

**The California beef producer is using an RFID and bar-code system to track cattle from birth all the way to the retail market.**

By Claire Swedberg

Mar. 31, 2006—Beef producer [Brandt Beef](#), of Brawley, Calif., is using an RFID and bar-code tracking system to keep track of its cattle, from birth to beef.

By using the GlobalTrack system from [GTR-Datastar](#), Brandt can automatically trace beef directly back from a retail site, such as supermarket or restaurant, to the specific animal and its origins. It can also track the beef forward to a retail site from a feed lot when necessary—such as during a meat recall. With better inventory visibility, the company can be prepared to act within minutes in the event that a meat product should turn out to have contaminants such as E. coli, or come from an animal afflicted by a disease, such as a cow with bovine spongiform encephalopathy (BSE), also known as "mad cow disease."



*Eric Brandt*

The application of the software combining RFID and bar-coding technology is a first, according to Paul Cheek, a partner at GTR-Datastar. Brandt, a family-run company, says it strives to offer higher-quality meat than that sold by large beef companies. Brandt guarantees its beef to be free of antibiotics and added hormones, and is now spearheading the use of technology to provide better information about the beef's journey from calf to harvesting and into the store.

Within the first day of birth, Brandt calves are first tagged with [AllFlex](#) ISO-compliant 134.2 kHz passive RFID tags on their ears. Handlers at the two California calf ranches that provide Brandt with their cattle use AllFlex handheld interrogators to read the tag ID number, which is entered into the GlobalTrack system, the Internet-based interface for tracking the origins of the product.

Authorized users of the system can query about the origins of a beef product through all stages of production—birth, feed lot, slaughter, distribution and customer. GlobalTrack integrates with Brandt's in-house, unbranded proprietary accounting software package, and data related to the calf, such as its date of birth, health and birthplace, is added to the GlobalTrack system

At four months, the calf is shipped to Brandt Beef's feeding lot, where the tag is again scanned with handheld readers, updating the animal's information. The calf stays on the feeding lot for approximately one year, then is shipped to Brandt's meat-processing facility. There the tag is scanned again before the calf is slaughtered. At that time, the system switches to bar codes, says Eric W. Brandt, vice president and managing partner of Brandt Beef, because many distributors and retailers are still using that technology.

"Currently, economics and customer demand are the major driver for using bar-code labels," Cheek

says. "We can easily move to RFID throughout the process if the unit price for RFID labels decreases and customer demand increases."

Brandt personnel affix a large bar-coded label to the animal carcass. The company first interrogates the RFID tag, which is disposed of, then scans the bar-code label, permanently linking the label's unique bar-code number with that animal. After the carcass is butchered, its ground meat is placed in 2,000-pound beef bins, and the animal's bar-code number is added to the ID label physically attached to the bin. Other meat is prepared for shrink-wrapping and labeling with identifying bar codes that link back to the animal's specific ID numbers in the system.



Paul Cheek

The distributor is the last to scan the bar code, thereby uploading into the GlobalTrack system the details of which animal's meat is present in each retail package, and where the package is being shipped. Some of these packages are wrapped for consumer purchase, while others are wrapped in bulk quantities to be shipped to a retailer, which divides the meat and places it in smaller consumer-sized packages. Each package has a label with a bar-code number linked to the animal's RFID-based ID number.

If a contaminated package of meat is identified anywhere in that process, Brandt Beef can identify which animals' meat was in the package by typing or scanning the package's bar-code number into the GlobalTrack system, then tracing the animals' life, locations and health history. Brandt Beef can also locate any other packages of meat from that animal. "From the standpoint of risk mitigation, we will know where the pieces went," says Brandt. The company intends eventually to extend the software system all the way to the retailer by making details about the meat available by entering the bar code on a password-protected GlobalTrack Web site.

"The system will not be totally open for privacy reasons, but we have plans to offer watered-down views that keep sensitive information anonymous," Cheek says.

"We're not a big Tyson or Excel or ConAgra," says Brandt, "We always have to stay one step ahead of the big companies to differentiate ourselves. Besides being all-natural, we are now following through the whole process further with this technology, which adds to the final testament of our product."

Because of the threat of mad cow disease in the United States and globally, says Cheek, trace-back capabilities are a major concern. What GlobalTrack provides, he explains, "is enhanced trace-back and trace-forward in a commingled environment." That commingling involves the use of both RFID and bar codes. As more companies transfer from bar code to RFID technology, Cheek predicts, the use of bar codes may eventually be eliminated in favor of RFID tags throughout the entire shipping process. "A lot of companies are gearing up for RFID but currently are still using barcodes," he says. The GlobalTrack system provides sharing of data on one single standard and integrates with other companies' software

accounting systems.