

University of California Cooperative Extension

Livestock, Range & Watershed

Division of Agriculture & Natural Resources



Counties of San Luis Obispo and Monterey

<http://cesanluisobispo.ucdavis.edu>
<http://californiarangeland.ucdavis.edu>

350 N. Main Street
Templeton, CA 93465
(805) 434-4106 PHONE
(805) 434-4881 FAX

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Inside this issue:

- **Announcements**
- **The BEHAVE program at USU**
- **Prepare for Bad Fly Season in 2009**
- **Farm Water Quality Program Update**

Announcements

Ranching and Sustainability Workshop:

The continuation of the 2009 University of California Cooperative Extension "Working Among the Oaks" Workshop Series will continue with the Ranching Sustainability Self-Assessment Project on Wednesday, May 27th. Please see the enclosed flyer for time, place, and registration information.

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The BEHAVE Program At USU

Royce Larsen

Last year I was at Utah State University working on the BEHAVE (Behavioral Education for Humans, Animals, Vegetation, and Ecosystems) program. This was a great opportunity to learn more about animal behavior and most importantly, how we can alter their behavior.

As written in their website: "The mission of the BEHAVE program is to inspire people to master and apply behavioral principals in managing ecosystems. BEHAVE is a research and outreach program aimed at understanding the principles that govern diet and habitat selection. The program is dedicated to inspiring and enabling people to understand and use knowledge of behavior, ours and other creatures, to discover sound ecological, economic, and social solutions to land management issues, and to work with others to reconcile differences of opinion about how to manage landscapes. This program is headquartered at Utah State University and has collaborators from across the U.S. and around the world" (www.BEHAVE.net).

This program makes important information available to researchers and producers to help succeed in a time of change. As this program points out, the only constant is change. We are currently facing many hard decisions with the drought, increased regulatory pressures on water quality and food safety issues.

I look forward to sharing information about the BEHAVE program in future workshops and newsletters. Many of the principles taught by the BEHAVE program offer insights to help with tough management decisions. Take a look at some of the highlights on their website.

PREPARE FOR A BAD FLY SEASON IN 2009

John Maas, D.V.M., M.S. UC Davis

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.

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 AND 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

Eartags:

PRODUCT NAME	ACTIVE INGREDIENT	CHEMICAL CLASS	MANUFACTURER
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:

<u>Active Ingredient</u>	<u>Example Brand Names</u>
Coumaphos	Co-Ral
Dichlorvos	Vapona
Permethrin	Ectiban, Permethrin, Atroban, Permethrin, Insectrin
Tetrachlorvinphos	Rabon
Tetrachlorvinphos-Dichlorvos	Ravap
Spinosad	Elector
Cyhalothrin	Standguard

Pour-on Applications:

<u>Active Ingredient</u>	<u>Example Brand Names</u>
Cyfluthrin	Cylence
Fenthion	Lysoff
Permethrin	DeLice, Expar, Hard Hitter, Ectiban, Atroban, Ultraboss,
Cyhalothrin	Saber
Spinosad	Elector
Cyhalothrin	Standguard

Back Rubbers and Face Rubbers:

<u>Active Ingredient</u>	<u>Example Brand Names</u>
Permethrin	Ectiban, Insectrin
Tetrachlorvinphos-Dichlorvos	Ravap

Dust bags:

<u>Active Ingredient</u>	<u>Example Brand Names</u>
Permethrin	Permethrin, Ectiban
Tetrachlorvinphos	Rabon dust
Zeta-cypermethrin	Python

Feed-Through Insecticides:

<u>Active Ingredient</u>	<u>Example Brand Names</u>
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.

Note: Trade names may be used to simplify the information presented. No endorsement is intended nor is criticism implied of similar products not mentioned.

FARM WATER QUALITY PROGRAM UPDATE:

Beyond the short course

The overall project objective for the University of California's Farm Water Quality Planning Project is to improve or protect water quality (WQ) through the development of individual farm water quality management plans and the promotion of water quality management practices.

Project Accomplishments

From Jan 2001—Sep 2007

- 33 UC Advisors and Specialists on Team
- 62 Farm Water Quality Short Courses have occurred
- 2,029 Irrigated ag producers have attended, representing 375,000 acres
- 81 Government and industry collaborators
- 930 hours of field and classroom education
- 6 Spanish Courses
- 1 Chinese Course

Cost Studies

Conservation cost studies are available on the internet. They provide a partial table estimating costs and potential benefits for installation, maintenance, and costs of specific practices. 24,354 copies of planting annual cover crop were downloaded from our site in 2007-2008. Other conservation cost studies available are: underground outlets, filter strips, hedgerow, grass waterways and sediment basins. A total of 222,329 cost studies were downloaded in 2007-2008.

Farm Advisors are working on research-based management practices to help growers implement their Farm Plans, like the use of polyacrylamide to reduce sediments in irrigation ditches.



Project Partnerships:

USDA-Natural Resources Conservation Service, NOAA Monterey Bay National Marine Sanctuary, US Fish and Wildlife Service, California Department of Fish and Game, Central Coast Regional Water Quality Control Board, six local Resource Conservation Districts, County Water Agencies, local Agricultural Commissioners, and regional and local agricultural industry groups.

For more information about the Farm Water Quality Education Program, please follow this link: <http://waterquality.ucanr.org/>



**WORKSHOP:
Follow-up of the
Sustainability self-
assessment, BEHAVE
Program and History of
Annual Grasslands
May 27, 2009
Paso Robles
Culinary Arts Academy
(see flyer inside)**

Inside this issue:

- The BEHAVE program at USU
- Prepare for Fly Season in 2009
- Farm Water Quality Update

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mailing list, please register on our website:
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A handwritten signature in cursive that reads "Royce Larsen".

Royce Larsen

Watershed/Natural Resource Advisor
San Luis Obispo and Monterey Counties

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