



## DID YOU KNOW?

- Cephalosporin drugs are critical for treatment of many human diseases.
- Overuse of cephalosporin drugs in livestock may lead to antibiotic resistance and decreased effectiveness in humans.
- FDA limits the use of cephalosporin drugs in livestock to treatment of disease only as the label states to ensure these drugs remain effective in both humans and livestock.



DEPARTMENT OF  
AGRICULTURE

## CEPHALOSPORIN USE IN CATTLE

Cephalosporin drugs are effective treatments for many common cattle diseases. These valuable medications are effective, readily available, cost-effective, and have short milk and meat withholding times.

### What preparations of cephalosporins are available for use?

Ceftiofur and cephalixin are the only cephalosporins approved for use in cattle in the United States. Trade names of ceftiofur drugs include Cefenil, Ceftiflex, Excede, Excenel, Naxcel, and Spectramast; trade names of cephalixin are ToDAY and ToMORROW.

### How can these drugs be used to treat disease in cattle?

To ensure that these drugs remain effective, the FDA limits the use of these drugs in livestock to the labeled uses and to **treatment** of disease, rather than prevention. Livestock producers and veterinarians must be aware of these restrictions as they make treatment decisions.

Extra-label drug use (ELDU) of all cephalosporin drugs except cephalixin is restricted in cattle. Use of injectable ceftiofur (Cefenil, Ceftiflex, Excede, Excenel, Naxcel) and intramammary ceftiofur (Spectramast) **MUST** follow

the FDA-approved label directions for dose, treatment duration, frequency, and route of administration. Ceftiofur drugs may **ONLY** be approved by your veterinarian for ELDU for **therapeutic/disease indications** not listed on the label. Using these drugs at higher doses than indicated, exceeding the injection site limitation, or using an unapproved route of administration, such as intramammary, may result in illegal residues in edible tissues and/or in milk.

### Can cephalosporins be used in lactating dairy cattle?

These drugs can be used in lactating dairy cattle only when they are labeled for use in lactating dairy cattle. Consult with your veterinarian for more information on appropriate uses of these drugs on your operation.

The following tables provide a list of cephalosporin drugs that are labeled for use in cattle. This is a guidance document that is updated annually. **ALWAYS** refer to the drug label or ask your veterinarian for the most current recommendations on drug use.

For further information go to [www.mda.state.mn.us/residue-preventionmn.us/residue-prevention](http://www.mda.state.mn.us/residue-preventionmn.us/residue-prevention)

## Approved Uses of Injectable Ceftiofur in Cattle

Drug	Animal Class	Indications for Use	Labeled Dose	Route of Administration	Meat W/D	Milk W/D	Special Instructions
Excede Sterile Suspension (Ceftiofur Crystalline Free Acid)	Cattle (other than pre-ruminating)	Treatment of Bovine respiratory disease (shipping fever, pneumonia), Foot rot	1.5 mL/100 lbs once	Subcutaneous injection at the base of the ear (BOE)	13 days	0 hrs	
Excede Sterile Suspension (Ceftiofur Crystalline Free Acid)	Beef and <sup>1</sup> non-lactating cattle	Treatment of Bovine respiratory disease, Foot Rot	1.5 mL/100 lbs once	Subcutaneous injection BOE or in the middle third of the ear	13 days	0 hrs	
Excede Sterile Suspension (Ceftiofur Crystalline Free Acid)	Lactating dairy cattle	Treatment of Acute postpartum metritis	1.5 mL/100 lbs one time then 72 hours later	Subcutaneous injection at the base of the ear; 2nd dose BOE opposite ear	13 days	0 hrs	Injections must be rotated between ears
Naxcel Sterile Suspension (Ceftiofur sodium), Ceftiflex	Cattle (other than pre-ruminating)	Treatment of Bovine respiratory disease, Foot rot	1-2 mL/100 lbs once a day up to 5 days	Intramuscular or subcutaneous injection	4 days	0 hrs	
Excenel RTU EZ, Cefenil (Ceftiofur hydrochloride)	Cattle (other than pre-ruminating)	Treatment of Bovine respiratory disease, Foot rot	1-2 mL/100 lbs once a day for 3 days*	Intramuscular or subcutaneous injection**	4 days	0 hrs	*Additional treatments may be administered on days 4 and 5 if animals do not respond to 3 days of treatment **Do not inject more than 15 mL per injection site
Excenel RTU EZ, Cefenil (Ceftiofur hydrochloride)	Cattle (other than pre-ruminating)	Bovine respiratory disease protocol ONLY	2 mL/100 lbs two doses only on days 1 and 3 (48-hour interval)	Intramuscular or subcutaneous injection**	4 days	0 hrs	**Do not inject more than 15 mL per injection site
Excenel RTU EZ, Cefenil (Ceftiofur hydrochloride)	Cattle (other than pre-ruminating)	Treatment of Acute postpartum metritis	2 mL/100 lbs once a day for 5 consecutive days	Intramuscular or subcutaneous injection**	4 days	0 hrs	**Do not inject more than 15 mL per injection site.

<sup>1</sup>Non-lactating cattle: Dairy bulls, dairy calves, and replacement heifers.

**ALWAYS carefully consult the labels.**

## Approved Uses of Intramammary (IMM) Cephalosporins in Cattle

Drug	Animal Class	Indications for Use	Labeled Dose	Meat Withdrawal	Milk Withdrawal	Special Instructions
Spectramast DC (Ceftiofur hydrochloride)	Dry cows	Treatment of subclinical mastitis at dry off.	1 tube (10mL) per affected quarter at dry off	16 days	None	Product requires a 30-day dry cow period
Spectramast LC (Ceftiofur hydrochloride)		Treatment of clinical mastitis	1 tube (10 mL) per affected quarter daily for a minimum of 2 days and up to 8 days	2 days	72 hours	
ToMORROW (Cephapirin benzathine)	Dry cows	Treatment of mastitis at dry off.	1 tube (10mL) per quarter at dry off	42 days	72 hours after calving	Do not use within 30 days of calving
ToDAY (Cephapirin sodium)		Treatment of mastitis	1 tube (10 mL) per affected quarter and repeat only once after 12 hours	4 days	96 hours	If improvement isn't noted within 48 hours, consult your vet

**ALWAYS carefully consult the labels.**