

Flaxseed: Health Food for Feeder Cattle

Supplementing beef cattle rations with ground flaxseed can enhance carcass value, increase performance and improve cattle health. Flaxseed consistently boosts beneficial Omega 3 fatty acid levels in edible beef tissue. Flax is 42% oil and 23% protein, making it an energy dense, protein-rich replacement for other costly feed ingredients.

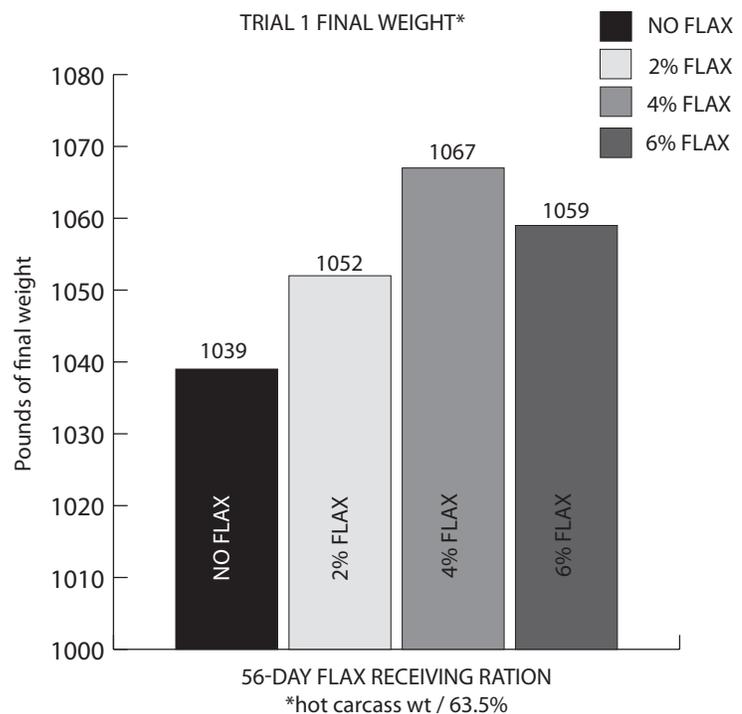
Healthier Feeders Mean Heavier Feds

Early health issues—even when resolved—can affect cattle performance enough to appreciably impact the bottom line later. The latest round of flax feeding research at Kansas State University once again confirms that immunologically-challenged feeder calves fed flax early in the feeding period finish at heavier carcass weights. This latest study joins several others completed in the last half-decade that shows flax-fed cattle often grade better, have better yield grades, gain more and are more efficient. All this, apparently, because they are healthier.

“The flax influence isn’t always the same—but we almost always see something beneficial in performance,” says Kansas State animal scientist Jim Drouillard. “It makes sense that healthier cattle do better.” In the latest KSU study, the effect was in heavier carcass weights because of less chronic illness.

Two sets of 5-weight heifers were fed small amounts of ground flaxseed (0%, 2%, 4% or 6% of the ration dry matter) only during the initial 56-day receiving period. Both sets of cattle came from a Kentucky sale barn but the 363 head in Trial 1 arrived in Kansas in January fighting far more of a disease challenge than the 377 head in Trial 2 the following April (as indicated by much lower mortality rates in Trial 2 during the receiving period).

Compared with non-flax fed controls, Trial 1 cattle fed flax in the receiving phase were 16 pounds heavier at the end of the receiving period and 20 pounds heavier at the end of a 140-day finishing period. (Final weight determined by dividing hot carcass weight by a 63.5% common dressing percentage). When the researchers repeated the strategy with the healthier cattle in Trial 2, performance was not affected by diet. “The impact of feeding flaxseed in the receiving diet is very favorable in cattle that are disease-challenged,” says Drouillard. “Unlike the heifers in Trial 1, the heifers in Trial 2 had low mortality rates indicating they were not severely challenged with disease. In this study, it appeared we needed to have a health challenge in order to have something for flax to prevent.”



How and Why Flaxseed Works

Omega -3 fatty acids such as in flaxseed apparently influence the immune response by suppressing certain pro-inflammatory compounds. These compounds, according to Drouillard, contribute to the lung tissue destruction and may impair the animal's future performance. By calming this inflammatory process, flaxseed omega-3 fatty acids may improve the response to antibiotic therapy and result in lower production costs on stressed feeder cattle. Indeed, in addition to improved gains, there were also significantly fewer chronics among the flax-fed heifers in Trial 1 compared with non-flax fed controls. These results were obtained by feeding approximately 0.8 of a pound of flaxseed per head per day for the 56-day receiving period (about 45 pounds per head).

Affordable Insurance

Previous studies at KSU and elsewhere have found improvements in performance traits when flaxseed was added to cattle rations. But assume this latest KSU study reflects the industry as a whole—and that flaxseed only impacts performance half the time. Predicting which cattle will be arrive immunologically challenged is almost impossible, making it difficult to know what pens are good candidates for flaxseed. Should flaxseed be a part of all receiving rations?

"It's a no-brainer," says Drouillard, noting that flaxseed was optimal at 4% of the ration in this study. The feedlot industry practices this kind of insurance strategy all the time with disease prevention medication," says Drouillard. "We treat every animal on arrival even though we know not every animal is going to get sick. I look at the decision to feed flaxseed the same way." Indeed, Drouillard valued flaxseed in this latest two trial study by assuming he would feed it to all the cattle, but only get the performance improvement on half of those receiving it.

Economical Finishing Strategy

Thus, the 20 pounds of final weight improvement per head in Trial 1 became 10 pounds per head over all the cattle in the study. "Those 10 pounds of liveweight equate to about 6.5 pounds of carcass weight or \$9-\$10 per head on every head (using \$1.50 per pound carcass price). Whenever you can feed flax for less than \$9 a head, it will make you money."

Make sure you consider the grain replacement value when evaluating flaxseed rations. In the KSU analysis flaxseed cost 18 cents a pound (\$10/bu) and replaced 7 cents worth of corn in the ration for a net cost of 11 cents a pound. On average, all the heifers in the study ate 45 pounds of flaxseed during the 56-day receiving period for a total net cost of \$4.95 per head. "The return was almost double that even when only half the cattle responded," notes Drouillard.

A Boon for Backgrounders

On average, 16 pounds of the weight improvement in the flax-fed calves in Trial 1 occurred in the receiving phase itself. Even if only half the cattle respond, that's still 8 extra pounds to sell on every feeder calf—and healthier calves to boot. As in this study, whenever those extra pounds are worth more than the cost to feed the flax (8 pounds X \$1.12 - \$4.95/head = \$4.01 return per head), it makes economic sense to put flaxseed in your receiving rations.

Technical Information Contact:

Dr. Jim Drouillard, KSU Feedlot Nutritionist, (785)532-1204, jdrouill@ksu.edu

