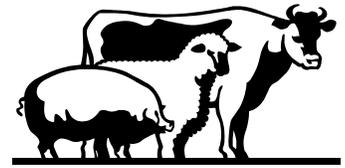




LIVESTOCK LINES



Stanislaus & San Joaquin Counties

March 2009 ♦ Volume 15 No. 1

DID YOU KNOW...

Medusahead (Mh) has been quietly taking over our rangelands for over 50 years. When you start to realize how much you are losing by not controlling Mh, different control options start to look more appealing.

Read more about this on page 4.

by Theresa Becchetti

Livestock and Natural Resources Farm Advisor

PREPARE FOR A BAD FLY SEASON IN 2009 CURRENT METHODS FOR FLY CONTROL IN BEEF CATTLE

The third year of drought means summer may arrive sooner and fly season may be longer and more severe than usual. Cattle pests, such as flies, cost cattlemen by increasing treatment costs, lost production, irritation to the cattle, and because of the diseases they can transmit. Fly infestations cost the U.S. cattle industries more than \$1.6 billion yearly. Horn flies alone cost cattle producers \$876 million a year. Horn flies are very stressful to cattle because they take 24 to 38 blood meals per day—per fly! California cattlemen report that face flies are the worst pests, followed by horn flies.

Face flies, in addition to producing eye irritation due to their feeding behavior, serve as mechanical carriers of the causative agent of Pinkeye in cattle (infectious bovine keratoconjunctivitis [IBK] caused by the bacterium Moraxella bovis). Pinkeye consistently ranks as one of the top five most costly diseases in California beef cattle. Feeding by horn flies, stable flies, horse flies, and other bloodsucking flies mechanically transmits several disease organisms as well as causing irritation and decreased weight gains.

Both face flies and horn flies develop resistance to insecticides over time. For maximum prevention, it is advisable to switch the class of drug you use each year or two. If you used an organophosphate ear tag last year, use a pyrethroid ear tag this year. Additionally, if you plan to use a pyrethroid ear tag this year, use an organophosphate spray this year. Alternating the classes of drugs in this manner will increase the success of your preventive program. It is also recommended that application of ear tags be delayed until the fly population is relatively high so that the possibility of the flies developing resistance this year is lowered. Sprays, back rubbers, face rubbers, and dust bags can be helpful in reducing the fly populations early in the season, before ear tag application. Then, as the fly populations increase, apply the fresh ear tags to achieve maximum benefit. Always follow the manufacturer's label directions for ear tag application. If they call for two ear tags--use two ear tags! If you need ear tags to prevent Pinkeye in the calves--use the tags in the calves. In the fall always remove the ear tags. If the ear tags are left in the cattle the flies that over winter—particularly the face flies—will develop resistance to the drug you used and it will no longer be as effective.

To simplify information, trade names of products have been used. No endorsement of named products is intended, nor is criticism implied of similar products

Prepare for a Bad Fly Season in 2009: Current Methods for Fly Control in Beef Cattle Pg. 1-2
Important Details to Remember for Fly Control Use..... Pg. 2
Selected California Registered Pesticides for Beef Cattle: 2009.....Pg. 2-3
Ecological and Economical Impacts of Management Options for Medusahead Control Pg 4-5
Niche Meat Marketing Conference.....Pg. 6-7

Face flies and horn flies lay their eggs in cow manure and the larvae can **only** develop in cow manure. Therefore, some of the compounds that are fed or given orally that kill the larvae in the manure pat can be very effective. One example of this is the insect growth regulator methoprene. This compound is an insect growth regulator (IGR), which is safe, and resistance does not develop to this product. It can be used in “feed through” products, where the drug passes through into the manure unchanged and kills the fly larvae in the manure. Other insecticide products are available that can kill the fly larvae when used as a “feed through”, such as Rabon®. Rabon® is an organophosphate and resistance can develop to this compound. Some of the ear tags now contain a compound that increases the effectiveness of the insecticide. One of these compounds is piperonyl butoxide (PBO) and it increases the activity of the primary insecticide in the ear tag.

Some of the products available last year are no longer on the market in California. One of the newer products is a pour-on and spray from Elanco called Elector. This is a new class of insecticides called the spinosads. These products appear to be very safe and effective. Currently they market a pour-on and a spray product; however, they do not have any ear tags approved at the present time. There is a relatively new ear tag called Avenger produced by KMG Animal Health. This tag contains endosulfan, an organochlorine compound that may help with resistance problems.

IMPORTANT DETAILS TO REMEMBER FOR FLY CONTROL & PESTICIDE USE ARE:

1. Plan ahead for insecticide and ear tag purchases; fly season will arrive—probably sooner this year.
2. Consult with your veterinarian regarding active ingredient(s) in these products and their record of effectiveness in your area.
3. Always follow instructions, warnings, and precautions: these products can be toxic to you, your children, pets, and others working with them around the chute. Use disposable latex gloves when handling the ear tags. Keep the donuts and coffee away from the tags!
4. Follow label withdrawal times and keep records of treatment dates, products and lot numbers.

SELECTED CALIFORNIA REGISTERED PESTICIDES FOR BEEF CATTLE: 2009

EAR TAGS

<u>Product Name</u>	<u>Active Ingredient</u>	<u>Chemical Class</u>	<u>Manufacturer</u>
Avenger	Endosulfan	Organochlorine	KMG
Co-Ral Plus	Diazinon + Coumaphos	Organophosphate	Bayer
Cylence Ultra	beta-Cyfluthrin	Pyrethroid+PBO	Bayer
Double Barrel VP	Cyhalothrin + Pirimiphos	Organophosphate	Schering-Plough
Dominator	Pirimiphos	Organophosphate	Schering-Plough
GardStar Plus	Permethrin	Pyrethroid	Y-TEX
OPTimizer	Diazinon	Organophosphate	Y-TEX
Patriot	Diazinon	Organophosphate	KMG
Python & Python Magnum	Zeta-cypermethrin	Pyrethroid	Y-TEX
Saber Extra	Cyhalothrin	Organophosphate	Schering-Plough
Super Deckem	Permethrin	Pyrethroid	Destron-Fearing
Terminator II	Diazinon	Organophosphate	KMG
Warrior	Diazinon + Chlorpyrifos	Organophosphate	Y-TEX
X-Terminator	Diazinon	Organophosphate	Destron-Fearing

SPRAYS

Active Ingredient

Example Brand Names

Coumaphos	Co-Ral
Dichlorvos	Vapona
Permethrin	Ectiban, Permethrin, Atroban, Permethrin, Insectrin
Tetrachlorvinphos	Rabon
Tetrachlorvinphos-Dichlorvos	Ravap
Spinosad	Elector
Cyhalothrin	Standguard

POUR-ON APPLICATIONS

Active Ingredient

Example Brand Names

Cyfluthrin	Cylence
Fenthion	Lysoff
Permethrin	DeLice, Expar, Hard Hitter, Ectiban, Atroban, Ultraboss,
Cyhalothrin	Saber
Spinosad	Elector
Cyhalothrin	Standguard

BACK RUBBERS AND FACE RUBBERS

Active Ingredient

Example Brand Names

Permethrin	Ectiban, Insectrin
Tetrachlorvinphos-Dichlorvos	Ravap

DUST BAGS

Active Ingredient

Example Brand Names

Permethrin	Permethrin, Ectiban
Tetrachlorvinphos	Rabon dust
Zeta-cypermethrin	Python

FEED-THROUGH INSECTICIDES

Active Ingredient

Example Brand Names

Tetrachlorvinphos	Rabon oral larvicide
Methoprene	IGR Mineral, Starbar

Please Note: the active ingredients are available under a number of brand names and those listed are examples only and not specific endorsements or recommendations.

ALWAYS READ AND FOLLOW LABEL INSTRUCTIONS CAREFULLY.

John Maas, D.V.M., M.S.
Diplomate, ACVN & ACVIM
Extension Veterinarian
School of Veterinary Medicine
University of California, Davis

Ecological & Economical Impacts of Management Options for Medusahead Control

Medusahead (Mh) has been quietly taking over our rangelands for over 50 years. It has slowly replaced our desirable forages with a monoculture that is not palatable to livestock, increases fire risk, and changes habitat for a variety of species. Fire has traditionally been the best tool to fight it, but burn permits are not easy to obtain. UCCE has been working on many different strategies that are available to ranchers that we will briefly discuss here.

First we need to cover some basics. There is a two week window of opportunity in our area which occurs roughly in early to mid April, depending on weather conditions. For comparison, on the coast development is delayed and the same susceptible period does not occur until early to mid May. The nutritional content of Mh is another factor. As the grass leaves the vegetative state and enters into the reproductive state (roughly when we want to target it), the crude protein content dramatically drops and continues to drop as it matures. Mh also has a high silicon content regardless of the growing state. We also know from our observations that as Mh cover increases, there is a decrease in grazing ability. As Mh increases from 5 to 40%, we have seen a reduction in grazing of 50%, and as Mh cover increases over 40%, there is a 100% reduction in grazing (Picture 1, pg. 5). This means that either you have to provide supplemental feed, reduce the number of livestock, or find more land to graze.

High intensity grazing. We stocked Mh infested areas with sheep to achieve utilization levels of 50, 60, 70, and 80% at short and long time periods (7 and 14 days). We had a high density of sheep in the areas, ranging from 1 to 28 sheep per acre (equivalent to 0.2 to 5.6 cows per acre). We had no differences per treatment, but did have great results for treatments compared to controls. High intensity grazing dramatically reduced seed production to 187 seeds per foot squared (ft²) compared to the area not grazed producing 748 seeds per ft². We also compared our high intensity grazing to continuous grazing, which produced roughly 654 seeds per ft². Mh thatch decreased from 40% to 8% and other grasses and forbs increased from 18% to 50% in the treated areas, providing more desirable forages. Bare ground also increased in the treated areas (Graph 1, pg. 5).

Supplementation. Low moisture supplement tubs were strategically placed in areas of high Mh cover during our window of opportunity. We placed five tubs radiating out from a center point in 2007,

and added four more tubs in 2008. We also had transects and exclosures where we could compare areas open to grazing at different distances from the tubs, and non grazed areas. The supplement tubs did attract livestock, and we did see a reduction in Mh cover, however as you moved further away from the tubs, there was less impact. Tub appear to be effective for a distance of about 40 yards (Picture 2, pg. 5).

Mowing. We mowed areas of high Mh cover in 2007. Mowing lengthens the window of opportunity by another week. Mh cover was reduced from 50% to 5%. Seed production also dramatically reduced from over 280 seeds per ft² to 13 seeds per ft². Desirable species also increased the following year with an increase in soft chess, rose clover, and filaree.

Herbicide. 3% active ingredient glyphosate was applied at 16 and 32 oz. per acre early, mid, and late season. We did not see any difference between the rates. As expected, the early and mid applications did kill everything. Our late application may have been a little too late to be effective. From our preliminary results, it looks like a mid season spray will allow for a longer grazing period and kill Mh. This spring we will be completing data collection and will have more information on this treatment option.

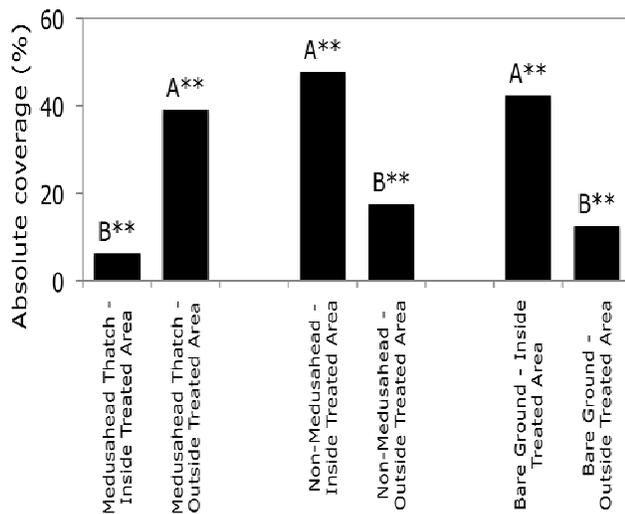
Costs. We have found methods that work, however, each method may not work for each ranch. Mowing may not be practical in rocky areas. High intensity grazing may not work if you are not able to duplicate our stock density. Each person will need to examine their own constraints and determine what works best for their situation. To help with this, UC Cost Studies were utilized to calculate costs per acre (Graph 2, pg. 5). Supplement is the cheapest option available, roughly \$10 per acre. This is for the extra time you will be spending looking for Mh patches, and moving the supplement to that area, which you can expect to do weekly. While this is the cheapest option, it also does not provide as much control. Impact is within a small sphere, which is why moving weekly is key. It is important to note that doing nothing has a cost to it that you may not be realizing. At a typical 30% cover of Mh, there is a grazing reduction of 50%. To calculate a cost we put this on an average production of 1000 lbs of available forage per acre, and a reduction of 50% would mean 500 lbs. per acre would need to be replaced. We replaced our lost forage with grass hay at a cost of \$22.50 per acre. When you start to

realize how much you are losing by not controlling Mh, different control options start to look more appealing and actually can pencil out. It is important to keep in mind that hitting Mh when it hurts the most is important for control, as well as long range planning. It may take more than one year depending on the control option you choose, and persistence will be needed to keep Mh off your ranch.

Many Livestock Advisors have worked on this project from Mendocino County south to San Luis Obispo County on the coast and Shasta County south to Stanislaus County in the valley as well as support from scientists and Specialists on the Davis Campus.



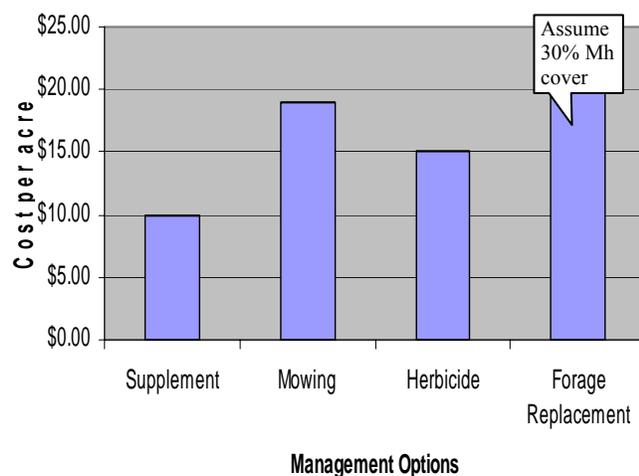
Picture 1. Mh thatch. This level of thatch prevents desirable species, reducing grazing ability.



Graph 1. Cover of Mh, other species, and bare ground after high intensity grazing.



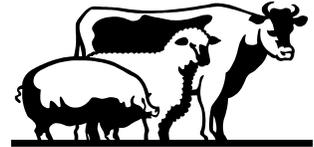
Picture 2. Picture of supplement tub and exclosures. Impact decreased as you move further away from tubs.



Graph 2. Cost per acre of different management options, and the cost of no management (forage replacement).



LIVESTOCK LINES



Stanislaus & San Joaquin Counties

March 2009 ♦ Volume 15 No. 1

UPCOMING EVENTS:

★ **Niche Meat Marketing Conference**

Stanislaus County Ag Center, March 26-27, 2009

★ **Westside Ranchers Meeting**

Frank Raines Park, Del Puerto Canyon April 21, 2009

★ **Beef Improvement Federation,**

Sacramento, CA April 30-May 3, 2009

Current Resident or:

NONPROFIT ORG.
U. S. POSTAGE PAID
MODESTO, CA
PERMIT NO. 400

COOPERATIVE EXTENSION
UNIVERSITY OF CALIFORNIA
3800 CORNUCOPIA WAY, SUITE A
MODESTO, CA 95358