
FEEDING COTTONSEED AND COTTON BYPRODUCTS TO BEEF CATTLE

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The cotton plant provides three excellent feeds for beef cattle. These include whole cottonseed, cottonseed meal, and cottonseed hulls. A short discussion about the feeding of each product is presented below.

WHOLE COTTONSEED

Cottonseed can be used for beef cattle producers to replace other more expensive energy and protein supplements. Cottonseed are approximately 23 percent protein and 96 percent Total Digestible Nutrients (TDN) and 23 percent fat. Cottonseed should be substituted at the rate of two pounds of cottonseed to one pound corn and one pound of cottonseed meal up to 3 or 4 pounds of seed for weaned calves and 6 pounds for cows. The amount of cottonseed utilized in a ration must be limited because of the oil content of the seed.

Guidelines for Feeding Whole Cottonseed

- (1) Feed only gin-run cottonseed. These are whole, non-delinted and untreated seed.
- (2) Feed only dry seed that are not moldy. Damaged or moldy seed may contain aflatoxin.
- (3) Feed cottonseed without processing. Grinding does not improve feeding value. In addition, the lint from the seed may clog the screen.
- (4) Whole cottonseed should be hand-fed. Whole cotton seed do not flow well through self feeders. Salt or other intake limiters do not mix well with whole cottonseed.
- (5) Consumption of whole cottonseed should be limited to 6 lbs./day for mature animals and

3-4 lbs. for weaned calves. Whole cottonseed are not recommended for young calves.

Overconsumption of whole cottonseed may cause scours. Producers should try to limit the fat content of rations to 7 percent.

- (6) Do not feed whole cottonseed to young bulls. It has been reported that feeding the seed has caused temporary infertility.

Handling of Whole Cottonseed

The feeding of whole cottonseed is limited because of their bulk and handling characteristics. Whole cottonseed do not move through grain storage bins or augers very well. The best method of storage is an open bin or shed that can be kept dry. The best methods for handling whole cottonseed are using a front-end loader, seedfork or scoop. Whole cottonseed may be fed on the ground in dry weather, however, feeding losses are reduced when fed in a trough. Be sure to provide enough trough space to allow all animals to eat at one time.

COTTONSEED MEAL

Cottonseed meal is considered as one of the standard protein supplements in beef cattle rations. The analysis of cottonseed meal will depend on the process used to extract the cottonseed oil. The standard cottonseed meal is 41 percent crude protein on an as fed basis. Cottonseed meal that is 50 percent protein is also available. The TDN will run between 75 and 80 percent, depending on the extraction process. Cottonseed meal can be fed to all classes of beef cattle without problems, except calves under 4 months of age. Gossypol, a compound found in cottonseed meal, has been shown to be toxic to calves in some situations. It is recommended that the amount of cottonseed meal fed to the animals be limited.

COTTONSEED HULLS

Cottonseed hulls make an excellent roughage to use self-fed rations. The hulls are low in protein, with much of this being indigestible. The TDN of cottonseed hulls is approximately 42 percent. Cottonseed hulls are low in calcium and very low in phosphorus, and are lacking in carotene. This is usually not a problem because the hulls are used to “bulkup” a high protein, high energy ration. Cottonseed hulls are one of the best roughages available to use in a ration to limit intake and reduce the possibility of digestive upsets.

GIN TRASH

Gin trash is made up of cotton burs and stems, lint, leaf fragments, and some immature cottonseed. The gin trash is a byproduct of the ginning process and thus makes its availability limited to areas near cotton gins. The gin trash is a low quality roughage that can be used that can be used to stretch winter feed supplies. Beef producers must work closely with the local gin manager to secure gin trash that is not contaminated with chemicals used during the production of the cotton. Feed gin trash at your own risk. Remember: It is the responsibility of the beef producer to be sure there are no chemical residues fed. Residues found in carcasses are the full responsibility of the beef producer.

SUMMARY

The cotton plant provides several good feeds for use in beef cattle rations. Beef cattle producers should study the economics and handling characteristics of feeding these products.