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Beeftips
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"Focus on Efficiency"

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Information available on the Web at:
www.beefimprovement.org/BIFconv.html
Or contact:
Jim Gosey
(402) 472-6417
Jgosey@unlnotes.unl.edu
Greg Ruehle
(402) 475-2333
nc@necattlemen.org

Contributors

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

Frank Brazle
Livestock Production
620-431-1530
fbrazle@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

Sandy Johnson
Livestock Production
785-462-6281
skjohnso@oznet.ksu.edu

Gerry Kuhl
Feedlot Nutr. & Mgt.
785-532-1250
gkuhl@oznet.ksu.edu

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

Recommendations for Free-Choice Pasture Supplements

Dale Blasi, Beef Specialist

Aside from ingredient costs, effective summer supplementation programs require a significant investment in labor and equipment, especially if hand-feeding each day. In contrast, a well-managed free-choice supplementation program that limits intake to a desired level is a labor-saving management tool that improves performance, familiarizes cattle with bunk feeding, and dispenses antibiotics for improved efficiency if necessary.

For years, producers have used salt to regulate consumption of highly palatable feeds such as grain and high-protein oilseed meals. The fact that there are practical limits to the amount of salt cattle can consume, coupled with its low cost and availability, has led to widespread use as a supplement-intake regulator. Several studies over the past 40 years have demonstrated that using salt equals hand-feeding in controlling intake and supporting performance.

Even though a supplement is self-fed, plan to spend time monitoring and managing intake. Expect to modify the salt content in a self-feeding supplement an average of five times over the course of a grazing season to make sure that supplement consumption is consistent with intended intake levels. While salt is often used to regulate supplement intake, several quality self-feeding commercial supplements are available. The proportion of salt in the self-fed mixture may vary from 5 to 45 percent. To determine the amount of salt needed in a supplement, you need to know desired supplement intake and weight of cattle being supplemented. If increased performance, or pinkeye or foot rot control is desired for 500- to 600-pound calves early in the grazing season when grass quality is still high, then 3 to 4 pounds daily consumption of a supplement containing 15 to 20 percent crude protein may work. Conversely, when grass quality begins to decline, 2 pounds per head per day intake of a supplement containing 30 to 35 percent crude protein would be a good target. The amount of salt to include in the mixture depends upon the desired supplement intake.

To increase supplement intake, decrease salt content; to decrease intake, increase the salt. Assume you want to self-feed a protein supplement (soybean meal, cottonseed meal, etc.) with a desired daily intake level of 2 pounds per head per day to a group of 500-pound steers. The daily salt consumption of 500-pound cattle averages 0.6 pounds when salt is used to limit supplement intake. In this case, a self-feeding supplement composed of 25 percent salt, 75 percent protein supplement would, on average, regulate total intake to 2.0 pounds protein supplement and 0.6 pounds salt (2.6 pounds total supplement). Tables to help estimate salt intake for a given body weight and determine the correct proportion of salt and supplement, are available from your local extension office.

Factors other than desired intake and cattle weight also can affect the amount of salt required. Age can affect salt intake because older animals require more salt to obtain the same level of restriction compared with equal-weight younger animals. As quality and quantity of the standing grass declines, more salt will be required. As animals become accustomed to the supplement, the amount of salt may need to be increased. Forage intake level, palatability of supplement ingredients and salt content of the

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Considerations for Implanting Suckling Calves

Ron Hale, Livestock Specialist

The proper use of implants in suckling calves can result in heavier calves at weaning and doesn't have to reduce the future reproductive performance of heifers. Four products are approved for use in suckling calves. Ralgro (zeranol) can be used in steers and heifers that are at least a month old. Synovex-C and Component E-C, both estradiol-progesterone implants, can be used in calves at least 45 days old. Compudose (estradiol 17ß) is approved for suckling steer calves, but not heifers. None of the products is to be used in calves intended to be breeding bulls.

A summary of published studies (Selk, 1997) showed improved gain using a single zeranol or estradiol-progesterone implant from implanting to weaning. Implanting heifer calves resulted in an average daily gain of 1.61 pounds, an increase of 0.12 pounds over nonimplanted heifers. Steer calves gained 1.92 pounds or 0.1 pounds a day better than those not implanted. Interestingly, steers implanted twice before weaning had gains similar to calves implanted only once; 1.93 pounds with an additional 0.13 pounds per day. This is probably not a large enough increase to warrant the use of a second implant if the calves are to be sold at weaning time. However, if ownership is retained, the use of a second implant will likely continue to improve gain. Steers implanted with Compudose gained an average of 1.82 pounds a day with an improvement of 0.09 pounds over nonimplanted calves.

Implanting future replacement heifers yielded a variety of results. Selk also summarized several studies that reported the use of zeranol and estradiol-progesterone implants on subsequent reproduction. The pregnancy rate of heifers implanted once between one and three months of age was approximately 2 percentage points lower than nonimplanted calves (82.15% vs 84.10%). This value represents two fewer pregnant heifers in a herd of 100 head. The pregnancy rate of heifers implanted at or near weaning was 1.7 percent lower than the nonimplanted heifers. While neither of these average responses was severe, using the same products at birth, or two, three or four times before weaning reduced pregnancy rates by 39, 7.3, 16 and 42 percentage units, respectively. These decreases would have a significant impact. Other research studies indicate implants may slightly increase precalving pelvic area, but provide no real improvement in dystocia. Calf birth weight and two-year-old milking ability do not appear to be influenced.

A concern often voiced is whether or not implanting reduces calf value. Two studies (Odde et al.) examined the effect of various factors on the price of calves sold via a satellite auction. In 1995, data from seven auctions involving more than 200,000 calves showed implanted calves brought $65.37 per hundredweight and nonimplanted calves brought $65.04. In 1996, the authors reported the sale price of implanted and nonimplanted calves was not significantly different based on data from more than 220,000 calves in nine auctions. It is important to note that the implant status was listed in the sale catalog, allowing buyers to make purchasing decisions based on implants.

Implanting suckling calves can result in an additional 20 to 25 pounds at weaning with little difference between products. So the most important decision is whether to implant rather than which implant to use. Recommendations and considerations for implanting suckling calves include the following:

- Follow product instructions for implanting.
- Never implant bulls intended for breeding.
- Use only one implant in steers to be sold at weaning.
- Implant all calves at branding (2 to 3 months of age), but exclude known replacement heifers if possible.
- Heifers implanted more than once should not be used for replacements.

"Implanting suckling calves can result in an additional 20 to 25 pounds at weaning with little difference between products."

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water are other factors that may require adjustments in salt levels.

When cattle are accustomed to supplements but not the self-fed variety, prevent overeating by starting with a higher salt level than intended for a period of 7 to 10 days. Younger cattle not acquainted with concentrates require special attention to prevent overconsumption. Hand-feed the supplement without salt for a couple of days until calves are familiar with the supplement. Then hand-feed the supplement with salt for a couple of days before making the transition to full feeding. Never introduce self-feeding supplements when animals are hungry.

Free-choice supplements containing salt are most effective when presented to cattle in a meal package. To prevent separation, the particle sizes of the basal supplement and salt should be similar. Salt should be plain white and coarsely rather than finely ground. If grain is included, it should be cracked or coarsely ground. While pelleting helps minimize separation, it is not recommended because of added cost. Minerals typically provided for calves on grass also can be included in the total supplement.

For intended daily supplement intake levels of 1 pound or more, ionophores such as Rumensin can be added at approved levels in the self-feeding supplement for faster weight gain. By adding Rumensin, producers can expect a 25 to 40 percent decline in the level of salt needed to limit intake as discussed above. The addition of Rumensin to self-feeding supplements also will reduce the number of adjustments in salt concentration required to maintain the desired intake.

To prevent toxicities resulting from excessive salt intake, a clean, plentiful and dependable water supply is a necessity. Research shows that water requirements can increase 50 to 100 percent when using this system. Producers using salt-limited supplement should submit a water sample to a commercial laboratory to determine the total dissolved solids (TDS) content of their water. Exercise caution in using salt-limited supplements when water contains more than 5,000 ppm TDS.

Self-feeders should be portable and able to protect the mixture from wind and rain. As a rule of thumb, approximately 20 percent of the animals in a pasture should be able to eat from a feeder at any one time. Strategic placement of self feeders will help direct cattle toward less grazed areas of the pasture. Avoid placing feeders next to water sources because this will limit grazing distribution. To monitor supplement consumption, it is important to know the initial volume and weight of the salt mixture placed in the feeder. Record this information and mark the feed level every few days to approximate the amount being consumed per head per day.

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First-Cutting Tips for Alfalfa

1. Scout fields for alfalfa weevil.

This insect is the scourge of alfalfa producers. If unchecked, it can defoliate an alfalfa field in short order, reducing both yield and quality. If you find sufficient alfalfa weevil larvae to spray, be aware of preharvest waiting intervals listed on the insecticide label. You might decide to make a cut rather than spray if the field is nearly ready to cut. Afterwards watch for alfalfa regrowth and adult alfalfa weevil feeding. Adult alfalfa weevils will graze the new growth and virtually stop it. If that occurs, you will need to spray the adult alfalfa weevils. If the windrows remain on the field too long, larvae and adults may hide and survive under the windrow, causing damage.

2. Watch for crown regrowth.

Most people think alfalfa should be cut at the bud to 1/10 bloom stage. The first cutting should be made when new regrowth from the crown is observed. That will be before the bud to 1/10 bloom stage on this first cutting. What is this regrowth? It's the second-cutting growth. If you wait until 1/10 bloom or later, you will remove this second-cutting growth with the first cutting. That slows regrowth and reduces the chance for four or five cuttings. After the first cutting you can go on a 28- to 32-day cutting schedule.

3. Watch cutter-bar height.

Generally, the cutter-bar height is set at about 3 to 4 inches. On this first cutting you might want to set the cutter bar higher to avoid cutting the regrowth.

4. Watch hay moisture content.

This is a double-edged sword. Bale too wet and you get moldy hay and possibly burn down a barn. Bale too dry and you lose all the leaves. Leaves contain more than 2/3 of the nutrients. Good hay can be put up with moisture between 15 and 20 percent, with 18 percent being ideal.

5. Fertilize.

Every ton of alfalfa removes about 10 to12 pounds of phosphorus per acre. If you didn't apply phosphorus (P) after the last cutting last fall and before the first cutting, a phosphorus application may be in order after you remove this year's first cutting. How much? If you want to maintain soil P levels, then you should replace what has been removed. For example, if you normally average 5 tons of hay per acre, then you should apply 50 to 60 pounds P per acre.

—Jim Shroyer, Crops Specialist

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Kansas Feedlot Performance and Feed Cost Summary*

Gerry Kuhl, Feedlot Specialist, Kansas State University

February 2002 Closeout Information**

Sex/No.	Final Weight	Avg. Days on Feed	Avg. Daily Gain	Feed/Gain (Dry Basis)	% Death Loss	Avg. Cost of Gain/Cwt.	Projected Cost of March-Placed Cattle
Steers/12,130	1,258	158 (140-178)	3.17 (2.55-3.43)	6.38 (5.96-7.10)	2.14	$52.12 (49.52-56.69)	$47.50 (45.00-50.00)
Heifers/27,069	1,144	161 (116-203)	2.93 (2.55-3.45)	6.44 (5.50-7.10)	1.61	$53.14 (46.10-56.63)	$49.00 (47.00-52.00)

Current Feed Inventory Costs: Mid-March	Avg. Prices	Range	No. Yards
Corn	$ 2.29/bu	$ 2.10-2.43	7
Ground Alfalfa Hay	$107.73/ton	$95.00-118.00	7

*Appreciation is expressed to these Kansas feedyards: Brookover Ranch Feed Yard, Decatur County Feed Yard, Fairleigh Feed Yard, Hy-Plains Feed Yard, Kearny County Feeders, Pawnee Valley Feeders, and Supreme Cattle Feeders.

**Closeout figures are the means of individual feed yard monthly averages and include feed, yardage, processing, medication, death loss and usually sold FOB the feedlot with a 4% pencil shrink. Interest charges normally are not included.

Cooperative Extension Service
K-State Research & Extension
244 Weber Hall
Manhattan, KS 66506

Sandra K. Johnson
Livestock Specialist