Setting the Bar

Prather Ranch uses every ounce to make a profit.

by ***Ed Haag***

If there is a single place where it all comes together — tradition, science, technology and finance — it is Prather Ranch, a 28,000-acre cattle operation based in a high-mountain valley near Mount Shasta in northern California.

This is the ranch that most cattle people only dream of — a cowboy nirvana, the big rock candy mountain and a bovine spa all wrapped into one scenic package with more than its fair share of idyllic mountain meadows, cool spring-fed streams and content Angus grazing lazily on lush green organic grass.

But don't be fooled into thinking that Prather Ranch is all about being pretty. When you cast an admiring gaze upon its likeness, you are looking at a model of high-end, consumer-driven beef production, and managers Jim and Mary Rickert have the reputation and the awards to prove it. In 2004 alone, the ranch was a nominee for the Beef Improvement Federation (BIF) Commercial Producer of the Year Award and the recipient of the Governor's Environmental and Economic Leadership Award (GEELA).

The Rickerts have operated the ranch since 1980 and are now managing partners. The Prather Ranch's principal owner is Walter Ralphs, of the Ralphs Grocery chain. He purchased the ranch in 1964.

Since taking charge of the management duties, the Rickerts have been directly responsible for developing not one, but two highly lucrative markets — the first supplying hides, bones and tissue to the pharmaceutical industry, and the second producing organic and natural beef for a bourgeoning consumer market.

In the process, much of the ranch has been converted to organic crop and livestock production, and an on-ranch harvest facility has been built to both U.S. Department of Agriculture (USDA) and International Organization for Standardization (ISO) standards. The ISO has the world's most rigorous regimen for tracking and processing meat products.

"The Rickerts have turned what used to be a traditional cow-calf operation into a ranch serving a profitable but very demanding niche market," says Dan Drake, a University of California, Davis, Extension farm advisor who has worked extensively with the Rickerts and is a frequent visitor to the ranch.

PHOTOS BY TERRY COTTON

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He sees the Rickerts' approach to ranching as unique in that they have spent the time to identify viable, high-return markets with specific requirements and have tailored their operation to meet those requirements. "This is a definite shift from the more traditional approach of raising a calf, then looking for a sale," Drake says.

Drake adds that what makes Prather Ranch's program work is the management's willingness to respond to a market in its infancy and provide a quality of product that satisfies customers and sets the bar for the industry.

As Jim explains, the benefits of this approach are twofold. Exacting standards have helped establish the ranch as an industry leader and have led to new opportunities in related and nonrelated fields.

Quality has its rewards

An excellent example of this is the ranch's participation in the American Angus Association sire evaluation program as a cooperating test herd. With a recordkeeping system, performance data collection procedures and a workable insemination schedule already in place, the sire program has proved to be a winner for both Angus seedstock producers and Prather Ranch.

"Since we were already doing everything they wanted us to do, it wasn't difficult to move into the program," says Tom Hill, Oregon State University ag faculty member and longtime consultant to Prather Ranch. "To test one bull you needed 170 AI (artificial insemination) services. That was no problem, since the ranch was already artificially inseminating 600 cows over the 28-day breeding season."

Hill notes that all the progeny in the program are born within 21 days of each other, raised and fed in the same pastures and feedlot, and ultrasounded within the same six-hour period. "Our cattle — the contemporaries and the tests — are managed virtually identically," he says.

The ranch has evaluated around eight bulls a year since joining the program in 1998. In return for providing the data, it receives free semen and a $1,500 fee for each bull tested. Hill estimates that the return to the ranch for its evaluation services alone is more than $50,000.

"Before entering the program we were spending at least $40,000 a year on semen," he says. "That is one cost we no longer have."

Million-dollar babies

If there is a single event that could be seen as the genesis of today's ranch operation, it

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occurred in the late 1980s when Jim was approached by a plastic surgeon and patent holder who was looking for a cattle operation that could provide hides for the manufacture of pharmaceutical-grade collagen.

The surgeon's manufacturer, Collagen Corp. of Palo Alto, Calif., was actively seeking a sole supplier that used only source-verified cattle. The objective was to eliminate the risk of spreading neurological diseases, such as bovine spongiform encephalopathy (BSE), from infected animals to people.

Collagen, extracted from bovine hides, is used primarily in reconstructive and cosmetic surgery. It plays an important role in a variety of medical procedures, ranging from skin grafting techniques essential in the treatment of burn victims to collagen-injection therapy used to control urinary incontinence. When injected under the skin, it eliminates wrinkles and facial lines, and it can be used in the enlargement and shaping of lips.

It is reported that the retail value of each hide is about $1 million once it has been converted to pharmaceutical-grade collagen. Although the financial return on the finished product is significant, so are the procedures leading to its production.

Because collagen is routinely introduced directly into the human body, the raw products used in its manufacture must conform to a rigorous code of standards that includes both animal histories and harvest procedures. On closer examination, Prather Ranch proved to be an excellent candidate.

With the exception of a handful of bulls, no new animals had been introduced to the operation since the 1970s. This was an excellent first step toward establishing a totally closed herd — one of the primary objectives of the collagen producers. During the past 15 years, the Prather herd has been totally closed to outside cattle and other livestock that might pose a health threat. Cows are either AIed using certified and tested semen or are serviced by ranch-born cleanup bulls.

Another objective of the collagen producers was to have a complete and comprehensive set of health records on all of the animals on the ranch. Because Prather Ranch had used the same veterinarian since the 1960s, those records were intact. Additionally, that same veterinarian was able to declare the cattle had never been fed ruminant-derived proteins, meat or bone.

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Geographically, the ranch also had advantages. Its isolation, in relation to other cattle, made the spread of diseases into the herd less likely; the mountain-fed springs, well away from sources of pollution, made the contamination of feed and drinking water unlikely.

Finally, the patents required that the product be manufactured from the hides of Angus and Hereford cattle or crosses of the two, and that was precisely what Prather Ranch raised. The breed requirements date back to the initial hides used in the original collagen production research.

Making it all work

Once it was determined that Prather Ranch was to be the supplier, the real work began, Jim recalls. Although the Rickerts were provided with Food and Drug Administration (FDA) and ISO standards, because they were the actual pioneers in the field, they were required to develop a set of written operating procedures that reflected those standards. Mary recalls the end product being a manual of exceptional thickness.

"We are talking about very precise instructions and a tremendous amount of recordkeeping," she says. "This business is not for the faint of heart."

The recordkeeping applies to animal health and genealogy as well as to the feed cattle consume and the environment in which they live. All use of fertilizers, herbicides and pesticides must be recorded, and surveys must be conducted to check for contamination in the water and soil.

Initially, the ranch shipped the cattle for harvest in Stockton, Calif., and hides were then sent to a collagen-manufacturing plant in Fremont, Calif. But, by the mid-1990s, concern for cross-contamination from the 1,000 other cattle harvested on the same day as their animals led the Rickerts and Collagen Corp. to enter in a joint venture that would result in the 1998 completion of a USDA/ISO-certified harvest facility on the ranch. Although designed to harvest 40 head a day, the ranch facility processes approximately 20 animals a week, or 1,000 animals annually.

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PHOTO BY SHAUNA ROSE HERMEL

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In addition to selling the hides directly to the collagen manufacturers, Prather Ranch is now delivering bone tissue to a Florida biotechnology firm, Regeneration Technologies Inc. (RTI), for use in spinal, orthopedic and other surgeries. "Bovine tissue creates a scaffolding on which a patient's own bone tissue can grow," says RTI Senior Corporate Quality Assurance Manager Michael Plew, adding that bovine tissue, like human bone tissue, has a higher degree of acceptance by the body than metal or plastic implants.

More with less

One of the major challenges facing Prather Ranch during the past two decades has been keeping up with the demand for product. The operation now maintains close to 1,500 cows in two herds on the same ground, and with less baled hay than was needed to run fewer than 350 cows in 1980, when Jim became manager — a testament to his ability to maximize the ranch's potential.

For much of this improvement he gives credit to a grazing program that optimizes the conversion of grass to beef. "Most of the gains we've made are directly attributable to the high-intensity, short-duration grazing model," he says, adding that it is also an excellent fit for the ranch's other niche market, organic beef production, as well as the ranch's underlying mandate.

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Mary admits that the decision to branch out into raising, processing and selling organic beef didn't require a lot of thought. "With our ranch already set up to raise animals for the pharmaceutical industry, it wasn't much of a stretch to convert over to organic," she says, adding that not having to keep records on fertilizers, pesticides and herbicides on much of the ranch has been a blessing.

In addition, Mary has been the driving force behind the humane treatment of animals at Prather Ranch, basing many of her ideas on the views of Colorado State University animal scientist Temple Grandin. She has developed an animal welfare policy for the ranch and educates employees on a regular basis about gentle treatment of the animals.

"You'd be surprised at how many of our customers purchase our meat not only for the taste, but because they know we treat our animals humanely," Mary says. "We've even converted some vegetarians back to eating our beef."

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Always room for improvement

For the Rickerts, one of the keys to running a successful beef operation is applying new technology to their ranch operation as soon as it becomes available. DNA testing is no exception. In 2004 Prather Ranch began using GeneStar® DNA tests for the detection of two tenderness gene markers in their herd sires. These DNA markers are a result of research done by the Beef Quality Research Center in Australia and the Roman L. Hruska U.S. Meat Animal Research Center (MARC) in Clay Center, Neb.

In the ranch's new program, bulls that test positive for the tenderness trait are retained in the herd as breeding stock. It is believed that their offspring are more likely to produce meat that will be tender. The test has received a preliminary validation by the National Beef Cattle Evaluation Consortium (NBCEC).

In addition to DNA testing to detect tenderness characteristics in their livestock, Prather Ranch also uses DNA testing to identify the offspring of each cleanup bull. "Parentage testing has worked very well for the ranch," Drake says. "It has allowed them to continue using more cost-effective practices, such as running multiple bulls in a herd, without compromising their data."

For Jim, the process can also be a real eye-opener. He recalls a bull that had wonderful conformation and was the most aggressive of the lot, but when the parentage DNA results came in, he proved to be more of a fighter than a lover. "We took care of that soon enough," he says. "Now just call him burger."