

Gentle Pays

By: Wes Ishmael

Recognizing the keener animal husbandry and different nutrition required by Wagyu can help them fulfill their potential.

“Everything we do is based on taking care of the animal,” says Dr. Jimmy Horner, a Texas-based nutritionist. “The first question we ask is if what we’re doing is taking care of the animal. We never want to get something out of the animal at the expense of the animal.”

Besides being the approach Horner takes in dealing with clients, this mantra serves as the foundation to Protocol Technologies at Bridgeport, TX, an animal nutrition and biotechnology company Horner founded in 1994 (more later).

This mantra of never taking something from the animal at the expense of the animal could have even more value to anyone raising, growing and finishing Wagyu cattle.

Horner first became acquainted with the Wagyu breed in 1994 when he was invited to Japan to present nutritional seminars to dairy producers. That first trip led to a long-term relationship with a businessman in northern Japan who also owned a dairy farm and, through his business, had ties to other dairies and Wagyu farms throughout Japan. He soon discovered that many Japanese dairies commonly have a herd of Wagyu beef cattle as well.

Ultimately, a large Wagyu producer in southern Japan asked Horner to consult with him and some of his fellow Wagyu producers, wanting his nutritional expertise to help advance their program. Before offering any advice, Horner felt the immediate need to learn as much as possible about the specifics of the Wagyu breed and the Japanese style of producing beef. He learned much in those early years and developed nutrition programs specifically for the Japan operations. The farmers were pleased with results and Horner still serves these same Japanese producers today.

Horner has made two or three trips to Japan every year since to visit clients. Along the way, he’s had a unique opportunity to see and learn about Wagyu cattle in the breed’s native land.

“In my 20 plus years of working in Japan, I’m convinced the biggest difference in the quality of beef produced by Wagyu cattle here compared to those in Japan is how the farmers take care of the cattle in Japan,” Horner says.

Understand Wagyu Differences

First, there is little if any pressure placed on milking ability and other maternal traits in Japan. Though the breed is highly fertile and Wagyu cows breed back easily, Horner explains, “Most Japanese Wagyu producers don’t leave their calves on the cow.”

Much like the dairy industry here, Wagyu producers in Japan remove calves from the mama within a few days of birth. The calves are fed by bottle or with an automatic feeder or both.

“As a result there are females in the breed that aren’t very good milkers,” Horner explains. He sees some U.S. breeders making strides in improving Wagyu maternal ability. He also knows of U.S. Wagyu breeders sending their calves to be bottle-fed at dairies. But, he realizes it’s not realistic to expect that on a large scale.

That’s why managing calf nutrition is so critical from the outset as breeders work to increase inherent milk production.

“Dairy producers typically make sure calves get colostrum no later than 12 hours after birth. They focus on the quantity and quality of colostrum and when calves receive it,” Horner explains. “And many dairy producers use a colostrometer to measure the quality. If the quality isn’t high enough they provide a supplement. That’s especially critical when it comes to first-calf heifers.”

Conversely, in most U.S. beef operations Horner says, “We hope the calf receives colostrum from its dam and that the quality and quantity are enough to keep the calf alive.”

Next, like dairy calves, Horner says Wagyu calves need more protein and energy than is typically supplied in most U.S. beef calf creep feeds.

In Japan, Horner explains the typical rations for Wagyu cattle being finished include more protein and less energy than here in the U.S. Specifically, high quality hay is usually removed from the ration by the time cattle are 18 months old or so. That’s when they utilize rice straw for a source of fiber. A major reason for that is the desire to stay away from providing high levels of Vitamin A.

Reductions in Vitamin A tend to accelerate the deposition of marbling Horner explains. “Over here, a lot of folks don’t yet realize the significance of this practice. Whereas, the Japanese were pioneers in discovering the antagonistic role vitamin A can have on marbling.” Consequently, Horner advises clients to stay away from fresh-cut hay in the second phase of finishing. Though rice straw is hard to come by here, he says there are plenty of other roughage choices such as wheat straw and grass hay. Ideally, Horner says grass hay fed during the final finishing phase should be six months or older to ensure low vitamin A content while alfalfa hay should be avoided altogether during this time.

Stress Robs Performance

Similarities between U.S. dairy production and Japanese Wagyu production extend to stress.

“In Japan, the cattle typically aren’t exposed to as much stress as they are in this country, especially compared to larger, more expansive commercial cattle operations” Horner says.

In a nutshell, Horner explains most Japanese cattle spend their lives indoors, so there is very little environmental stress on the cattle.

“That alone, can affect the quality of the beef product,” Horner says. In research he conducted at a feedlot in Iowa, Wagyu cattle in the last two weeks of the

finishing phase lost 10-15% of their marbling score when exposed to blizzard conditions.

Who feeds the cattle and how often also impacts animal stress. In dairy operations and in Japanese Wagyu operations, the same person feeds the same cattle at the same time every day, usually twice each day.

Horner also refers to research conducted at Colorado State University demonstrating the impact of weaning stress on ultimate carcass quality.

“If you want to get the most out of the Wagyu breed, the level of management needs to be more intense,” Horner believes. “We have to learn to apply more intense management if we’re going to capitalize on what this unique breed has to offer (and not at the animal’s expense).”

In fact, Horner often encourages clients and prospective ones that if they’re not willing to provide the extra management required of the breed, then they should consider raising a different breed of cattle. It’s not just the end result of casual management that concerns him, it’s the consistency of the result.

“The typical Japanese operation will have a tight handle on those 5 Cs every single day.”

The 5Cs Horner refers to are what he shared with participants at this year’s American Wagyu Association conference (see 5Cs of as Healthy Start). They include: colostrum, calories, cleanliness, comfort and consistency.

“Don’t listen to me, listen to you cows,” Horner tells clients and prospective ones. “They’ll tell you whether we’re taking adequate care of them or not.”

Wagyu-Specific Nutritional Supplements

With the specific needs of Wagyu cattle in mind, after a few years of consulting and learning in Japan, Horner began developing feed additives and supplements specifically for Wagyu breeders there.

Japanese producers typically manage their cattle without the use of antibiotics or growth hormones, what many in the country would consider the strict definition of all-natural.

“We took the same approach with Protocol Technologies,” Horner explains. “We emphasize the all-natural approach and trying to help U.S. producers be less dependent on things that concern consumers.”

So, rather than use antibiotics to combat and destroy specific pathogens, for instance, Protocol Technologies utilizes technologies such as bovine-specific probiotics and antibodies which target specific pathogens.

Probiotics are live, naturally occurring microorganisms that create an environment in the animal’s digestive tract which is not conducive for growth of harmful pathogens. The end result is improved digestion and subsequent enhancement of performance and immune function.

Antibodies are produced by the body to identify and rid the body of bacterial or viral antigens. “This process occurs in a very direct and rapid manner if the type

and level of antibody used is specific for the predominant pathogen present,” Horner explains .

Protocol Technologies manufactures and distributes more than 150 different products, everything from species-specific nutritional products, to highly specialized biotechnology-based products. These include host-specific, direct-fed microbials, live cell yeast blends, baby calf products, natural vasodilators, show animal supplements and **energy** drenches.

“The more stress there is, the more the cattle benefit from these specialized products, whether it’s to stimulate immune system, digestive system, blood flow or removing pathogens from the intestine,” Horner explains.

One of their newest products is a probiotic containing natural vasodilators which increase blood flow and provide a greater supply of essential nutrients at the animal’s tissue level.

Horner has worked at developing this particular product with all natural vasodilators for almost three decades. Think of a trait and the associated performance you’d like to increase—milk production in dairy cows, marbling deposition in beef, etc. In simple terms, these compounds can enable such increases at a significant rate without the use of drugs.

Horner works with local feed suppliers to formulate rations using local commodities and Protocol Technologies’ specialized pre-mixes, whether the feed mill is somewhere in the U.S. or Japan.

“We’ve been able to make it so that this technology is available to all producers wherever they may be,” Horner explains.

“We offer these products and technologies along with our expertise, but nothing replaces good animal husbandry and/or good management. Understanding and applying the basics of animal husbandry are so vital before you get caught up in the complexities of things like animal health and nutrition,” Horner says. “The focus has to be on the health of the animal first and foremost, the animal feeling good, their rumen working properly and them eating aggressively every day.”

The 5 Cs of a Healthy Start

Dr. Jimmy Horner of Protocol Technologies at Bridgeport, TX believes these are the five critical components essential to giving Wagyu calves the chance to express their potential.

Colostrum

- Rich in nutrients and antibodies, immune protection
- Must be ingested by calf first 12-24 hours
- Calf is inoculated with E. coli and other pathogens with onset of nursing
- Consider supplements for calves from first-calf heifers, which have lower-quality colostrum.
- Proper nutrition of the dam is critical including energy and protein, minerals

- (including potassium, selenium and zinc) and vitamins A and E
- Consider vaccinating dams with E. coli vaccine pre-calving
 - Monitor colostrum quality with tools like a Colostrometer or Brix refractometer.

Calories

- Emphasize milk yield of dam through genetics and nutrition; cheapest source of nutrients
- High quality creep or starter feed as soon as possible to stimulate rumen development; do not use low-quality creep feed
- Creep feed is most critical in pasture systems with poor milking dams
- Try to wean by 3-4 months and no later than 5 months
- Both creep feeding and early weaning = higher quality, heavier marbled carcasses
- Feed consumption is best criterion for weaning; probiotics help.
- Offer fresh, clean drinking water to calves
- Consider adding electrolytes to water in extreme conditions

Cleanliness

- Clean, comfortable, dry conditions,
- Avoid calving in wet, muddy, or dirty areas
- Poor conditions at calving = sickness and death loss
- Proper sanitation of equipment, housing, hands, etc. Anything that touches the calf's mouth.
- Fresh feed and water

Comfort

- Shelter from extreme weather
- Pest control
- Accessible feed and water
- Most Japanese care for calves as family members
- Calves should always be restrained with minimal stress (chemical or mechanical)
- Employees should be trained on safe, low stress handling and provided the time and resources needed
- Stress impacts feed efficiency, growth, reproduction and carcass quality more than any other single factor

Consistency

- Probably the most challenging of the 5 C's
- Consistency of newborn protocols and daily management is of utmost importance
- Observe and feed at the same time everyday
- Managed by same person every day
- Japanese operations are highly uniform and consistent

- American operations are much more variable and diverse, which can lead to inconsistency

“Until we strive for greater consistency at every point in the life **cycle** of this wonderfully unique Wagyu breed, we will continue to experience a highly variable product and the many accompanying frustrations and challenges,” Horner says.

(You can find Dr. Horner’s presentation at www.wagyu.org)