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Animal Health

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Treating for Internal Parasites of Cattle

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Although specific estimates are not available, economic losses from worm parasite infections of cattle can be significant. But the extent of internal parasite problems is usually related to management practices that increase exposure, whereas ongoing preventive management practices will minimize losses caused by parasite infections.

This publication recommends times to worm, types of wormers commonly used, withdrawal time before slaughter, and methods of administration to various classes of cattle.

When to Worm Young Cattle

Calves under one year of age are more susceptible than older cattle. Older cattle frequently have been exposed to the parasites and developed a degree of immunity.

Adult worms in the gut of cattle produce eggs that are passed in the feces. The eggs hatch, producing immature larvae that develop and move up onto the pasture grasses. Infective larval forms of the worms may be present in large numbers on the growing forage. Some of the eggs can survive the winter and hatch out with warm weather. Temperatures between 60° and 80°F. and at least 2 inches of rainfall per month provide excellent propagation conditions. Feed bunks or waterers contaminated with feces can be a source of exposure to the larvae.

The need to worm calves during the summer depends strictly on the degree of contamination of pastures or lots. Use of the same pastures year after year or high densities of grazing cattle can result in heavily contaminated forage. The number of times

calves should be wormed during the spring and summer depends on the level of exposure and reinfection. Dairy calves confined to small lots around the farmstead may need to be wormed several times during the summer.

Feeder Cattle

Worming of cattle at the time they enter the feedlot is cost-effective only if the load of parasites they are carrying is great enough to reduce the rate of gain. The decision to worm cattle can be based on finding large numbers of worm eggs by microscopic examination of feces. Alternatively, cattle from the southeastern United States can generally be expected to have a heavier load of parasites than western cattle. The parasite load of cattle from the Midwest will be variable.

Internal parasites have the greatest impact on rate of gain when cattle are on low energy levels which are typical of receiving or backgrounding rations. Therefore, worming feedlot cattle when they are processed into the feedlot will give the best returns.

Beef Cows

The cow herd is the major source of initial exposure of the calves. One of the most important worms in cattle lives in the abomasum, the true stomach. The stomach worms are active during the grazing season busily laying eggs. At the end of the grazing season they bury themselves in the stomach wall and are dormant until spring when they emerge and start egg laying. Timely deworming prior to the grazing season will greatly reduce the subsequent contamination of pastures during the grazing season.

The pregnant cows can be dewormed in the fall. The cows can be expected to winter better, have a higher conception rate the next breeding season, and wean heavier calves.

Dairy Cows

Dairy cows kept in drylots or semi-confinement have access to fecal contaminated feed or water; this practice results in a detrimental load of internal parasites. Mature cows should be wormed at the end of lactation to avoid discarding milk, or wormed at any time with Morantel tartrate, because this product does not require discarding of milk. Replacement heifers should be wormed as yearlings and again prior to entering the milking herd.

Dairy Calves

Dairy calves confined to small lots frequently carry heavy loads of worm parasites. It may be necessary to worm them twice or more during warm weather to maintain desired growth rates.

General Use Dewormers

Deworming with one of several anthelmintics (wormers) approved for use in cattle is an effective preventive practice. Consult your veterinarian concerning strategic worming; timing the deworming to be the most cost effective.

Fenbendazole (Panacur) is available as a stable suspension or granules. It is effective against roundworms in the gut, larval forms in the tissues, and lungworms. Withdrawal time to slaughter is 8 days.

Ivermectin (Ivomec) for cattle is an effective medication against the internal worm parasites including lungworms as well as cattle grubs and sucking lice. It is available in injectable or pour-on formulations. Withdrawal time to slaughter is 35 days.

Levamisole (Levisol, Tramisol) is available in boluses, a paste for oral administration, as a pour-on or an injectable form. Levamisole is effective against roundworms and lungworms. Withdrawal time is (orally) 2 days and (injected) 7 days.

Morantel tartrate (Rumatel) comes in boluses or crumbles for oral use. It is effective against roundworms, and has a 14-day withdrawal time to slaughter.

Thiabendazole (Omnizole, TBZ) for oral administration is available in paste, boluses, suspension, or crumbles. It is effective against roundworms. Thiabendazole is approved for use in lactating cows and has a 96-hour milk discard time. Withdrawal time to slaughter is 3 days.

Albendazole (Valbazen) is available in paste or suspension. It is effective against all intestinal worms including tapeworms, and lungworms as well as liver flukes. It has a 27-day withdrawal for slaughter. It should not be used in animals during the first 45 days of pregnancy.

Oxfendazole (Synanthic) is a new wormer that is effective against intestinal parasites including tapeworms. This wormer has a unique delivery system in that the wormer is injected directly into the rumen. Oxfendazole is also available in the drench form.

Fenbendazole, Ivermectin, Levamisole, Albendazole and Oxfendazole are not approved for use in dairy cattle or dairy heifers of breeding age.

Methods of Administration

Administering a wormer to individual animals is the only way to be sure that each one is getting the required amount of active material relative to its body weight. This section describes the various methods of administration, their advantages, the drawbacks, and suggestions to ensure "success."

Orally

Wormers in liquid form, or suspension can be administered by drenching, with a dose syringe or with multiple dose equipment with a backpack reservoir. Avoid getting any of the wormer into the lungs where it could initiate pneumonia. Pour-on formulations are absorbed following direct application to the skin.

Boluses should be given with a balling gun to get them past the base of the tongue. It is not uncommon for cattle to hold a bolus in the mouth for some time and then spit it out. Always observe an animal to be sure it has swallowed the boluses before releasing it.

The paste formulations of wormers are given with special guns, comparable to a caulking gun, designed for each individual product. The tip of the tube is placed in the corner of the mouth, and the paste deposited on the back of the tongue. Do not force the gun deep into the mouth as the paste can cause difficult breathing or the gun can cause injury to soft tissues of the mouth. Good restraint, preferably a squeeze chute, is essential to successful oral administration of wormers. Most cattle are head shy and will resist the operator's attempt to treat them orally.

Injections

Injections should be made with clean equipment and sharp needles. Withdraw the wormer through the rubber diaphragm stopper. Never open the bottle to fill the syringe; this increases the chances for contamination and post injection abscesses. The injections should be under the skin of the neck, not into the muscle. Never inject in the rear quarters. Do not inject more than 10 ml of drug in a single site.

Feed-Incorporated Materials

Crumbles or granules that can be incorporated into the feed are attractive to many producers, because the need to catch and restrain each animal is eliminated. However, it is still necessary to assure that each animal gets the appropriate deworming dose of medication. It is recommended that feed incorporated wormers be used only when (1) cattle are on full-feed, (2) feed is in front of them 24 hours a day, and (3) the wormer can be thoroughly incorporated into a complete mixed ration. All of these criteria must be met to ensure complete worming of the entire group of cattle.

Fenbendazole is also available in a "lick-block" form that can be used with pastured cattle.

A well-planned parasite control program strategically timed to minimize contamination of lots and pastures with parasite larvae can be very cost effective.

Reference to products in this publication is not intended to be an endorsement to the exclusion of others which may be similar. Persons using such products assume responsibility for their use in accordance with current label directions of the manufacturer.

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