DID YOU KNOW?

Drug residues from oxytetracycline use are more likely to occur when producers:

- Exceed the highest recommended dose of drug per pound of bodyweight per day;
- Use the drug at a higher frequency or longer duration than is listed on the label; and/or
- Inject more than 10 mL per IM or SC injection site limit.

DEPARTMENT OF AGRICULTURE

Avoiding Residues from Tetracycline Drugs

Tetracycline drugs account for nearly two thirds of all antibiotics sold for use in livestock. Tetracycline drugs are available in many different forms (chlortetracycline, oxytetracycline, tetracycline) and preparations (injectable, tablet, water-soluble powder, medicated feed). Oxytetracycline, one of the most used forms, is available for use in food producing animals in a variety of injectable formulations. Although most formulations of injectable oxytetracycline require a veterinary prescription for purchase, some oxytetracyclines are available over-the-counter (OTC). Prescription and OTC oxytetracycline may vary in concentration and directions for use. Because of these differences, it is important to read and follow FDA labels carefully to avoid a drug residue.

What are the Disease Indications for Injectable Oxytetracycline Use?

Injectable oxytetracycline is approved by the FDA to treat respiratory disease, foot rot, pink eye, diphtheria, E. coli scours, wooden tongue, leptospirosis, wound infections, and acute metritis. Additional disease approvals for anthrax and anaplasmosis in beef cattle and non-lactating dairy cattle are available with a prescription and veterinary guidance.

What Strengths of Injectable Oxytetracyclines are Available?

Injectable oxytetracycline is available in 100 mg/ml, 200 mg/ml, and 300 mg/ml concentrations. The 100 mg/ml and 300 mg/ml preparations have approvals for non-lactating dairy cattle and beef cattle. The 200 mg/ml forms include lactating dairy cattle in their animal class approvals. There are no FDA approvals for use of injectable oxytetracycline in sheep or goats, so any use of this drug in these species is considered extra-label drug use.

What are the Limitations of Injectable Oxytetracycline Use?

Other routes of administration of injectable oxytetracycline have been used throughout the years, including the infusion of injectable oxytetracycline into the uterus to treat metritis. This extra-label use of injectable oxytetracycline is discouraged. Withdrawal times are unpredictable and can vary greatly depending upon the severity of the animal's case of metritis. More severe cases of metritis result in a higher state of inflammation which may lead to a higher rate and extent of absorption of the oxytetracycline.

What about Tetracycline Drugs Applied to the Foot?

Powder form tetracycline drugs are often used topically to treat foot diseases. Great care should be taken when using a topical application of a tetracycline solution in a foot bath or spray to avoid inadvertent introduction to the teat canal. New studies have shown tetracycline was present on the teat skin, in the milk and serum after topical application in the form of a paste or powder applied in a single dose with or without a bandage. Use a low dose and test milk with the Charm ROSA TET test post treatment to provide further protection from a residue.

Can Milk be Tested for Tetracylcine Residues?

While testing of tankers for tetracyclines is not a required part of routine testing protocols, testing is conducted intermittently and for specific markets. Some milk processing plants may also be testing for tetracycline-class drugs at much lower levels than the U.S. tolerance level to meet regulatory requirements for export. Producers should consult with their veterinarian about milk and meat withdrawal times for oxytetracycline drugs, and especially when using oxytetracycline in an extra-label manner. Milk from treated animals should be tested to ensure the oxytetracycline is at or below the U.S. tolerance of 300 ppb.

For additional information visit **www.mda.state.mn.us/residue-prevention**