

High Roughage vs High Concentrate Test Diets

Beef cattle seedstock producers must select a nutrition and management program for the post weaning gain test of young bulls. The nutrition choices range from high concentrate diets, consisting of 90 percent grain and 10 percent roughage, to 100 percent roughage; while management can vary from close confinement on slatted floors to free range.



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Breeders are bombarded with various arguments for or against different gain test procedures, so a pro and con analysis is indicated.

Jay Lush, the father of animal breeding, said, "Breeding stock should be selected under the same conditions as those under which their progeny are expected to perform."

Since almost all cattle produced in the United States

go through a feedyard before slaughter it becomes obvious that gain tests should duplicate feedlot conditions.

The nutritional regimen practiced in almost all feedyards is a high concentrate one. Concentrate-to-roughage ratios of 8 or 9 to 1 are used almost universally. High concentrate diets contain more available energy than roughage. This high caloric density results in improved conversion and lower cost of gain.

Unfortunately, some strains of cattle do not have the ability to handle high grain diets which results in an increased incidence of such problems as bloat, founder and difficulties with feet and legs. These problems lead to poor performance both on the gain test, and later in the breeding pasture.

Further, some bulls get too fat on high concentrate diets indicating undesirable yield grades in the carcasses of their offspring.

When the above problems occur the breeder is tempted to correct the situation by changing the diet in order to present his bulls in better condition. This is a mistake and the bulls which cannot handle high energy diets should be culled along with their ancestors.

The old cliché, "Good sailors hail from stormy seas," fits this situation. The breeder's goal should be to improve the genetic ability of cattle not to handle them so as to cover faults.

Some breeders argue that cattle are ruminants and utilize roughage more efficiently than other meat animals and therefore should be tested on roughage. Cattle are ruminants but all cattle do well on roughage while only certain strains can handle the feedyard rations. This difference is due to genetics and such cattle should be identified and multiplied if breeders are going to provide commercial cow-calf herds with the genetic material they need.

Mention was made above to the fact that some bulls get too fat if gain tested on high concentrate diets. This too is controlled by genetics. If bulls are tested on low-energy, high-roughage rations, those individuals genetically predisposed to excessive fat deposition will not be identified.

When bulls, steers and heifers of similar genetic makeup are fed the same the bulls will be leanest, the steers intermediate in fatness, and the heifers fattest.

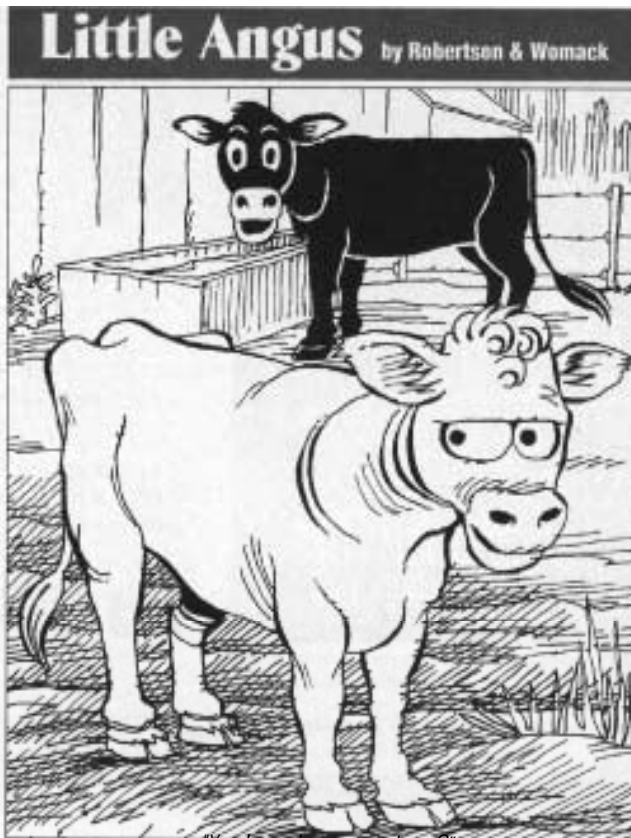
Therefore, if a bull is gain tested under feedlot conditions and is carrying much finish at the end of the test he has failed because his steer and heifer progeny will carry even more finish when fed for slaughter.

The performance that bulls record on gain tests is also affected by management.

For example, if bulls are fed individually with no competition for feed or bunk space a shy bull might record a much higher rate of gain than had he been tested under feedlot conditions. The same could be true if bulls were tested in large pens or on pasture rather than forced to compete in a feedyard situation. Good bulls are aggressive for feed, water and space.

Remember, breeding stock should be selected under the same conditions as their offspring will encounter. Therefore, bull calves should be uniform in age, go on feed at approximately 8 or 9 months of age, and be fed a high concentrate diet in a feedlot situation. After 140 to 150 days, the bulls should be evaluated for rate of gain and composition.

If a bull has not gained well, has developed any unsoundness, is inadequate in muscling or is too fat, he should be culled—not sold as a performance tested bull.



"You been in a snowstorm?"