Wagyu cattle look different from the typical beef animals raised in the U.S. Most stockmen seeing Wagyu for the first time are not impressed, thinking they look more like a dairy cow (except for the small udder and lack of milk) than a beef animal. There are some major and minor differences that are unique to Wagyu, some of which are very positive traits that could be beneficial in beef crossbreeding programs in the U.S.

**Beneficial Traits** - Charles Gaskins, a Washington cattle breeder/animal scientist retired from the faculty at Washington State University says the most obvious trait and the one that U.S. breeders are most interested in is marbling. “These animals have the ability to deposit an extreme amount of marbling. The Wagyu cattle deposit fat in the muscle rather than on the external portion of the carcass,” he says.

“I’ve looked at a lot of Angus-Wagyu cross cattle and they marble very well, but they do put on quite a bit of external fat, taking after the Angus side. As you increase the percentage of Wagyu in these animals, they tend to put less fat on the outside of the carcass,” says Gaskins.

“In contrast to our U.S. beef cattle, the Wagyu marbles highly, but doesn’t have as much back fat,” says Jerry Reeves, PhD (retired from Washington State University, Animal Sciences Department). “They have less external fat (under the hide) but they do have a lot of internal fat, and more kidney fat than our cattle. You can get a fairly decent yield grade with the Wagyu fullblood or crossbred—without so much external waste fat that has to be trimmed off—and still get a Prime carcass,” Reeves explains.

“Two of the other beneficial characteristics of Wagyu are meat tenderness and flavor,” says Gaskins. “On average, the meat from these cattle is a lot more tender than that of other cattle. Wagyu meat also has a different flavor and most consumers really like it. The flavor comes from the fatty acid composition, which is a little higher in mono-unsaturated fatty acids than other meat. Some Wagyu breeders like to promote the idea that it’s healthier, but this hasn’t been directly proven in humans.” There is some circumstantial evidence to indicate it might be healthier, but there are no definitive studies in humans to prove this.

“Researchers have tested these fatty acids in mice, and we know that certain fatty acids in mice make a difference when they are fed large volumes, but we can’t necessarily assume it’s the same in humans,” Gaskins says.

“Those are the key positive traits, along with ease of calving. The calves are small at birth, and this makes it attractive to use Wagyu bulls on beef heifers. The resulting calves have more value than when using other easy-calving breeds like Longhorn or Jersey.” The producer can get a premium for the half-Wagyu offspring.

Bob Estrin, owner of Lone Mountain Ranch near Golden, New Mexico, says the fullblood calves weigh about 55 to 60 pounds at birth. “With F1 crosses, calves average about 70 to 75 pounds. If Angus producers want to add beef quality and get rid of dystocia problems, a Wagyu bull is the way to go. The crossbred F1 calf will be smaller than the typical Angus calf. And if fed properly, 95% of those F1 calves will grade Prime. This is quite different from Angus or other beef breeds, because only 3 to 4% of commercial calves are currently grading Prime. According to the Beef Quality Audit, 9% of consumers want and are willing to pay more for Prime-graded beef,” says Estrin.

Another plus with this breed is temperament. They are docile, gentle animals. They have been handled intensively by people for so many generations, in Japan, that there was probably some selection for docile disposition. “They are very curious and friendly animals. My daughter and I went walking through a pasture, and she said, ‘You are not going into that pasture with that bull, are you?’ and I said ‘Sure!’ These bulls are gentle, and so are the cows. Some breeds will chase after you, but with Wagyu bulls we can go into their pen and pet them all. They are very easy to handle.”

**Less Desirable Traits** - “On the negative side, depending on the lines of Wagyu, these cattle are smaller and slower growing than the typical beef animal,” says Gaskins. Fullblood Wagyu are usually harvested at 28 to 30 months of age.

“You have to pay for extra feeding time, but the end result is worth it, in premium prices,” says Estrin. “Wagyu breeders need to get more for these carcasses, however, because they have invested all that time and money to feed them out correctly,” he says.
Proper marketing is important, however, to get these carcasses to the customers who want them and are willing to pay more for them. “If a person tries to shortcut to get to the end product, they will pay the price in less marbling and thus less value for these carcasses. You cannot shortcut these cattle; Wagyu require patience. In Japan they were selected for their beef potential, not for fast growth,” says Estrin.

In black Wagyu, there are 3 basic lines. “The Tajima line tends to have better marbling characteristics but is also smaller and slower growing, with poorer milk production than the other lines,” Gaskins says.

“You’ll get different opinions from different people regarding why these cattle are slower growing. Some people feel part of the problem is on the calf side, rather than just the cow’s milk. They feel the calves don’t nurse as aggressively and therefore don’t challenge the cows enough,” he says. Nursing is what stimulates the cow to produce more milk, and these calves don’t nurse as often or as vigorously as other calves.

Wagyu cows don’t produce much milk and were obviously not selected for milk production. “The Japanese have been raising these animals for 100 years this way, and simply wean them early,” says Estrin. “We wean ours at 4 months of age and add creep feed to their pasture diet. They do fine on grass and creep feed after weaning,” he says.

“Wagyu are very poor milkers,” says Reeves. “This is because Japanese breeders weaned the calves at about 3 months resulting in this weakness for the breed. The nice thing about their udders, however, is small, well placed teats. There are no bad udders or big teats that calves can’t get on when they are first born.” The Wagyu cross has improved the udder structure on other breeds.

Their unique horns are often seen as a drawback. “Their horns don’t grow very long, but are very large at the base, which makes it hard to dehorn. This is one reason we’re trying to develop a polled line. The Japanese, by contrast, never allowed registration of polled animals. If you had a naturally polled calf, you could not register it because they thought it was a defect,” Reeves says.

“We’d like to have a polled gene here, however, because Wagyu are so hard to dehorn. The large horn base makes it difficult to use a regular dehorner and do a nice job. It’s also difficult to dehorn them really young (with dehorning paste or the Buddex electric dehorner) because sometimes they don’t have much bud,” he explains.

**Fertility** - The cows and bulls may not reach puberty as quickly as other breeds, but are very fertile and have a long life of production. The bulls have smaller testicles than other beef bulls, but good sperm quality. “The real question is whether the smaller testicles have a bearing on fertility. These bulls definitely get the cows bred. Anecdotal information shows that these bulls have good fertility,” says Gaskins.

“The bulls are very active, and will cover more cows in a breeding season than most beef bulls will,” says Reeves. “The Japanese breeders generally put one bull with 50 cows. We haven’t tried to go that high but we’ll put a bull with groups of 30 to 40 and in some groups I’ve had 45 cows with a bull. I think Wagyu bulls are more active than the typical beef bull, partly because they are very fertile and athletic, and not as big, and have durable hind leg structure. They hold up much better than a post-legged bull,” he says.

The cows are also very productive, re-breeding and raising calves for many years—usually staying in the herd longer than cows of other breeds, in spite of carrying less body condition. It’s hard to judge body condition of a Wagyu compared to an Angus, for instance, because of the difference in how they store fat. But Wagyu cows seem to have enough fat reserves to cycle and breed even if they look thinner.

“It’s hard to put a body condition score on Wagyu because they always look thinner than the average beef cow,” says Reeves. “They seem to have more fat in the kidney, intestine and pelvic areas, so they do have some fat reserves even though they don’t have much fat covering their muscles.” This may be part of the reason they still have good fertility at what might look like a low body condition score. They still have fat reserves where it counts—a bit like a dairy cow that tends to have more internal fat than a beef cow and can still cycle even while looking thin.

“Wagyu cows might not look like they are in good condition but they are still cycling, and conceive. If they are still cycling and have good pregnancy rates, they must be fat enough,” explains Reeves.

Wagyu have good fertility and tremendous longevity, compared to American beef cattle. “This is one of the advantages I see in Wagyu; their longevity is tremendous under tough conditions,” says Reeves. “It’s common to have 18-year-old cows still producing, in a Wagyu herd.” In our American cattle, it
usually takes a good crossbred beef cow to last that long, and most of them don’t. Wagyu cows just keep coming in pregnant and keep raising a calf.

**Conformation** – Typical Wagyu conformation is thick through the chest, thin in the hindquarters, a little weak in the back, fine bone, poor milking ability, and perfect teats. Wagyu cattle have a wide front end and smaller rear end than the typical beef animal. They were originally draft animals, needing a strong front end for pulling carts and plows. The way these cattle were selected in Japan created a different type of animal than what we are accustomed to in this country.

“The Japanese people didn’t start eating red meat until about 1860,” says Reeves. “Even up until the 1950’s these cattle were used as draft animals, working in the rice paddies and mines. Thus they have heavier shoulders, built for pulling. They are wider between the shoulders than most beef cattle.”

Wagyu are thicker in the front end, but have a lighter, more peaked hind end. “They don’t look like anything our local cattle judges would choose. They are finer boned and at first impression you might think they have some dairy breeding, except they don’t give much milk,” Reeves says.

“Traditional U.S. cattlemen like to see a big hindquarter on a beef animal,” says Gaskins. “But the lowest valued cut is the round! So why do we care if an animal has less muscling in the hindquarter? The only drawback is less yield. Wagyu conformation is something U.S. cattlemen don’t like, because they are not familiar with this trait.”

“Wagyu structure and conformation enables them to hold up longer,” says Reeves. They are built more like a wild ungulate, with adequate angle in the hind legs rather than being post-legged like many club calves and beef bulls.

“Our show cattle are mainly post-legged and tend to break down at a young age. It makes you wonder whether we are selecting for the right things. The type of cattle we seem to be selecting for at the big cattle shows won’t hold up. They may do fine in a small paddock for a while, but they can’t handle tough country out in the mountains,” says Reeves.

“The Wagyu are so non-conventional, and so peaked in the hind end that most cattle producers wouldn’t think of them as beef animals. When I was young, the judging coaches always told us to select cattle with lots of muscling in the hindquarters because it would carry up through the loin. That idea has stuck with U.S. cattlemen,” says Reeves.

“With ultrasound, however, we can now determine which animals have the biggest loin. Actually the rump is the least valuable cut in the entire animal. The loin is more tender and flavorful, and the most valued cut. The hind end, which cattlemen still select for, is the wrong focus. They should be selecting for a good loin,” says Reeves.

“Wagyu cattle actually add more loin to other breeds. If we cross them with Angus, they usually add an inch or so of loin to the crossbred offspring—with a much better loin than the Angus.”

**Athleticism and Adaptability** – The Wagyu seems to be very adaptable, thriving in a variety of environments. Japan has some high elevations and cold weather, as well as many regions at sea level.

“The Japanese people used these cattle in the mines and in the fields, and they thrived in every environment,” says Reeves.

“They are also better grazers than any other beef breed we’ve worked with. Our cattle run in the Snake River Breaks which is very rough. If we turn out beef cattle that have never been in this environment they generally stay in the bottoms and won’t climb up the canyons, and they don’t do very well. The Wagyu and Wagyu crosses climb right to the top,” Reeves says.

They have the structure and athleticism to travel and climb. They travel all over the mountains, more like an elk. “We may not see them for months, and in that situation they also start to act like a wild animal and you can’t keep up with them. They will outrun a good Quarter Horse. They seem to tame down quicker than most cattle, but they can also become quite scared of people if they don’t see us for a while. So we try to keep in contact with them. If we plan to move them, we go out there ahead of time and call them and drop some hay, and keep them a bit more attached to us, associating us with food—and they respond,” he says.

“We feed them in winter for 90 days and they get used to us, but as soon as grass comes on in the spring, they want to go back out. They are truly a natural range animal, and work very well in our rough country where cattle have to make a living. Everyone’s situation is different, however. Some people raise them like pets,” says Reeves.
They have a different mentality than our cattle and it’s hard to describe it. When we come down out of the canyons with these cattle in the fall, they don’t always come readily. When I was a kid and we rounded up cattle, they’d always come down a trail and work down to the corrals. But with Wagyu, you might start them down a trail and they’ll just turn around and go back up the canyon. This can be frustrating when you are trying to gather them, but they do very well in rough country,” he says.

“The Australians, who were using mostly Brahman cattle in some of their arid outlying areas, tell me that Wagyu are fitting in very well in very arid country. They do much better in the heat than most beef cattle, even though they are black. They don’t have as much fat insulation and also have thin skin, and are therefore able to get rid of body heat more easily than most beef cattle. Their hide is very thin, and you have to be careful when branding them because it’s more like branding a horse. The thinner hide enables them to tolerate and dissipate heat better than most black cattle, and they seem to handle cold weather, so they are fairly adaptable,” Reeves says.

**Difference in Feed Efficiency** - Another difference between Wagyu and the typical beef animal is in how they perform in a feedlot. “They don’t have as much appetite as other beef animals. They eat awhile, go lie down for a while, and then come eat again, rather than continuous eating. This doesn’t help them on growth. Most beef cattle come up to the bunk and stand there and keep eating,” says Reeves.

“We are starting to evaluate Wagyu cattle for feed efficiency, using the GrowSafe systems to help us determine their efficiency. We are trying to select breeding stock based on which ones are more feed efficient—using the top bulls for feed efficiency and then looking at carcass data from their offspring,” he says.

Wagyu are typically fed a lot slower and longer than other beef cattle, and there’s not as much concentrate needed. “When we fed Angus alongside them to compare, the Angus go to a certain degree of marbling, and that’s it. If you keep feeding them, they just put the fat on their back. Wagyu keep putting it into marbling, and not so much on the back. So there are several advantages to the crossbred animal. They gain quite well, with plenty of marbling, and the industry likes the carcass result,” Reeves says.

**Profit Potential** – “People are willing to pay for quality, and these cattle produce quality carcasses,” says Estrin. “The profit potential is what many people look at when they decide to raise Wagyu,” he says.

“We’ve had this ranch in our family for 50 years. I started managing it in 1995. It was a commercial cow-calf operation until 2005. Those 10 years were tough; the margins were excruciatingly narrow. The price of fuel, machinery, labor and everything else kept going up, but calf prices did not. Now we are in a time of high prices for cattle, but it was a real struggle for the 40 years we were raising commercial cattle,” says Estrin.

“Today, we get a premium if we sell an F1 calf to the feeders, over and above the commercial grid price. We’ve also found that people who want to get into the Wagyu breed are willing to pay a high price for heifers and bull calves.”

The Wagyu’s greatest strength is carcass quality. “Their carcasses are much superior to what we are seeing in other cattle,” says Reeves. “Some of the big outfits are starting to use more Wagyu in their programs. Agri-Beef bred 31,000 Angus heifers to Wagyu this past year. In their feedlot at American Falls, Idaho, they have about 18,000 half-blood cattle on feed currently.”

He feels this is probably the direction the U.S. beef industry will take, utilizing more Wagyu crossbreds and producing half-blood animals as a terminal cross for beef. Rather than trying to produce large numbers of fullblood animals for slaughter, by using half-blood cattle, we can produce a lot more total carcasses, breeding many other breeds to Wagyu bulls.

**Fat Differences** – Wagyu fat is different from typical beef fat. “It has a lower melting point and is a softer fat,” says Reeves. “Most people think this is where the desirable taste comes from. When you examine the carcass, you can feel that the fat is softer. People select for this trait because of enhanced taste, but the disadvantage is that this fat can go rancid faster. It won’t keep as well, if you let the carcass hang too long.” Timing and temperature for aging the carcass is critical, because if it goes rancid you’ve lost the whole carcass. These carcasses take more meticulous care.

Some people wonder how Wagyu withstand cold weather, since they don’t put on much external fat to serve as insulation or energy reserves. “We get fairly cold winters here, and these cattle seem to do all right. The Wagyu generally don’t look as good as our Angus cattle because they don’t have that smooth
under-covering of fat insulation, but they produce a calf and they breed back. They do grow a good coat of hair in our climate, and that helps,” says Reeves.

Some people have remarked about an odd-looking lump along the backbone on some of the older Wagyu cattle. “This is a patch of fat, much like the patches of fat that Shorthorn cattle sometimes get over their pin bones. The Wagyu cattle with this lump on the back are probably older animals that have been over-conditioned and this may be similar to the fat we humans get around our middle as we get older,” he says.

We’re Still Learning About Wagyu - “The Wagyu population in the U.S. is still very small,” says Gaskins. “We are producing a lot of beef but much of it is from crossbreeding, mostly from Angus heifers. The population of fullblood Wagyu cows is small, so we don’t have a lot of solid information yet about their longevity, etc. Most of the fullblood cows early on were used in embryo transfer programs (to maximize the number of offspring from them) rather than raising calves of their own, because they were such high value animals,” he says.

“Things are changing, but fullbloods are still worth more than the purebreds, though by now we have lots of purebreds that are 99% Wagyu.” The definition of a fullblood is an animal that is 100% Wagyu, whereas a purebred can be created by starting with a crossbred animal, breeding it back to Wagyu, each generation having a higher percentage of Wagyu. To be considered a purebred in the American Wagyu Association, the animal must be at least 15/16ths Wagyu. There are also some percentage cattle, but none of these (purebred or percentage animals) can ever get to be fullbloods.

“My feeling is that many of the purebreds (originating from a cross with another breed) may be better than the fullbloods because they have a little bit of something else—probably Angus—and a little hybrid vigor compared to fullbloods,” says Gaskins. They have some other genetics to add to the tiny gene pool and counterbalance inbreeding. What the customer demands will also be a factor on whether a person decides to have purebreds or fullbloods.

Red and Black Wagyu – The term Wagyu simply means Japanese cow. There are four different breeds of Wagyu in Japan, and several were imported to the U.S., including red and black. The reds were sometimes called Japanese Brown. “In this country we just called them red Wagyu, originally,” says Gaskins.

“We imported a lot of blacks, and a few reds. Those red animals looked more like typical U.S. cattle. They have better growth, smoother conformation with larger rounds, and probably a little more milk. There were several people breeding what was originally called the Japanese Brown, but HeartBrand Cattle, owned by Dr. Al Woods and his wife had the biggest group. At some point HeartBrand started working with Japanese Akaushi Association (red Wagyu) and started referring to their red Wagyu as Akaushi in the U.S.”

There is now an Akaushi Association in the U.S. “These cattle are owned by HeartBrand. There are people all over the country who have red Wagyu, but they are not allowed to call them Akaushi because this name is now reserved for the cattle owned by HeartBrand and the Akaushi Association,” he explains.

“The red Wagyu have gained in popularity partly because they are something different and not a lot of people have access to them. We are seeing more red-black Wagyu crosses and the reds and blacks can all be registered in the American Wagyu Association. The only way we differentiate them is a statement of color. At first, people didn’t cross them much, but in the last decade there has been more interest in crossing.” This could help with some of the inbreeding issues in the black lines.

“It depends on the breeders, and their objectives. Many people wanted to find a way to improve meat quality in Brahman cattle, for instance. They might use a red Wagyu or a red-black Wagyu cross on Brahman or some other breed, not for producing Wagyu beef, but just to improve the quality of meat in those breeds,” says Gaskins.

Other people prefer red cattle, especially in a hot climate, because black-hided cattle can’t handle the heat as well. The black Wagyu is an exception because they tend to manage better in the heat than Angus, for instance. “Some producers in Queensland Australia (where it is very hot in summer) and Brazil use black Wagyu and they do fine.”