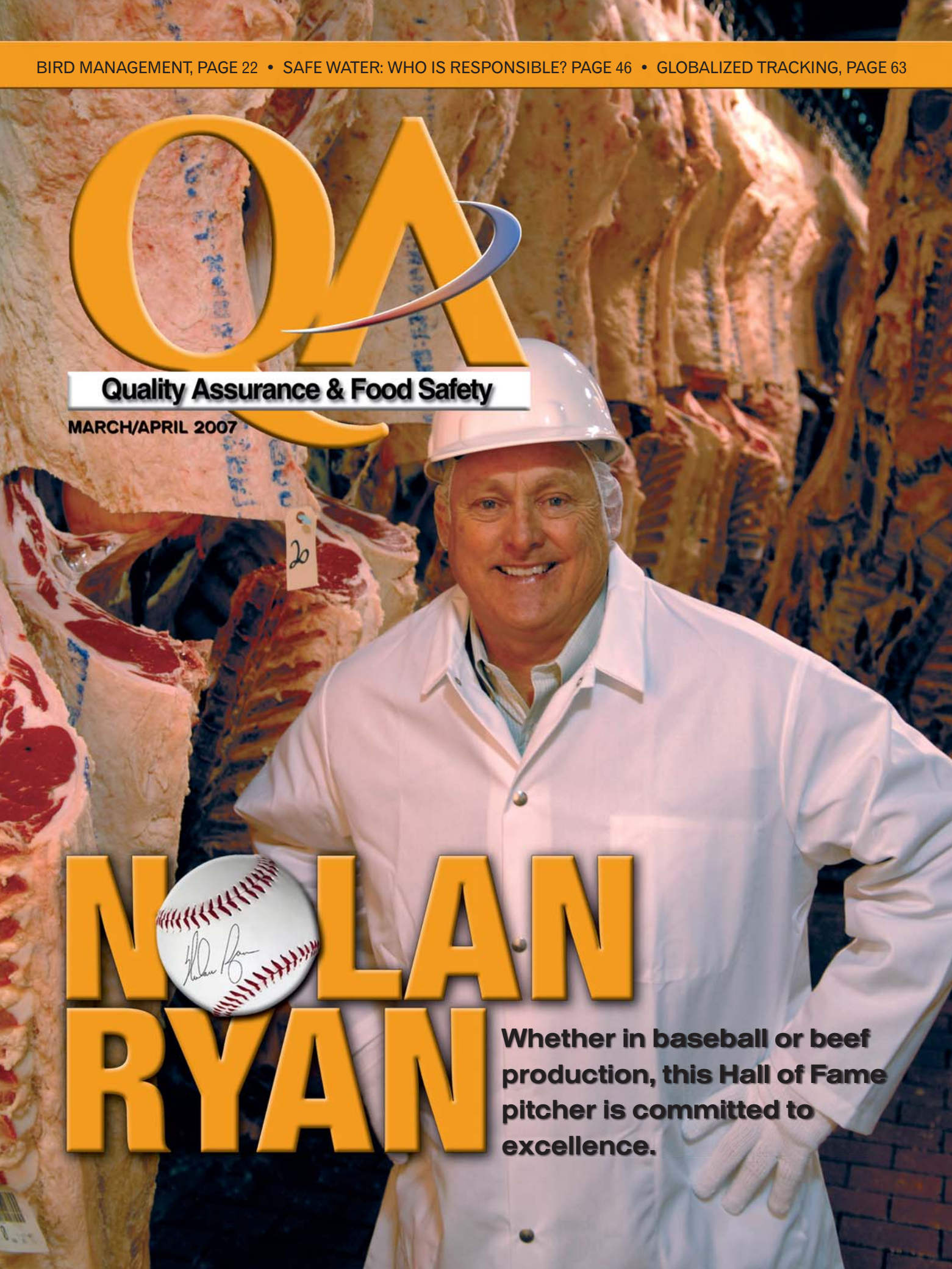


QA

Quality Assurance & Food Safety

MARCH/APRIL 2007



NOLAN RYAN

Whether in baseball or beef production, this Hall of Fame pitcher is committed to excellence.

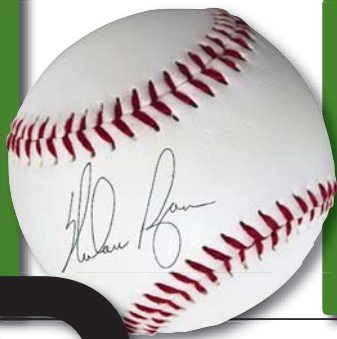


Plant Photos by Eddie Seal Photography

UNPARALLELED PERFORMANCE ON

BY LISA LUPO

Nolan Ryan



At any company, your brand is your reputation, but when your brand is equated with unparalleled performance and reflects record-breaking accomplishments of a basic American way of life, a food bearing that name holds a high accountability to exact its own exceptional standards in quality, as well as food safety, to protect that name.

Such is the case with Nolan Ryan's Guaranteed Tender Beef (NRB), an operation of Beefmaster Cattlemen LP. A legend in baseball history, a player known for dedication to his craft and exacting standards, and a man who has worked cattle since his youth, Nolan Ryan did not give his name lightly and, since the company's inception in 2000, Ryan has continued to be involved at various levels in all phases of the process from cattle breeding to distribution of Nolan Ryan's beef.

BEEF AND BASEBALL. Besides his family, to which he is clearly dedicated, Ryan has two loves in his life: baseball and cattle. There is no doubt that he made his mark in baseball — holding 48 records and having been inducted into the Hall of Fame by an almost-unanimous vote (For more information on highlights of Ryan's baseball career, see *Nolan Ryan: A Baseball Legend*, pg. 14), and since his retirement from the sport in 1993, Ryan has returned to his childhood milieu of ranching and is making his mark in the beef business. "I'm still involved in baseball, but my real focus is my cattle operation and the entire beef picture," Ryan says. Though Ryan has been a spokesperson



THE DIAMOND AND IN THE PLANT

Nolan Ryan at his ranch. Ranch photos courtesy of Nolan Ryan's Guaranteed Tender Meats



for a number of products throughout his baseball and retirement years, he is quick to note that he is not simply a spokesperson for NRB. "I'm part of the company and I'm involved in it," he says. "I'm a producer that puts cattle in the program."

"As a producer I'm very interested in the end product. I'm very concerned about the consumer having a good eating experience and about being consistent."

While lending his name to the product certainly brings it more recognition, adding flair and a designation of excellence, Nolan Ryan doesn't kid himself that his name is the definitive reason for NRB's ongoing success. In fact, he knows there's a great deal more to it. "You may get somebody to buy your product one time because of name recognition," he says. "But most of the time you only get one shot at them, and if the product isn't what

it's reputed to be, then the chances of getting them to do it again aren't very good."

So what *does* bring the customer back? Just as consistency leads to perfect results in baseball, so too does consistent quality lead toward perfection in the end product. "We think the consistency of the product, because of the specifications and the way the program is run, makes the difference," Ryan says.

And when you are a company like NRB which culls cattle from five licensed feedlots and processes the beef at non-NRB-owned plants (Sam Kane Beef Processors, Inc., in Corpus Christi, Texas, and Swift & Company outside Dumas, Texas), consistency is no small feat. For this reason, NRB has stringent specifications and employs a third-party service, Food Safety Net Services, for its food safety testing and verification.

In the production of virtually any food, there are numerous people, suppliers and stages integral to the success, quality and safety of the final product, some of which are internal, some outsourced. At NRB it is the successful integration of these that enables the end product to hold claim to — and guarantee — "tender, nutritious, and delicious or your money back." This means rigorous specifications for the beef from the ranch to the grocer, the meeting of USDA specifications for all-natural designation as well as certified tender and aged certified — certifications which NRB was the first to receive; and a consistency throughout the process and among contractors to ensure the end product is the same high quality every time.

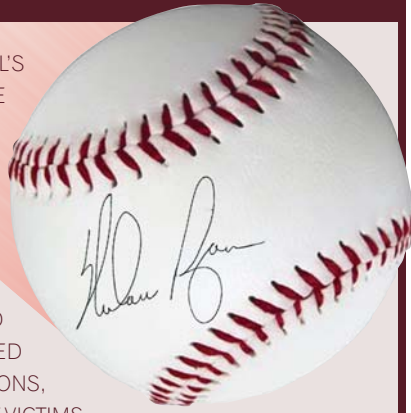
FOOD QUALITY GUARANTEED. When you commit to an all-natural, always-tender product, it is not only the consumer whose expectations must be met but also the regulatory labeling and certification requirements, and, at NRB, it is a process which begins at the ranch. "We only use five licensed feedyards that have to sign an affidavit stating that they feed according to our specifications," says NRB Quality Control/Sales Manager Mysti Richardson. Specifications that include specific feed requirements as well as giving the cattle 75,000 international units of vitamin E, using no growth hormones or antibiotics within the last 100 days, and providing records as to when the cattle were implanted. This not only adds to the tenderness of the beef, but enables its all-natural certification. In addition, NRB accepts only A maturity; young grain-fed steers and heifers.

Because the plants with which NRB works do process beef for other companies, the cattle in the Nolan Ryan program are tagged and run separately from any other product in the plant. While no other beef can be added to the NRB line, this does not mean that all

NOLAN RYAN: A BASEBALL LEGEND

"A FIERCE COMPETITOR AND ONE OF BASEBALL'S MOST INTIMIDATING FIGURES ON THE PITCHING MOUND FOR FOUR DECADES, HIS OVERPOWERING FASTBALL AND UNPARALLELED LONGEVITY PRODUCED 324 VICTORIES AND A HOST OF MAJOR LEAGUE RECORDS. LIFETIME BENCHMARKS INCLUDE 5,714 STRIKEOUTS, SEVEN NO-HITTERS AND 12 ONE-HITTERS IN 27 SEASONS PITCHED. LED LEAGUE IN STRIKEOUTS 11 TIMES AND FANNED 300 BATTERS IN A SEASON ON SIX OCCASIONS, INCLUDING A RECORD 383 IN 1973. STRIKEOUT VICTIMS TOTALED 1,176 DIFFERENT PLAYERS. A TEXAS LEGEND WHOSE WIDESPREAD POPULARITY EXTENDED FAR BEYOND HIS NATIVE STATE."

— NOLAN RYAN'S HALL OF FAME PLAQUE



Born Lynn Nolan Ryan January 31, 1947, in Refugio, Texas, major league pitcher and 48-record holder Nolan Ryan was inducted to the Hall of Fame in 1999, his first year of eligibility, attaining 98.8% of the vote on his first submission (491 of 497 votes). Other Nolan Ryan stats and facts:

- In the majors, Ryan pitched for:
 - 1966, 1968-1971
New York Mets (National League)
 - 1972-1979 California Angels (American League)
 - 1980-1988 Houston Astros (National League)
 - 1989-1993 Texas Rangers (American League)
- Ryan is recognized by the *Guinness Book of World Records* for the fastest pitch: clocked at 100.9 mph August 20, 1974.
- He is the only player to have had three teams retire his number: Angels, #30 and Astros and Rangers, #34.
- Playing a record-setting 27 seasons, the "Texas legend" was selected to eight All Star teams: 1972, 1973, 1975,

1977, 1979, 1981, 1985, 1989.

- Nicknamed "The Ryan Express," Ryan is now principal owner of the Round Rock Express as well as the Corpus Christi Hooks, both minor league Astros affiliates.
- Besides baseball and beef, Nolan Ryan's name has been given to:
 - two Texas roads named Nolan Ryan Expressway — one a state highway (288) leading into his hometown of Alvin, and a second running alongside the Texas Rangers' field in Arlington.
 - an Alvin High School ballpark, Nolan Ryan Field, commemorating his second no-hitter with the California Angels.
 - Nolan Ryan Junior High in the Alvin Independent School District for which ground was broken in January with a scheduled opening of 2008.
 - at least 100 children; and that's only counting those named Nolan, Ryan or both who came out to meet their namesake at the 1993 Nolan Ryan Appreciation Day.

beef originally designated for NRB makes it to the final product. This is because the beef must make it through a number of additional eligibility requirements to be deemed good enough to be called Nolan Ryan Beef.

Similar to many of today's reality shows, it is a process of elimination, beginning with the ruling out of any cattle that comes in with a medical tag. "They mark those with Xs as they're coming out of hot cattle, so those don't even come into our program," Richardson says. In addition, carcass weight must be between 600 and 900 pounds; yield grade 1 or 2; the ribeye area 11.0 to 16.4 square

To ensure consistency, Nolan Ryan Beef undergoes a number of quality control checks.



inches with slight 00 to slight 100 marbling and a maximum of 1/4-inch fat trim, and the beef assessed as tender according to the Smart Machine Vision BeefCam.

It is this piece of equipment that provides one of the most interesting and unique aspects of the NRB quality process. The computer vision system BeefCam, developed by Research Management Systems, Inc., from a system originally used in the clothing industry to measure fabric color, provides measurements for beef grading — assessing ribeye area and shape, marbling percentage, fat thickness, and lean/fat color.

"If it meets requirements when it comes past the BeefCam," says Richardson who operates the system, "I will stamp it with one of our T's [denoting Tender] saying that I've approved it. Then it goes to the USDA grader."

In addition, Richardson walks the rail, evaluating every potential ribeye section "to make sure I don't see anything on the rail that I don't think represents the Nolan Ryan name," she says, explaining, "I would rather not certify as many, but have confidence in those we do certify."

The USDA grader will then check Richardson's reports and randomly select five carcasses for assessment prior to putting its

own approval on the beef, enabling it to be USDA-certified tender.

It is this working with contract processing plants that enables NRB to be so selective. "They're allowing us to come in and say 'We want these, now you can have the rest.' They're letting us have our pick of what we want," Richardson says, adding "If our carcasses don't meet every specification, we don't take it." But it's not that "the rest" aren't good cuts of beef — in fact the BeefCam has a fairly low accuracy rate in designating non-tender beef, that is the pieces it passes as tender will be tender, but a good percentage of those it finds ineligible will still provide "a good eating experience." A carcass may be passed over because it is a single pound (0.001%) over the 900-pound maximum; the color may not have been perfect; or the ribeye was 0.25-inch too large. But by sticking to rigorous specifications every time, NRB knows that its product will be consistent, and consumers will get the quality they expect.

While these checks and assessments ensure that only the most tender of beef is used for NRB products, it is the practices along the supply chain that make the beef tender. In addition to the feedlot specifications, electric stimulation of the carcasses and an aging process add to the product's tenderness.

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Doing it right at Nolan Ryan Beef means exceeding all regulatory compliance requirements.

Sam Kane, who in conjunction with Texas A&M University, introduced the first commercial high-voltage stimulation system in 1978, says Quality Control Manager Darren Bammert. The electrical stimulation works by causing the muscles to vigorously contract, Bammert explains, thereby burning up all the excess lactic acid in the muscle which then prevents cold shortening when the carcass moves into the cooler. Basically it accelerates the entire aging process and enhances tenderness by up to 20%. On top

of that, Richardson says, the NRB carcasses are assessed by the BeefCam and aged for a minimum of 14 days, not only for tenderness, but also for taste. When the beef has been run through all NRB's tests and requirements, "the average is about 23 to 24 percent acceptance on the cattle that are fed to our specifications that actually make the program," Ryan says. "So we feel that through that, we pretty much have a consistent product."

FOOD SAFETY. When asked about food

safety, Ryan somberly replies, "I think it's a must"; then grinning at the obviousness of the statement, he adds, "I just really think that's an area you have to be very, very vigilant. On our end, we have to know that we have done everything properly; that we've gone through all the steps within our company; that we've done everything that we know; and that we've done it right."

Doing it right at NRB means going well above regulatory compliance in a multi-step program. This can be observed by walking through the process at Sam Kane Beef, one of the two plants contracted by NRB for processing. Sam Kane also produces beef for other brands, and for all its product, the plant implements a full process well above regulatory requirements, with even FSIS Inspectors In Charge impressed with the plant's program, Bammert says. The strictness and involvement lie in the steps "above and beyond [regulatory] standards that we require here and have adhered to for many years," Bammert says. These include:

- ① Prior to cattle entering the slaughter facility, Sam Kane takes the extra step of washing live cattle in their pens, thus ensuring that the cattle coming into the facility are visually clean.

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2. The plant's newly expanded kill floor has not only increased capacity but has allowed for a more thorough inspection of the carcasses, thus increasing quality output and making the plant more efficient.
3. Immediately after the hide is removed, the carcass is run through a rinse cabinet and sprayed with acidified sodium chlorite, thus providing "an early attack on bacteria," Bammert says. "We have an early intervention that will knock down, if not kill, most of the bacteria."
4. Following the initial cabinet, the carcass proceeds through multiple inspection points, including a final visual inspection by trained Quality Control Inspectors.
5. The carcass passes through the first of two validated carcass-rinse systems – a hot-water cabinet with a temperature of 190°F. This hot water rinse provides an instant reduction of any remaining bacteria that was not apparent under visual inspection.
6. The carcass is then run through the second rinse system, a lactic acid cabinet. "Hot water will eliminate bacteria instantly, whereas lactic acid provides a residual effect that retards bacteria growth," Bammert explains.

7. After chilling for 48 hours, and being graded by USDA personnel, the carcasses are run through one more pre-fabrication cabinet and sprayed with acidified sodium chlorite prior to entering the processing facility.
8. Prior to each day's operations, five product contact surfaces are randomly selected and tested for organic material. Additionally, before Nolan Ryan product is fabricated, 10 samples are taken for production lines and sent to an accredited third-party lab for further testing.
9. In addition to these process steps, Bammert says, there are many "little things" done at the plant to maintain food safety. For example, employees must do a complete change of outerwear each time they enter the plant area – including hairnet, coat, gloves and boots; with coats issued to employees in individual plastic bags from the supply facility.

This profusion of food safety initiatives was one of the reasons NRB chose Sam Kane as a packing partner. But in addition to these, Richardson says, the beef that is eligible to be used in a Nolan Ryan product faces further safety requirements. NRB product is always



Carcass weight must be between 600 and 900 pounds to meet Nolan Ryan Beef standards.

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QA COVER STORY

run first thing in the morning on clean lines. No other beef can be run on the lines prior to the NRB run. This not only ensures that it is run on the cleanest surface possible, but it also lessens any chance of carcasses or pieces that are not NRB-certified getting mixed in, Richardson says. "It preserves the integrity of the product."

FOOD SAFETY NET SERVICES. At plants processing NRB products, Food Safety Net Services (FSNS) is employed for food safety testing and auditing. "We have no laboratory on site, all of our testing is contracted through Food Safety Net," Brammert says. "That is their specialty. That is their profession. We feel they are more qualified than if we were to train or take on the lab work ourselves." FSNS provides an integrated network of services and industry expertise to improve the effectiveness of food safety and quality programs. The testing and verification conducted by FSNS "supports the production of products that meet the highest quality and safety standards present in the beef industry today," says President John Bellinger. "These practices ensure that the finished products sold to consumers meet quality and safety expectations." Specification of the NRB program include:

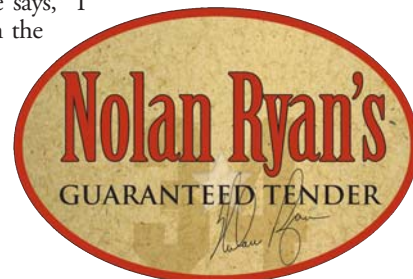
- Feed used by NRB-approved feedlots is verified annually, and cattle verified as being free from antibiotic residues at the time of slaughter, with one in 300 cattle tested by FSNS.
- All carcasses are electrically stimulated prior to chilling; chilled for at least 24 hours, then evaluated with the BeefCam following strict parameters and examined for overall microbial integrity both as required by regulation and for levels of aerobic plate count (APC) bacteria.
- Beef trim to be used in NRB ground beef is required to be at or less than four days from the boning date, and with lean designation accorded by specification.
- For ground beef production all fat levels must fall within a required tolerance; with no carryover product ever allowed, and maintenance of all products at 30 – 36°F.
- All trim is tested for APC, total coliforms, generic *Escherichia coli*, *Salmonella* spp. and *Escherichia coli* O157:H7. No trim positive for *E. coli* O157:H7 will be accepted.
- Finished ground beef is monitored by FSNS for APC, anaerobic plate count (AnPC), coliform count, generic *E. coli*, *Salmonella* spp. and lactic acid bacteria; shelf life testing is conducted to ensure product quality over time; and for each production day, a shelf life sample is held for 15 days at 35°F after which time it is tested for APC, AnPC, coliform count, generic *E. coli* and lactic acid bacteria.

NRB doesn't feel that its responsibility is ended just because the product leaves the plant. Rather, through its website (www.nolanryanbeef.com) and a customer newsletter, the company has put a conscientious effort into educating the consumer on food safety as well as proper handling and cooking for the best results. "I just don't think you can educate the consumer too much about that," Ryan says.

WHAT'S NEXT? For Nolan Ryan Beef, the next step may be overseas; in fact Ryan has a trip to Japan planned for this summer to research the market and determine the viability of such expansion. Why Japan? Because, Ryan says, "We think with their attachment to baseball, there may be an opportunity there that we need to investigate." While the company does want to continue to expand, growth for its own sake is outside the realm of consideration for NRB. "We would rather grow slow and do it right than to do a large volume and not be doing a good job," Ryan says. When he visits Japan, one goal will be to ascertain not only whether there is opportunity and viability, but also whether the company can "deliver the product that we represent it to be. That's why we have the specifications that we have."

"I'm pretty conservative," Ryan adds. "So for us to make a decision to move in a certain direction with our company, I have to be comfortable with it." The other principles of the company feel the same, he says, "I think that, as a whole, we have pretty much the same philosophies."

NOLAN RYAN – THE MAN. "I'm at the point that I'm just trying to focus on the things I'm involved with and really trying to not get involved in more projects," he says. When



Ryan retired after the '93 season, he thought it would give him a great deal of time to do all the things he wanted to do. "That was the biggest surprise about retirement is how busy you stay," he says. Truth be told, however, Ryan's "retirement" – ownership of Nolan Ryan Ranches and Nolan Ryan Beef; principal ownership of the Round Rock Express and Corpus Christi Hooks minor league baseball teams; Nolan Ryan Foundation fund-raising; speaking engagements; and husband, father and grandfather – requires more "work" than many full-time jobs. But, he says, it's work that he enjoys and loves.

Retirement from the game brought other surprises as well. "I was shocked when I got out of baseball, because it took me a few years to get over baseball and I wouldn't have ever thought that," Ryan says. "I guess I underestimated the grip it had on me." Probably the greatest change since that time, he says, is his lack of competitiveness. "From my days as a baseball player, now I'm not nearly as competitive as I used to be because I had to do it for so long. It was required; you had to do that to play on that level."

"I try to focus on the things I look forward to and enjoy," Ryan says, which, in addition to his work, includes trips "Out West" or snow-skiing with his grandkids. Just as Ryan liked to take his own children along when he traveled with his teams, now that his grandchildren are getting old enough, he is enjoying taking them on trips with him as well. In fact, Ryan and his wife, Ruth, recently moved from their childhood town of Alvin, Texas, to Georgetown to be closer to family.

While Ryan cites consistency as key to perfection, he also believes that flexibility is what will keep a business in the game long-term. "I think you have to be flexible to be able to make adjustments depending on what the industry and consumer are asking for, and I think that you have to not lose sight, as a producer, of the end product. I feel like we have a lot of producers that don't concern themselves with how they perform around that."

This very quality-consistent/business-flexible paradox is reflected in the most recent change to the NRB product logo. Simplifying its name to Nolan Ryan's Guaranteed Tender, with prominence given to Ryan's name, the logo includes the renowned Nolan Ryan signature and, in a just barely discernible brown on brown, Ryan's Houston Astros and Texas Rangers retired number 34. A number associated with inimitable excellence – exactly the association NRB wants reflected in the consumer's mind ... and tastebuds. **QA**

Lisa Lupo is staff editor of QA magazine. She can be reached at llupo@gje.net.

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