# Boulder County Small Acreage Management Newsletter

**Spring 2014**

**http://www.extension.colostate.edu/boulder/acreage.shtml**

## In this Issue:

### From the SAM Coordinator

I hope that this newsletter finds you all well.

It is the time of year to control the winter annual weeds. I've seen a lot of Cheatgrass either just beginning to head out or it has and the seeds are beginning to mature. If you want to control it by mowing, you need to be getting it mowed now. Remember to mow it high the first time so that you have room to mow a second time. If it already has seeds, it is best to collect the debris and send it to the landfill. The same principles apply to the winter annual weeds.

Start watching for the perennials, biennials and summer annuals and have a management plan ready to implement.

I decided to concentrate this issue on livestock and some of the diseases and health issues you may encounter. We hear a lot about biosecurity on large livestock operations but the same principles need to be applied to the small flocks and herds.

I would also like to remind everyone to make sure that they have an emergency plan in place for themselves and their livestock.

Thank you,
Sharon Bokan

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**SAM Newsletters Online**

View previous newsletters via the SAM link above.

**SAM Email Listserv**

If you are receiving this newsletter for the first time and are not subscribed to the boco_small_acreage@colostate.edu listserv, you may request subscription on the SAM website (linked in header above). This quarterly e-newsletter and other timely info will be distributed via this email listserv.
Subscribers may use the listserv also as a SAM info gathering mechanism. For example, you may inquire about who is available in the area supply hay, to perform swathing/baling, etc. The listserv is not a marketplace, however. Because it is hosted on the CSU server, NO COMMERCIAL EMAILS ARE ALLOWED. DO NOT ATTEMPT TO SELL ANYTHING VIA THE LISTSERV – THANK YOU. Use the newsletter ad section for these purposes.

Currently, there are 216 subscribers to the listserv

## Basic biosecurity for Small Acreages

By Sharon Bokan

Biosecurity according to the Merriam-Webster dictionary is "security from exposure to harmful biological agents or measures taken to ensure this security". Whether you are a large livestock producer or a homeowner with 4 hens, there are basic principles of biosecurity that every livestock owner should practice to keep their animals healthy and safe.

Animals

- Keep new additions separate for 5 to 14 days
- Keep sick animals as far from healthy animals as possible
- Feed, water and treat sick animals last, use different buckets and other equipment for sick animals than for healthy ones
- Maintain individual animal health records
- Discuss testing and vaccine protocols with your veterinarian

Facilities

- Restrict visitor access to livestock
- Provide protective clothing for visitors and employees (large facilities)
- Change/clean outerwear after visiting another facility and before leaving yours (or neighbor's property)
- Wash hands after handling livestock
- Regularly clean and disinfect trailers, equipment, feeding stations and clothing (especially boots)
- Minimize fence line contact, if possible, with same species livestock of other producers

Large livestock facilities know how devastating a large disease outbreak can be to their business. However, small acreage owners can experience the same devastation or be the cause of disease spread. Small acreage landowners need to take the same care that large facilities do.

The first step is cleanliness. Keeping stables, coops and other livestock housing clean and providing clean, dry bedding, fresh clean water and preventing contamination of feed is a good start. Removing manure and providing good footing material is a must in the barn/stable and dry lot area. Bedding should periodically be removed and replaced with clean material. Remove bedding if it gets wet. All animals need fresh clean water available every day. Drain water tanks and clean them out on a routine basis and whenever you see that they have gotten dirty. Livestock doesn't like to drink dirty water any more than we do.

Any time that your animals are around and interact with other livestock there is the possibility for disease transmission. Do not take your animals to shows or fairs if they are not healthy. If your animal gets sick while at a show or fair, talk with the organizers and see what their protocol is (at a minimum isolate your animal or limit interactions until it is determined what the illness is). When returning from a show/fair, the ideal situation would be to keep the animals that went to the show separate from those that did not until you know that they are healthy.

Keep health records for all animals that include vaccinations, and illnesses. Discuss with your veterinarian what tests and vaccines are needed and on what frequency. Keep current on vaccinations.

## EHV-1 update

By Sharon Bokan

There have been several cases of EHV-1 (Equine Herpes Myeloencephalopathy this year. In March, a horse in Larimer County tested positive. Most recently, two horses in Rio Grand County tested positive. As of May 21, 2014, there are no known new cases. The stable in Rio Grande County is still under quarantine. The stable euthanized one horse that tested positive and a second horse is being monitored, under quarantine with so far no signs of the neurological disease. Both of these horses had attended the same rodeo/barrel racing circuit events.

No additional movement restrictions are in place for moving horses in and out of Colorado. Routinely, horses moving into Colorado are required to have a certificate of veterinary inspection/health certificate within the last 30 days and a negative Equine Infectious Anemia test (Coggins) within 1 year. Check with any equine event for their specific entry requirements.

Symptoms to watch for include fever, decreased coordination, urine dribbling, nasal discharge, loss of tail tone, hind limb weakness, leaning against a wall or fence to maintain balance, lethargy, and the inability to rise. If you have concerns, please contact your veterinarian.

Resources:
http://www.aphis.usda.gov/vs/nahss/equine/ehv/equine_herpesvirus_brochure_2009.pdf

http://www.aphis.usda.gov/publications/animal_health/2011/bro_keep_horses_healthy.pdf

CDA Animal Health:
www.colorado.gov/ag/animals and click on "Animal Health."

## Rabies: Not Just a Risk to Your Animals

**By Nicolette Ahrens, 4-H Livestock Agent, Boulder County Extension**

Imagine you walk out to feed your horses, just like you do every day. You notice right away that one of them tries to eat but can't seem to swallow or chew quite right. Otherwise, he is walking normal and looks bright eyed and healthy. You walk up to check out his mouth and brush your hand around his gums and teeth looking for a sticker or piece of logged food. You find nothing. Then you lean your ear against his side to check for gut sounds and all seems normal. So you decide to watch him for a bit longer. Thirty minutes later, he still can't eat right and now he might even be walking funny, so you decide to call the vet.

By the time the vet arrives, your horse is now wobbly on his feet and looks depressed and uninterested in anything. The vet suspects West Nile or EHV-1 (equine herpes virus), common neurological diseases. You load up your horse carefully in the trailer and head up to the CSU vet hospital. Tests soon rule out West Nile and EHV-1. Within hours, your horse can no longer stand and is soon put down. The vet hospital decides to check for rabies, which means submitting your horse's head to the local public health laboratory.

A few days later, you receive a call confirming rabies and asking for the names of everyone who interacted with the horse. Each person deemed at risk, is required to begin rabies vaccination with includes five shots over 30 days and can cost around $3,000.[1] On top of it all, your property is now quarantined for the next 60 days, so no humans or animals can come or go from your property.

Rabies is a fatal viral disease that is shed in the saliva usually a few days prior to the development of clinical signs. Horses can become infected by encountering a rabid wild animal. Their curiosity may lead to them being

bit usually on the muzzle, head or lower limb. The virus spreads to the central nervous system causing severe inflammation of the brain and eventually will sheds in the saliva of the horse. What makes it such a big concern is that rabies is zoonotic, meaning it can be spread to humans. The cost and risk to humans is significant especially when you look at how the disease progresses and shows up. Signs are widely variable and often the first sign is just a change in behavior, which is the sign for almost all other diseases. Rabies can very easily be confused with other neurological diseases such as EHV-1 , tetanus, West Nile, botulism, and Western Encephalomyelitis as well as lead poisoning or head trauma. The one sign that sets it apart is how fast the disease progresses, usually resulting in death within two to four days, maybe up to two week with support care. Another tricky part about rabies is that it can only be tested for after the animal is dead and there is no treatment once the horse shows clinical signs. Therefore, vets will check for all other diseases first, but keep rabies in mind because of the risk for human exposure.

The good news is how preventable rabies can be by vaccinating. The American Association of Equine Practitioners (AAEP) considers rabies a core vaccine. Rabies has also become a greater risk in our area and something worth considering. Before 2007, a form of rabies associated in skunks has not been seen in Colorado. Since then, it has spread from Eastern Colorado and to the Front Range. Last year in 2013, 24 animals tested positive for rabies in Boulder County, including 9 skunks.

You can also limit your chances by not attracting skunks and other wildlife. Tightly seal all trash cans and feed bins, feed your pets indoors, keep outdoor pets in a fenced area, and do not feed, touch or adopt wild animals.

The story above is not unrealistic as something similar has happened to others before. If you are not vaccinating for rabies, take the time to talk to your vet about what is the best choice for your specific situation. Check out the Colorado State University Extension Fact Sheet, "Rabies in Horses: Should Horses be Vaccinated in Colorado?" for more information.

References:

Shwiff, Stephanie A.; Sterner, Ray T.; Jay, Michele T.; Parikh, Shefali; Bellomy, Amy; Meltzer, Martin I.; Rupprecht, Charles E.; and Slate, Dennis, "Direct and Indirect Costs of Rabies Exposure: A Retrospective Study in Southern California (1998 – 2002)" (2007). USDA National Wildlife Research Center - Staff Publications. Paper 719.

## General Scrapie Information

By Colorado Department of Agriculture

Scrapie is a difficult and devastating disease of sheep and goats that is classified as a transmissible spongiform encephalopathy (TSE), which affects the central nervous system of sheep and goats and is always fatal. Scrapie is estimated to cost the U.S. sheep industry over $20 million a year and can potentially affect your flock, as well

**Cause and transmission**

Scrapie is a condition in which sponge-like holes develop in the sheep and goat brain. Most scientists believe that scrapie is caused by prions – an abnormal form of a normal cell protein. It appears to spread most commonly from an infected, often

normal looking ewe to her offspring and other lambs that come in contact with the placenta and placental fluids. The environment can become contaminated and remain so for years, serving as a source of infection to susceptible animals long after these materials have been removed. Although infection likely occurs at or shortly after birth, scrapie is a degenerative disease and signs usually develop 2 to 5 years later. Animals may live 6 months or longer after onset of signs, but there is no treatment, and death follows a progressive course of disease.

Susceptibility in sheep is linked to genetics, and genetic testing is available to aid in management of this disease. Genetic susceptibility in goats is not well understood, therefore all goats are considered susceptible when evaluating exposure risks for this species.

There is no evidence of a human health risk.

**Clinical signs**

- Early signs include subtle changes in behavior or temperament
- Scratching or rubbing against fixed objects to relieve itching
- Loss of coordination
- Weight loss despite displaying a "normal" appetite
- Biting at feet and legs
- Lip smacking
- Gait abnormalities such as high stepping of forelegs, hopping like a rabbit and swaying of the back end; or
- May appear normal at rest, but if stimulated with sudden noises or excessive movement, the animal may tremble or fall down in convulsion

**National Scrapie Eradication Program**

The United States Department of Agriculture's (USDA) Scrapie Eradication Program goal is to eradicate scrapie and have the United States declared scrapie-free by the World Organization for Animal Health by 2017. Achieving this goal will boost producers' economic viability by increasing opportunities for exports, increasing value of animals, and decreasing production costs. Although there is no evidence to suggest scrapie is a human health concern, eradication can increase consumer confidence in a healthy food supply. The main tools in the program are animal identification to facilitate rapid identification of exposed animals and premises, surveillance testing among live animals and post-slaughter, and genetic-based flock cleanup plans.

**Additional Resources:**

http://www.eradicatescrapie.org

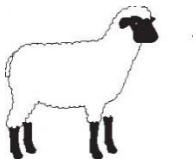
http://www.aphis.usda.gov

*Colorado Department of Agriculture Fact Sheet*

## Scrapie Surveillance: Tagging Sheep and Goats

In an effort to eradicate scrapie in the United States, USDA requires sheep and goats to have flock identification ear tags that list their flock of origin. Enforcement of these rules is now in effect as the tags are readily available to producers.

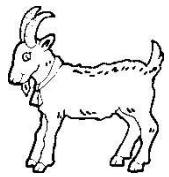
Animals required to have flock ID tags:



**Sheep**

- All sheep sexually intact regardless of age and wethers 18 months of age and older upon change of ownership or cull animals 18 mo. or older moving to slaughter.
- All sheep sexually intact regardless of age and wethers 18months of age and older for show or exhibition.
- All breeding sheep regardless of age

**Goats**



- All goats sexually intact regardless of age and wethers 18 months of age and older upon change of ownership or cull animals moving to slaughter.
- All goats sexually intact regardless of age and wethers 18 months of age and older for show or exhibition and do not have a registration tattoo with registration or the tattoo is illegible.
- Due to scrapie found in goats in Colorado, all commercial goats sexually intact regardless of age and wethers 18 months of age and older not in slaughter channels.

**Registered meat and dairy goats may use tattoos that are legible with Breed Registration Numbers until they are sent to slaughter when a flock ID tag will be required.

Cull breeding sheep and goats destined for slaughter will be tested for scrapie. During the scrapie surveillance program, the ID tags will be collected to accompany the test sample and used to trace an animal that tests positive for scrapie back to its infected flock. Flocks/herds will be counseled individually to help owners work through scrapie toward eradication. All exposed goats are at risk. All exposed genetically susceptible sheep are at risk.

**Keeping Records**

Records on purchases must be maintained for five years for disease investigation purposes. When selling sheep and goats at the livestock market, owners should have flock ID numbers recorded on the market check-in document.

**Buyers**

Sheep and goat buyers should maintain records on the number of animals acquired; the date of acquisition; the name, address and phone number of the person from whom they were purchased; and their flock of origin ID numbers. Livestock barns tagging sheep and goats with their flock ID tags are required to comply.

**Sellers**

Individuals who sell or dispose of sheep and goats should maintain records of the number of animals sold and disposed; the date of sale; the name, address and phone number of the buyer or person who acquired the animals; and the flocks of origin ID numbers and their individual numbers.

To obtain tags, owners must contact the **APHIS Area Veterinary Services at (303) 231-5385** for a flock identification number. APHIS will also assist owners in ordering the tags, which are provided at no cost. Sale barns will also be assigned a flock ID number and will be supplied with white or blue metal tags to identify sheep.

**Contacts:**
Colorado Department of Agriculture
Animal Health Division
Colorado Department of Agriculture
303-869-9130

## Pets and Pot

By Ragan Adams, DVM, CSU Veterinary Extension Specialist

Now that recreational marijuana is legal in Colorado, there has been an increase in unintended human overdoses from marijuana-laced edibles. Even with warning labels and childproof packaging, humans overindulge and are showing up very sick in emergency rooms with increased frequency. Regulators are considering numerous revisions to labeling, packaging and even shapes and colors of food to decrease overdoses.

But there are other populations also at risk of getting very sick from marijuana and/or edibles containing THC, the active ingredient. Consider the young children and pets who can't be expected to read or understand labels nor differentiate a marijuana containing edible from one that does not contain THC? What self respecting, highly food motivated Labrador retriever wouldn't crunch a childproof-plastic pill box left on the coffee table to munch a sweet smelling cookie? Gummy bears sprayed with THC are identical twins to their simply sweet brethren. So the kids and the pets are depending on responsible adults who legally bought the product to keep it out of their hands, paws and mouths. Spread the word to keep these products out of reach.

According to Dr. Tim Hackett, Director of the Colorado State University Veterinary Teaching Hospital, the incidence of dogs with marijuana toxicity increased after the legalization of medical marijuana. He bases his remarks on a research study of dogs presented to two veterinary hospitals with suspected marijuana toxicity.

The study from CSU and Wheat Ridge Animal Hospital explains, "The dry leaves and flowers from the hemp plant *Cannabis sativa* contain the toxic compound of THC. Toxicosis in dogs can be caused by inhalation of the smoke, direct ingestion of the leaves, seeds, stems and flowers of the plant, ingestion of products laced with marijuana leaves, or ingestion of products made with concentrated THC or hashish oil. Clinical signs may be seen within 30–60 minutes after ingestion of marijuana. THC toxicosis in dogs can cause considerable morbidity. The most common reported clinical signs of marijuana toxicosis in dogs include CNS depression, ataxia, mydriasis (dilation of the pupils), increased sensitivity to motion or sound, ptyalism (drooling), tremors, and acute onset of urinary incontinence." Dogs are affected longer and more severely than people.

Often dogs that consume marijuana edibles show signs of central nervous system disorientation as well as signs of severe gastrointestinal upset. Diarrhea, vomiting, dehydration develop due to the toxic effect of consuming oils, butter and chocolate in the carrier product. The reaction to the food in itself is a large component of the dogs' illness. The two dogs that died in the study were vomiting dogs with depressed nervous systems due to the THC. They died from severe pneumonia after inhaling their own vomit.

When asked about the problems of horses getting into a field and ingesting industrial hemp, our marvelous retired CSU extension poisonous plant expert, Dr Tony Knight says that this plant has a very low concentration of THC and rather is grown for its fiber.

"Horses have been reported to be intoxicated by eating Cannabis sativa and some of the varieties that have been selected for high THC levels increase the risk. There are very few detailed reports of horses being poisoned by THC. Symptoms include nervousness and disorientation that can progress to depression, trembling, and sometimes diarrhea and breathing difficulties. Fatalities are rare. Much depends on the dose as to how a horse will be affected. It is not very palatable and horses would need to hungry".

Scientific studies on medical marijuana use in animals are practically non-existent. Although there are many anecdotal stories about positive effects, anyone that gives their animals products containing THC, does so with risks.

The take home lesson from this information is simple: keep the pets away from the pot.

## Now is the time to "Step Up Biosecurity"

by Deborah R. Lester, CSU Extension, Park County Director

If there ever was a reason to step up your biosecurity on your livestock or horse farm/operation---- the time is now!
We are seeing Porcine Epidemic Diarrhea virus kill over 750,000 pigs in a year's time across the country. There is no vaccination, nor do pork industry officials think that an effective one can be made. Having a "clean line of separation" is where every operation should start. (I'll talk more about that later.)
Horses aren't being left out either as the EHV (Equine Herpes Virus)-1, has lead to two horses to be euthanized in Colorado because after catching the virus, the horses then showed signs of neurologic complications of the virus. This means that the horse was lethargic, unable to stand and walk properly (usually the horse is found leaning against a building or fence--unable to support its weight). Horses are then also unable or have no interest in eating.
Viruses are tricky and mysterious living things, but they do have a cycle. The good news-neither of these virus' are transmissible to humans or in the case of PED to their meat.
In the horse industry cycle, we have seen in past years, and it is showing to be true this year again that the infected horses were at major events and the virus was transmitted either by horse-to-horse contact, contact from contaminated clothes, buckets, feed, rakes, panels, air---or really just about anything that could touch or have anything to do with a horse.
Make no mistake about it, these losses are significant and are impacting not only the animals owners, but the industry and horse events as well. The Colorado State Veterinarian's office is recommending that equine event organizers and horse owners themselves, "exercise extreme caution" in planning or even attending these "circuit" type events.
Some organizers and those that travel to these events are not happy to hear these words. But some good bio-security measures could help these people and these organizers go a long way in the preventing the spread of these new and highly contagious diseases. Some events are just saying, "Let the participant come at their own risk".
Those of us in the horse industry are used to letting our horses touch noses at events, as a way to socialize them or maybe it just happens as we greet an old friend or as we wait for our turn in the competition. We walk our horses into stalls that were just vacated by another horse. All very potentially dangerous situations for our animals who depend upon us to protect them.
**But we need to think differently about how we handle ourselves and our animals**.
Here are a couple of ideas:

1. Keep your horse up-to-date in their vaccinations. If you haven't vaccinated for Encephalitis, Eastern & Western Influenza, Rhino, and Tetanus---do it now!
2. Realize that even the best vaccination program is not a replacement for a nutritious/sound feeding program and keeping your horse in absolutely the best condition possible. Good quality, grain (if you choose), vitamins & minerals and water are required.
3. Prevention has always been worth 10 times the cure. Don't think that your veterinarian can pull off a miracle because you neglected these basics.
4. Keep to yourself. Don't lend out tack, equipment or any kind. During these times of highly contagious viruses and diseases, consider stalling away from the group. Stay back in line. (This teaches your horse patience !!) Disinfect your area before entering and after leaving.
5. Consider staying at home and practicing there, building or repairing fence, learn a new skill--- until the "cycle is broken" for

three weeks--that's June 7th. Is one event, a buckle, a saddle --- worth the life of your horse?

**What's happening with the Pork industry?**

The Porcine Epidemic Diarrhea virus was first detected in the US a year ago, May 17, 2013. This virus has nearly a 100% mortality rate in unweaned pigs. Pork industry officials have had a hard time even finding where it started and how it is spreading in the U.S.

The virus is a fecal to mouth contamination, which means that when pigs ingest feces that are contaminated and they themselves pick up the virus. This virus can be spread pig-to-pig, by clothing, feed, trucks, boots (especially) and even through shavings (fomites), straw and other bedding materials. We know where a pigs nose and mouth are---on the ground!

Pigs experience lethargy, fever, then start vomiting or diarrhea; in most cases. Growers have seen some sows have immunity and have been able to pass it on to their young, while other sows (who also appear to have immunity), cannot pass on that immunity to their piglets. The industry is finding that the very young are the most susceptible to this virus, hence the reason for high mortality in the suckling piglets. A pig who is exposed will show the clinical signs of the virus in 12-24 hours, according the National Pork Board, but can still infect others for up to 4 weeks. This is the "shedding" stage. Increased bio-security and having a "clean line of separation" between the outside world and your facility has been found be effective. This means that vehicles, trailers, people, animals (especially dogs- since they often travel with us everywhere) can carry the virus from one farm to another or from one pig to another.

The National Pork Producers recommend the following:

1. Contact your veterinarian and enhance biosecurity procedures on your property.

2. Vehicles, trailers, especially commercial haulers should be clean, disinfected and dried.

3. A selection of disinfectants have shown to help "inactivate" PED, such as formalin, sodium carbonate, lipid solvents, and strong iodophors in phosphoric acid.

4. Replacement breeding stock should originate from a negative herd.

The Colorado State Veterinarian's office suggests the following:

* Implement a "terminal show" policy for all county fairs.

* Discontinue swine breeding shows or conduct proper cleaning and disinfecting before and after events.

* Discontinue co-mingling of swine for weigh-in or tag-in events and don't unload pigs and allow producers to tag pigs with appropriate biosecurity measures in place.

* If jackpot or swine exhibitions are allowed at your county fairgrounds prior to the county fair, implement a strict cleaning a disinfecting protocol at the end of each event.

* Update the health requirements in your county fair premium book.

* Reinforce biosecurity principles to your 4H and FFA members and demonstrate this disease prevention at your county fairs.

* Ramp up biosecurity for your fairs and shows to promote animal health and prevent the spread of disease.

For more information on PED, contact: www.pork.org, or the Colorado State Veterinarian's office at: www.colorado.gov/ag. Your local CSU Extension office may be able to help you as well.

Be safe, be proactive and be informed--its your choice.

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General Public, Individual: 25 cents/word
General Public, Business/Show: 30 cents/ word

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Half Page Ad: $80.00
Full Page Ad: $100.00

**Email Sharon Bokan for more details**
**sbokan@bouldercounty.org**