

**UCD VET VIEWS  
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***FLY CONTROL FOR BEEF CATTLE—2007***

As I write this column in early April it is easy to imagine that spring might arrive early and that the summer might hot, dry, and long. Also, the fly season may be upon us soon. 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.

You may notice that a few of the products available last year are no longer on the market in California and there are a couple of new products. One of the new products is a pour-on and spray from Elanco. 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 new ear tag called Avenger produced by KMG Animal Health. This tag contains endosulfan, a carbamate (similar to the organophosphate compounds), that may help with resistance problems. This product (Avenger) is not currently approved for use in California; but, may be approved this year.

#### IMPORTANT DETAILS TO REMEMBER FOR FLY CONTROL AND PESTICIDE USE ARE:

1. Plan ahead for insecticide and ear tag purchases; fly season will arrive.
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.

#### CALIFORNIA REGISTERED PESTICIDES FOR BEEF CATTLE: 2007

##### EAR TAGS

<u>PRODUCT NAME</u>	<u>ACTIVE INGREDIENT</u>	<u>CHEMICAL CLASS</u>	<u>MANUFACTURER</u>
Co-Ral Plus	Diazinon + Coumaphos	Organophosphate	Bayer
Cylence Ultra	beta-Cyfluthrin	Pyrethroid+PBO	Bayer
<b>Diaphos R<sub>x</sub> *</b>	Diazinon + Chlorpyrifos	Organophosphate	Y-TEX
Double Barrel	Cyhalothrin + Pirimiphos	Organophosphate	Schering-Plough
Dominator	Pirimiphos	Organophosphate	Schering-Plough

GardStar Plus	Permethrin	Pyrethroid	Y-Text
Max-Con	Cypermethrin + Chlorpyrifos	Pyrethroid + Organophosphate	Y-Text
New Z Diazinon	Diazinon	Organophosphate +PBO	Farnam
New Z Permethrin	Permethrin	Pyrethroid	Farnam
Patriot	Diazinon	Organophosphate	Boehringer-Ingelheim
OPTimizer	Diazinon	Organophosphate	Y-Text
Python & Python Magnum	Zeta-cypermethrin	Pyrethroid	Y-Text
Saber Extra	Cyhalothrin	Organophosphate	Schering-Plough
Super Deckem II	Permethrin	Pyrethroid	Destron-Fearing
Warrior	Diazinon + Chlorpyrifos	Organophosphate	Y-Text
X-Terminator	Diazinon	Organophosphate	Destron-Fearing
<b>Zeta Gard*</b>	Zeta-cypermethrin	Pyrethroid	Y-Text

**\*Available only through a licensed veterinarian.**

### **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

### **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  
Spinosad

Saber  
Elector

### **BACK RUBBERS AND FACE RUBBERS**

Active Ingredient

Example Brand Names

Permethrin  
Tetrachlorvinphos-Dichlorvos

Ectiban, Insectrin  
Ravap

### **DUST BAGS**

Active Ingredient

Example Brand Names

Permethrin  
Tetrachlorvinphos  
Zeta-cypermethrin

Permethrin, Ectiban  
Rabon dust  
Python

### **FEED-THROUGH INSECTICIDES**

Active Ingredient

Example Brand Names

Tetrachlorvinphos  
Methoprene

Rabon oral larvicide  
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.***

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