



www.asi.ksu.edu

Upcoming Events

Range Beef Cow Symposium

Dec. 6-8
Rapid City, S.D.
Details on page 4.

Employee Management Conference

Dec. 8-9
Kansas City, KS
800-456-7675
www.oznet.ksu.edu/employee

Central Kansas Cow/Calf Symposium

Dec. 19
Russell, KS
785-483-3157

Four-State Beef Conference

Jan. 11, 2006
Holton, KS
785-364-4125

Contributors

Dale Blasi

Stocker, Forages Nutrition & Mgt.
785-532-5427
dblasi@oznet.ksu.edu

Joel DeRouchey

Livestock Production
785-532-2032
jderouch@oznet.ksu.edu

Ron Hale

Livestock Production
620-275-9164
rhale@oznet.ksu.edu

Larry Hollis

Extension Beef Veterinarian
785-532-1246
lhollis@oznet.ksu.edu

Sandy Johnson, Editor

Livestock Production
785-462-6281
sandyj@oznet.ksu.edu

Twig Marston

Cow-Calf Management
785-532-5428
tmarston@oznet.ksu.edu

Chris Reinhardt

Extension Feedlot Specialist
785-532-1672
cdr3@ksu.edu

Reinhardt named extension feedlot specialist

Kansas State University has selected one of its own graduates to support the state's vast cattle feeding industry.

Chris Reinhardt is now the feedlot specialist for K-State Research and Extension.



Chris Reinhardt

"I have a passion for the Kansas feedlot industry," he said, "and feel I can best serve the industry by searching out and bringing to Kansas feedlot operators new and better ways to manage cattle, human resources and our product – beef."

While his office is in Manhattan, Reinhardt's responsibilities include communicating and sharing information with feed yard operators throughout Kansas. He also will conduct research on cattle performance as it relates to nutrition and management.

Reinhardt earned a bachelor's degree in meat and animal sciences from the University of Wisconsin, and a master's degree in animal sciences from Texas A&M University. His doctoral degree in ruminant nutrition is from K-State. Since earning his Ph.D., Reinhardt has worked for Vigortone, Purina Mills and Intervet. You can reach him at 785-532-1672 or cdr3@ksu.edu.

Don't leave it on the dashboard of your pickup

Larry C. Hollis, D.V.M., M.Ag.

Pharmaceutical and biological companies carefully research and develop products for the cattle industry. Quality control steps incorporated into manufacturing processes ensure that products sold to cattle producers and veterinarians work as intended.

Once products are sold, companies lose control of how they are cared for and used. It is the purchaser's responsibility to handle and administer products to maximize potential benefits. Here are some suggestions:

All Products

- Read the label for instructions on handling and administration.
- If products require refrigeration, make sure they are refrigerated when you purchase them. Keep them refrigerated before use and while chuteside. Ice

packs or a frozen gallon jug of water inside an ice chest work well to keep products cool.

- Be careful – you can get too much of a good thing. Some products that require refrigeration may be damaged if allowed to freeze.
- If products are designed to be stored at room temperature or within a specified temperature range, it is important to follow the manufacturer's temperature guidelines. These products may be inactivated if allowed to get too cold or too hot. The dashboard of a pickup exceeds room temperature quite regularly!
- You cannot always see physical changes that indicate that a product has been damaged by excessive cold or heat, so

See Dashboard, page 4

New feed additive improves feedlot performance

Ron Hale, livestock specialist

A relatively new feed additive approved by the Food and Drug Administration in 2003 for use in feedlot cattle provides beef producers with an opportunity to improve performance and profitability. Optaflexx is the brand name for ractopamine hydrochloride, a beta-agonist that directs nutrients toward muscle growth. Cattle fed Optaflexx show improved daily gain, heavier live weights, and improved feed efficiencies. The improved feed utilization results from more efficient use of nutrients for lean growth rather than for fat, as feed intake is not affected. Carcasses are heavier, have larger ribeyes, and have a lower percent fat, with little change in yield and quality grades. Feeding Optaflexx, however, requires a higher level of management principally because it is approved to be fed 28 to 42 days immediately before harvest.

Data from five steer and five heifer FDA registration studies are shown below. Although the studies examined 0, 100, 200 and 300 mg Optaflexx per head/day, only the 0 and 200 mg levels are shown here. Twenty-five pens (219 steers or 214 heifers) per treatment were fed Optaflexx for the last 28 or 42 days of feeding. The cattle were on feed for 136 to 235 days and received finishing rations with 13.03 to 15.23% crude protein, 90.70 to 100.98 Mcal NEm/100 lbs dry matter (DM), and 61.16 to 69.89 Mcal

NEg/100 lbs DM. Performance results measured during the Optaflexx feeding period are shown in Table 1.

During Optaflexx feeding average daily gain (ADG) and feed efficiency (FE) of the steers and heifers was improved with 200 mg Optaflexx. Steer and heifer hot carcass weights (CW) were heavier, while dressing percent (DP) and ribeye area (REA) of the steers increased. Feeding 100 mg Optaflexx improved steer ADG, FE, CW, and REA compared to no Optaflexx. Increasing the dose resulted in numerical, although not statistically significant, improvements of ADG, FE, HCW, and REA at each higher dose (100, 200, and 300 mg). Heifer live traits showed the same trend with each dosage increase, however, HCW and REA were not significantly improved until 200 mg Optaflexx was fed. Very few other differences were seen at any of the levels in the steer and heifer trials.

Additional post-approval experiments resulted in similar results. Six steer studies were conducted using a total of 92 large pens and 6,964 head. Optaflexx, fed at 200 mg/head/day for the last 28 to 32 days on feed, resulted in improvements of 17.4, 15.9 and 12.3% for ADG, FE, and CW, respectively, compared to no Optaflexx. Dressing percent also increased from 63.85 to 64.08% and REA increased from 13.8 to 14.1

continued on page 3

Table 1. Summary of five steer and five heifer FDA registration trials.

Trait	Steers		Heifers	
	Optaflexx, mg/hd/day			
	0	200	0	200
ADG, lbs	2.80	3.35*	2.74	3.22*
Weight gain, lbs	99.4	116.7	98.0	114.0
Intake, lbs DM	21.73	21.73	20.67	21.00
Feed efficiency	8.10	6.81*	7.77	6.68*
Carcass weight, lbs	753.4	767.5*	695.5	701.8*
Dressing percent	61.9	62.2*	62.2	62.0
Ribeye area, sq. in.	12.0	12.4*	12.6	12.7
Yield grade	3.32	3.22	3.13	3.12
Marbling score	Small ³³	Small ³¹	Small ³⁴	Small ³⁸
Quality grade	High Select	High Select	High Select	High Select

* Differs from control P<.05.

inches. All other carcass traits were similar for the two levels. Four calf-fed Holstein studies using a total of 63 pens and 1,892 head compared 0 and 200 mg during the last 28 to 38 days. Average daily gain and FE were improved by 15.0 and 14.3%, respectively. Hot carcass weight increased from 786.6 to 796.9 lbs and REA increased from 11.94 to 12.21 inches². Compared to no Optaflexx, Holsteins fed 200 mg had fewer YG #3 (34.2 vs. 27.6%), more Select (46.2 vs. 52.6%), and fewer Choice-and-Prime (47.7 vs. 40.7%) carcasses.

Evaluation of strip loin steaks obtained from the steers and heifers were conducted as part of the registration studies. No changes in cooking loss, muscle pH, tenderness, juiciness, or flavor were seen when 200 mg of Optaflexx was fed.

While Optaflexx is labeled to be fed at 70 to 430 mg/head/day, the data suggest that 200 mg of Optaflexx results in optimum performance. The daily cost of feeding 200 mg of Optaflexx is approximately \$0.28 per head. Cattle sold on a live basis at \$85/cwt would gross an additional \$14.45 for the extra 17 lbs of gain. The increase in net profit would be \$6.61 after a \$7.84 cost of feeding Optaflexx for 28 days. These calculations do not consider the value of other benefits such as improved feed efficiency.

Feeding Optaflexx will present new challenges to cattle feeders. The most difficult are associated with the 28 to 42 day feeding window and managing a new medicated ration. Feeding Optaflexx for less than 28 days is an off label use that may not produce all the desired benefits. Feeding for more than 42 days does not substantially increase performance over that already achieved at the labeled number of days. It is imperative that harvest dates are known to allow for the proper number of Optaflexx feeding days. It has been suggested that managers plan for the minimum 28 days, which would allow cattle to be fed for up to 42 days in case of delays in shipping the cattle. Because there is no withdrawal time, Optaflexx can be fed immediately before harvest.

Good manufacturing practices should be established and followed for proper use and maximum benefit, as with any feed additive. Follow label directions for handling, storing, inclusion rates, mixing, feeding, etc. Optaflexx is labeled only for cattle fed in confinement for slaughter and should not be fed to breeding or growing animals. Optaflexx is approved to be fed with Rumensin and Tylan to steers and heifers, and with MGA to heifers.

Research conducted to date shows that ration and feeding program changes are not needed to realize the benefits of Optaflexx. Recent K-State research with fed heifers indicates there is no need to change metabolizable protein. The product has been shown to be effective in cattle implanted with various products. Well managed implant programs should continue to be used until research indicates a change is needed. Cattle of different biological-types (British, Continental, and Brahman) have responded similarly to Optaflexx.

Whether selling cattle on a live or carcass basis, feeding Optaflexx can result in heavier weights and improved feed efficiency. Both can result in higher profits. USDA yield and quality grades, and meat quality are essentially unchanged. Although there are potential performance improvements when Optaflexx is fed at levels higher than 200 mg/head/day, the value of the improvements need to be weighed against the increase in product cost. Cattle sales and shipping need to be well planned to prevent feeding Optaflexx less than 28 days or more than 42 days.

Dashboard, from page 1

you have to know how it was cared for before use to ensure that it will work as intended.

- Mark all syringes so you know which product they contain while chuteside. A piece of masking tape, or better yet a piece of colored tape (use a different color for each product) with the name of the product written on the tape with a permanent marker is ideal.
- Do not pour injectable products from original packaging into a larger container. The injectable product was sterile when manufactured, but when you change containers there is a high probability of contaminating the whole container of product.

- Never re-enter a bottle with a used needle. The likelihood of contaminating the rest of the bottle of product is high. Put a new needle on the syringe each time you have to re-enter the bottle.
- To avoid having to re-enter a bottle, use a draw-off assembly and automatic refill syringe.
- Change to clean equipment any time existing equipment gets dirty enough that it creates a risk for injection site contamination.
- Clean and disinfect syringes and equipment at the end of each day's use. Washing them out with water from the horse tank does not constitute proper cleaning!

The next issue will target specific products.

Central Kansas Cow/Calf Symposium set for December

The Central Kansas Cow/Calf Symposium is scheduled for 9:30 a.m. Dec. 19 at the Russell County Fairgrounds. The day will be filled with general sessions, breakout sessions and an industry trade show.

The opening session will feature Ron Kramer of Irsik and Doll with an explanation of the USDA Quality Systems Assessment Program (see *Beef Tips*, September 2005) that will be used to meet requirements for export markets.

Breakout sessions will include Estate Planning, Water Quality Demonstration Grants for Producers, Taking Advantage of Maternal Heterosis, and Tree and Brush Control in Rangelands. During the breakout sessions Dr. John Thouvenelle will show producers what a veterinarian sees when performing a breeding soundness exam on a bull and a new procedure for spaying heifers.

The day will end with a panel of producers telling of practices they have adopted to remain competitive in the cow/calf business.

The cost for the day will be \$12.50 if pre-registered by Dec. 12 and \$20 for late registrations. This fee includes lunch. The first 150 producers to register will also receive a RED BOOK.

For more information contact the Russell County Extension Office at (785) 483-3157 or send e-mail to jstannar@ksu.edu.

South Dakota to Host Range Beef Cow Symposium

The Four-State Range Beef Cow Symposium will take place Dec. 6–9, 2005, at the Rushmore Plaza Civic Center in Rapid City, S.D. Sponsored by Cooperative Extension in Nebraska, Wyoming, South Dakota, and Colorado, the symposium has earned a reputation as an excellent educational program for commercial cow/calf producers, industry, and Extension personnel. It takes place every other year with the location rotating among the cooperating states. It is regarded as one of the best updates for cattle producers on current and emerging issues, management tools, breakthroughs in applied research, production economics and beef products.

For more information go to the Web site: <http://ars.sdstate.edu/extbeef/RBCS.htm>.