



# Beef Tips

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Department of Animal Sciences & Industry

[www.asi.ksu.edu/beeftips](http://www.asi.ksu.edu/beeftips)

## Natural and organic beef; similar, but not the same

### Upcoming Events

**Tri-State Cow/Calf Symposium**  
January 27, 2007  
Benkelman, NE

**KOMA Beef Conference**  
February 15, 2007  
Fort Scott Sale Barn  
Fort Scott, KS

*Sandy Johnson, livestock specialist*

While natural and organic beef products are not likely to ever dominate the US market, demand for organic products has been growing at the rate of about 20% annually since the early 1990's. The market is estimated to be at \$25 billion plus in annual sales, with large specialists such as Whole Foods and Wal-Mart supercenters competing for customers. Certified Angus Beef is now offering natural products. Given the growth in this area, there may be opportunities for producers to participate and benefit. The first step in exploring that option is to understand the differences between natural, organic and other marketing claims of these specialized products.

organic crop. Vaccination and other preventative management practices are used to keep animals healthy. A sick or injured animal must be treated; however, if treated with a prohibited medication it cannot be sold as organic.

Operations selling less than \$5,000 per year are not required to be certified by USDA. These producers and handlers must abide by the national standards and may label their products as organic even though they are exempt from the certification. These products would have an "organic" but not "certified organic" label.

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### Organic

Organic beef meets the standards put in place by the USDA and these standards apply to product grown in the USA or imported from other countries. To be labeled as "organic" the entire production system, from farm to processor, must be inspected by a government approved certifier to make sure all rules are followed. This certification process allows producers to use a "certified organic" seal. Products can be labeled as "100% organic", "organic" (not less than 95% organic material) or "made with organic" (at least 70% organic ingredients). Details of the requirements can be found at: <http://www.ams.usda.gov/nop>.

Organic meat, eggs and dairy products come from animals that have not received antibiotics or growth promoting hormones. Conventional pesticides, synthetic fertilizers, sewage sludge, genetically modified products or ionizing radiation cannot be used in production. Livestock must receive organically produced feed and the land used to produce the feed cannot have had prohibited substances for at least three years before the harvest of the

### Natural

USDA's Food Safety and Inspection Service (FSIS) regulates the term "natural" on meat and poultry products. There are three requirements for use of the term "natural" on food labels. The product must be minimally processed. The product cannot contain any artificial ingredients or colors and the product cannot contain any preservatives. There are no requirements on the management practices during the life of the animal. While organic claims are certified by the USDA, natural programs are administered and regulated by the company or organization that owns the brand name (for example, Coleman Natural Beef or Painted Hills Natural Beef). Each natural program may have slightly different requirements. For example some programs do not use implants or ionophores such as rumensin, while others restrict their use during the last 100 to 120 days prior to harvest.

### Other labeling terms regulated by FSIS

NO HORMONES (pork or poultry):  
Hormones are not allowed in raising hogs or

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poultry. Therefore, the claim "no hormones added" cannot be used on the labels of pork or poultry unless it is followed by a statement that says "*Federal regulations prohibit the use of hormones.*"

### **NO HORMONES (beef):**

The term "*no hormones administered*" may be approved for use on the label of beef products if sufficient documentation is provided to the Agency by the producer showing no hormones have been used in raising the animals.

**NO ANTIBIOTICS (red meat and poultry):** The terms "*no antibiotics added*" may be used on labels for meat or poultry products if sufficient documentation is provided by the producer to the Agency demonstrating that the animals were raised without antibiotics.

### **Non-hormone treated cattle**

The Non-Hormone Treated Cattle (NHTC; <http://www.ams.usda.gov/lsg/arc/nhtc.htm>) program has been in effect since 1989, when the European Union (EU) and the U.S. agreed to control measures to facilitate the trade of non-hormone treated beef. Cattle for this program must be produced under an approved [USDA Quality System Assessment \(QSA\) Program](#). The QSA Program ensures that the specified product requirements are supported by a documented quality management system. Any farm, ranch, feedlot, or other entity interested in producing animals for slaughter and subsequent shipment to EU must have their control system approved in advance. The documented system will be audited by USDA to assure conformance with these conditions. This is the same process used to provide age and source verification to export markets.

### **Grass-fed**

The proposed standard for a grass (forage) fed marketing claim will be part of the voluntary USDA grade standards used in

conjunction with the USDA Process Verified Program. The wording of that claim is under reconsideration and USDA was taking comments on the claim proposal until Aug 10, 2006. Initially the grass-fed claim indicated that grass, green or range pasture, or forage shall be 80% or more of the primary energy source throughout the animal's life cycle. The new claim proposal under review stated: Grass (forage) fed--grass (annual and perennial), forbs (legumes, brassicas), browse, forage, or stockpiled forages, and post-harvest crop residue without separated grain shall be at least 99 percent of the energy source for the lifetime of the ruminant specie, with the exception of milk consumed prior to weaning. Routine mineral and vitamin supplementation may also be included in the feeding regimen. Grass (forage) fed claims will be verified by a feeding protocol that confirms a grass or forage-based diet that is 99 percent or higher.

### **Summary**

While many may think that natural and organic mean basically the same thing, they are defined and regulated differently. Use of the terms organic, non-hormone treated and grass-fed all use some type of audit-based system for which all participants must have documentation and programs in place to ensure the integrity of the claim. The use of the term natural has much simpler requirements and owner of the brand is responsible for regulating compliance. A more detail comparison of "natural" and "organic" can be found at: [http://www.uaex.edu/Other\\_Areas/publications/PDF/FSA-3103.pdf](http://www.uaex.edu/Other_Areas/publications/PDF/FSA-3103.pdf).

Until the standardizations were put in place by USDA in 2002 for organic food, the use of the term organic was not nearly as clearly delineated as it is now. As efforts grow to provide products for other specialized markets, expect the terminology and requirements to evolve with them.

## **2006 KSU Stocker Field Day Proceedings**

Topics for this year's Stocker Field Day included "Forces Shaping Change in the U.S. Beef Stocker Industry" and "Impact of Added Value Programs on Beef Stocker Producers" and more. A copy of the proceedings is available at [www.beefstockerusa.org](http://www.beefstockerusa.org). If you would like a printed version, please contact Lois (785-532-1267; [lschrein@ksu.edu](mailto:lschrein@ksu.edu)).

## Distiller's grains used properly can contribute to high performance, low-cost rations

*Chris Reinhardt, feedlot specialist*

Distiller's grains, either wet or dry, can make a valuable contribution to beef cattle diets, regardless of the animals' stage of production. However, there are various factors which need to be considered when determining their potential value in your production system.

It is important to understand that during the distillation process, the starch component of cereal grains (normally 60-70%) is fermented out of the grain to ethanol. By removing this fraction, the remaining nutrients are concentrated, roughly, 3-fold. For beef producers this can be beneficial, resulting in an affordable protein supplement containing roughly 30% crude protein. Also, after removal of the starch component and concentration of the fat and fiber fractions, distiller's grains are a good source of energy in the form of digestible fiber and fat.

However, some of the nutrients which become elevated in distiller's grains may limit their potential use in beef cattle diets. The phosphorus content (~0.8-0.9%) of distiller's grains may require the addition of more calcium in order to maintain a proper calcium to phosphorus ratio. Excess phosphorus in the diet will also result in increased excretion in the manure and the associated need to dispose of this phosphorus. Sulfur content of distiller's grains (~0.5-1.2%) may limit their potential use because excessive sulfur in the final diet may cause trace mineral imbalances, health problems, reduced intake, and possibly death.

The fat content of distiller's grains is beneficial to growing and finishing cattle as a concentrated energy source. But excessive fat in the diet of forage-fed animals can reduce forage digestibility resulting in lower net energy consumption and lost body condition.

One additional benefit of feeding distiller's grains in the wet form (WDG) is the conditioning factor this wet ingredient brings to an otherwise dry diet. This may stimulate consumption by growing and finishing cattle, particularly if all the other ingredients in the diet are dry and/or dusty. The moisture added helps tie the loose, fine particles together.

Conversely, dried distiller's grains (DDG) may actually contribute to dustiness of an already dry diet, due to the fine particle size. A dusty ration may not be palatable, particularly for stressed calves. This dustiness can be alleviated if even a small amount of some other wet ingredient, such as silage, is fed.

Handling is also an important consideration. Wet distiller's grain stored outside during the summer is subject to spoilage within three to five days. If the operation is not large enough to use a full load within this brief time frame, the product can be stored in sealed plastic bags to limit oxygen content and potential of mold development. Another benefit of sealed storage may be to improve the opportunity to purchase an excess supply of wet distiller's grain at a lower price.

Using dried distiller's grains reduces the risk of spoilage, but because of dustiness, they cannot be stored long-term outdoors. Also, due to high fat content, dried distiller's grains may bridge up in a gravity-flow bin. Ideally, the dried product would be stored in a concrete-floored commodity bay.

Variability can be an issue when feeding either the wet or dry product. Particularly, moisture level in wet distiller's grains between loads can vary greatly, affecting the actual amount of dry matter fed. Also, nutrient content may fluctuate over time, between loads, and between suppliers. There are also notable differences in nutrient content between distiller's grains originating from corn, sorghum, or a blend of the two.

In summary, factors to consider when formulating rations with distiller's grains include:

- Protein
- Fat
- Phosphorus
- Sulfur
- Moisture
- Storage options

If these factors are optimized and rations are properly balanced, distiller's grains can contribute to high-performance, low-cost production for beef producers.

***“...during the distillation process, the starch...is fermented out... concentrating the remaining nutrients 3-fold.”***

