering substantial value to shareholders, our customers, employees and society at large."

According to Baumann, "growers will

benefit from a broad set of solutions to meet their current and future needs, included enhanced solutions in seeds and traits, digital agriculture, and crop protection."

But there is concern from farmers, the National Farmers Union are the first to speak on this. They express concern that family farmers, ranchers and consumers are the ones that lose out by crippling competition, thus increasing prices and reducing innovation.

# **Tackling the Cattle Fever Tick with Vaccine**

Texas Animal Health Commission (TAHC) is proud to announce the arrival of a new toll in fever tick eradication efforts.

A new fever tick vaccine will be used to reduce the risk of new fever tick infestations in quarantine areas such as the tick eradication quarantine area, or permanent quarantine zone, and in temporary preventative or control quarantine areas.

The first doses of the new vaccine were delivered to TAHC on May 17, 2016 and plans are

underway to hold producer meetings in the counties along the permanent quarantine zone to provide information on the effectiveness and use of the vaccine.

"There are numerous benefits of the fever tick vaccination. with the most significant being the potential to prevent the establishment of fever tick infestations on properties where cattle are being grazed. Additionally, the vaccine will be another tool aiding in more rapid eradication of fever ticks

on infested premises," said Dr. Andy Schwartz.

Vaccinating cattle on a property with fever ticks will help assure that ticks are eradicated as quickly as possible under established gathering, inspection, and treatment schedules.

While proper vaccine usage helps assure ticks are eradicated as soon as possible so quarantines can be lifted, it does not eliminate the need to do regular inspections.

### Wisconsin schools received funds for **Fuel Up to Play 60**

This school year, 115 Wisconsin schools were chosen to receive funds for Fuel Up to Play 60.

Schools were selected from across the state to help jump-start and sustain healthy nutrition and physical activity improvements. The schools could receive up to \$1000.

Fuel Up to Play 60 is an inschool nutrition and physical activity program launched by the Nation Dairy Council and the Nation Football League, with support from the USDA. The program encourages kids to consume nutrient-rich foods and achieve at least 60 mins of physical activity every day.

### New virus found in South Dakota - Influenza D

A new genus of influenza has been similarity to human influenza approved for naming, Influenza D. This virus was isolated in 2011 from a diseased pig but was later determined that cattle are the primary reservoir for influenza D.

This is the first influenza virus identified in cattle. The ultimate goal now is to determine whether influenza D, which has 50%

C, can cause problems in humans. Thus far the answer

Influenza D is spread only through direct contact and the antibodies for this virus have been found in blood samples from sheep and goats, but it does not affect poultry.

"If the virus can undergo reassortment in combination with closely related human influenza virus, it may be able to form a new strain that could pose more of a threat to humans," Kaushik explained.

Li noted, "We have much to learn about this new virus."

### Feed groups ask for changes in VFD rule

The FDA's new veterinary feed directive (VFD) rule, which will be fully implemented in Jan 2017, requires that veterinarians, producers, and feed distributors maintain records of all VFD medicated-feed orders for two years. The Feed groups recently asked FDA to relax on some requirements that are considered

unnecessary listed under Part 11, Electronic Records: Electronic Signatures requirements, listed under Title 21 in the Code of Federal Regulations.

According to AFIA and NGFA, the computer systems and labor required to bring VFD record-keeping processes into compliance with Part 11 would be

extremely costly and burdensome.

The group says that, to the best of their knowledge, none of the feed-distributor members currently have systems that are Part 11 compliant.

FDA has recently exempted other programs form Part 11; they have 180 days to make a decision.

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### Livestock/ veterinary entomology website

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