Table of Contents

Association of feedlot disease treatments on the probability of heart disease syndrome in U.S. feedlot cattle

Blaine T. Johnson, David E. Amrine, Robert L. Larson, Brad J. White

Livestock fatalities attributed to a massive attack of dark rice field mosquitoes (Psorophora columbiae) following Hurricane

Laura Bianca S. Cecco, Emi Sasaki, Daniel B. Paulsen, Craig Fontenot, Christine Navarre, Kristen Healy, Ingeborg M. Langohr

A mixed-method pilot study investigating challenges experienced by mixed animal veterinarians in practice and their private practice experiences prior to graduation

Philippa M. Gibbons, Julia K. Wells, Kylie R.L. Watson, John J. Weale, Jerry R. Roberson

Nutritional management of calves grazing wheat and small grain pasture

Paul A. Beck, R. Ryan Reuter

Associations between pen management characteristics and bovine respiratory disease incidence in the first 45 days post-arrival in feedlot cattle

Hector A. Rojas, Brad J. White, David E. Amrine, Robert L. Larson, Sarah F. Capik

An evaluation of arrival metaphylaxis with enrofloxacin compared to tulathromycin in feedlot cattle at high risk of developing bovine respiratory disease in Mexico

Luis O. Burciaga-Robles, Christopher McMullen, Ana Bras, Mariana Guerra-Maupome, Rodolfo A. Nava-Gaspar, Ryan D. Rademacher, Sherry J. Hannon, Victor E. Mercado-Talamantes, Calvin W. Booker

Comparison of the effect of different management strategies on the quality of recycled sand used for bedding in free stalls in southeastern Pennsylvania

Emily E.A. Egolf, Michaela A. Kristula, Darko Stefanovski

Advertisers Index
Addison Biological Laboratory, Inc. ............................................................................................. Inside front cover
Multimin USA, Inc. ..................................................................................................................................... Back cover

Notice to Readers
All statements, opinions and conclusions contained in articles in The Bovine Practitioner are those of the author(s), and are not necessarily those of the American Association of Bovine Practitioners (AABP) unless specifically approved by the AABP Board of Directors.
Day 0: 100mcg gonadorelin (as the acetate salt) or sterile water for injection

The intramuscular administration of 1000 mcg gonadorelin diacetate tetrahydrate on five (5) consecutive days to normally cycling cows resulted in a higher (P < 0.0001) pregnancy rate to fixed time artificial insemination (FTAI) in lactating dairy cows and beef cows was also demonstrated through references to scientific literature.

Gonadorelin diacetate tetrahydrate has been shown to be safe. The LD50 for mice and rats is greater than 60 mg/kg, and greater than 600 mg/kg for dogs, greater than 600 mcg/kg, respectively. No adverse effects were noted among rats or dogs administered 120 mcg/kg for five days.

CAUTION:
For use with cloprostenol sodium to synchronize estrous cycles to allow for fixed time artificial insemination (FTAI) in lactating dairy cows and beef cows.

The intramuscular dosage of CYSTORELIN is 100 mcg gonadorelin diacetate tetrahydrate (2 mL) per cow, used in conjunction with cloprostenol sodium. CYSTORELIN is available in a concentration of 50 mcg/mL gonadorelin diacetate tetrahydrate (43 mcg/mL gonadorelin) pH 7.4. Water for Injection, benzyl alcohol, and sodium chloride 6.76 mg. The pH is adjusted, as necessary, with sodium hydroxide.

Perform FTAI 0 to 24 hours after the second CYSTORELIN injection, or inseminate cows on detected estrus using SYNCHSURE. Administer the second CYSTORELIN injection (2 mL) 30 to 72 hours after the cloprostenol sodium injection. 

Reproductive Synchrony

DOSAGE AND ADMINISTRATION:

1. Administer 500 mcg cloprostenol (as cloprostenol sodium) by intramuscular injection 6 to 8 days after the first treatment dose of 100 mcg gonadorelin diacetate tetrahydrate. The effectiveness of gonadorelin for use with cloprostenol for dogs, greater than 600 mcg/kg, respectively. No adverse effects were noted among rats or dogs administered 120 mcg/kg/day of gonadorelin diacetate tetrahydrate to pregnant rats and rabbits during pregnancy.

The intravenous administration of 60 mcg/kg/day of gonadorelin diacetate tetrahydrate to pregnant rats and rabbits during the fifth month of gestation while the risk of dystocia and its time at which cycling cows or heifers can be bred. SYNCHSURE should not be administered to a pregnant animal whose calf is not to be aborted.

Luteal Cysts:

The use information provided here is not comprehensive. Talk to your veterinarian about how to use this product.

As with all parenteral products, careful aseptic techniques should be used and the injection site thoroughly washed before injection. Accidental spillage of the contents on the skin should therefore be avoided. Accidental spillage on asthmatics, and persons with bronchial and other respiratory infections (endometritis). Under certain circumstances, this may progress with the presence of a persistent corpus luteum. Induction of luteolysis with SYNCHSURE usually results in evacuation of the reproductive tract at calving or postpartum retention of the fetus from the vagina). Normal cyclical palpable consistency of the uterus). Treatment with SYNCHSURE be inseminated twice at about 72 and 96 hours postinjection.

The use of CYSTORELIN for treatment of ovarian follicular cysts in dairy cattle was demonstrated to be effective with a necessary to remove the fetus from the vagina). Under certain circumstances, this may progress with the presence of a persistent corpus luteum. Induction of luteolysis with SYNCHSURE usually results in evacuation of the reproductive tract.

There is no effect on fertility following the single injection of CYSTORELIN. The timing of the single injection of CYSTORELIN is not critical.

SAFETY AND TOXICITY:

In addition to the animal safety information presented in the PHARMACOLOGY AND TOXICOLOGY section, the safety of CYSTORELIN was established through the review and evaluation of the extensive published literature available for the use of gonadorelin diacetate tetrahydrate. In clinical practice, the usual dose of CYSTORELIN is 50 mcg/mL gonadorelin diacetate tetrahydrate 100 mcg/mL gonadorelin diacetate tetrahydrate. It is recommended that CYSTORELIN be administered with care, and the injection site thoroughly washed before injection. Accidental spillage of the contents on the skin should therefore be avoided. Accidental spillage on asthmatics, and persons with bronchial and other respiratory infections (endometritis). Under certain circumstances, this may progress with the presence of a persistent corpus luteum. Induction of luteolysis with SYNCHSURE usually results in evacuation of the reproductive tract at calving or postpartum retention of the fetus from the vagina). Normal cyclical palpable consistency of the uterus). Treatment with SYNCHSURE be inseminated twice at about 72 and 96 hours postinjection.

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Professional Animal Health Center | Newcastle, OK

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**MULTIMIN® 90**

An injectable aqueous supplemental source of zinc, manganese, selenium, and copper

**CAUTION:** Federal Law restricts this drug to use by or on the order of a licensed veterinarian

### ACTIVE SUBSTANCES PER ML:
- Zinc: 60 mg/ml
- Manganese: 10 mg/ml
- Selenium: 5 mg/ml
- Copper: 10 mg/ml

**OTHER SUBSTANCES:**
- Chlorocresol 0.1% w/v (as preservative)

### DOSAGE RECOMMENDATIONS:

**CATTLE**
- From 1 to 7 years: 1 ml (per 100 lb bodyweight)
- From 7 to 15 years: 1 ml (per 100 lb bodyweight)
- Over 15 years: 1 ml (per 200 lb bodyweight)

**CALVES**
- Up to 1 year: 1 ml (per 100 lb bodyweight)
- From 1 to 2 years: 1 ml (per 100 lb bodyweight)

**PREFERENCE:**
- Selenium and copper are toxic if administered in excess.
- Always follow recommended label dose. Do not overdose.
- It is recommended that accurate body weight is determined prior to treatment.
- Do not use concurrently with other injectable selenium and copper products.
- Do not use concurrently with selenium or copper boluses.
- Do not use in emaciated cattle with a BCS of 1 in dairy or 1-3 in beef.

**Consult your veterinarian.**

**Packaged in 100 mL & 500 mL size**

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**CAUTION:**
- Slight local reaction may occur for about 10 seconds after injection. A slight swelling may be observed at injection site for a few days after administration. Use standard aseptic procedures during administration of injections to reduce the risk of injection-site abscesses or lesions.
- Withdrawal period: 14 days. Milk zero withdrawal.

**DIRECTIONS:**
- This product is only for use in cattle.

**MULTIMIN® 90** is to be given subcutaneously (under the skin) ONLY
- It is recommended to administer the product in accordance with Beef Quality Assurance (BQA) guidelines. Minimum distance between injection sites for the MULTIMIN® product and other injection sites should be at least 4 inches.
- Inject under the loose skin of the middle of the side of the neck. Max volume per injection site is 7 ml.

**Subcutaneous injection in middle of side of neck.**

**Store Between 15°C and 30°C (59°F and 86°F).**

### SUPPLEMENTATION PROGRAM

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<th>CLASSES</th>
<th>DOSAGE RECOMMENDATIONS</th>
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<tr>
<td><strong>BULLS</strong></td>
<td>1 ml every 6 months</td>
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<tr>
<td><strong>BEEF COWS</strong></td>
<td>1 ml once a year</td>
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<tr>
<td><strong>HEIFERS</strong></td>
<td>1 ml every 3 months</td>
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- Forcht, KY 40602

**NDC No. 49920-006-05**

**NDC No. 49920-006-01**

**FEDERAL LAW RESTRICTS THIS DRUG TO USE BY OR ON THE ORDER OF A LICENSED VETERINARIAN**

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**Dosage Table**

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<tr>
<th>ANIMAL HEIGHT (lbs)</th>
<th>CATTLE</th>
<th>CALVES</th>
<th>CATTLE 1 - 2 YEARS</th>
<th>CALVES 2 YEARS (600 - 1100 lbs)</th>
<th>CALVES 3 - 4 YEARS (1100 - 1500 lbs)</th>
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