THE WAGYU MOTHER
By Heather Smith-Thomas

Wagyu females are not superstars in milking ability, compared with other beef breeds. Some breeders claim they give enough milk to raise a good calf while others feel that the Wagyu cow’s milk is inadequate. They prefer to supplement the calf, or early wean (and put the calf on a desired plane of nutrition) or use embryo transfer with the resulting calf raised by a recipient female of another breed that produces more milk.

Dr. Darrel DeGroff, an embryologist in Colorado, has clients who raise Wagyu cattle, and says this breed is known for marbling traits rather than milking ability. “These cattle are similar to Chianina in that they both started out as draft animals, bred to work and pull a cart or farm implements rather than as beef animals, and the calves were hand raised after they were born. The milking ability probably wasn’t an important trait to select for,” he says.

“I don’t have personal experience raising these cattle but we see some fullblood and purebred Wagyu that milk well. We also find some that you almost need to have a nurse cow to raise the calves. If you transfer embryos into crossbred beef cows, those cows will raise the calves very nicely,” he says.

“If you raised 100 calves from recipient females, and 100 out of fullblood cows, I don’t know what the weight difference might be when you weaned the calves, but there is a difference. Some people are weaning their Wagyu calves (off Wagyu cows) at 4 months of age. After being on creep feed, this early weaning allows moving these calves to a higher plane of energy and protein, for growth and marbling,” says DeGroff.

It may depend on the cow, because some lines of Wagyu milk better than others. “Also the purebreds have some percentage of another breed (usually Angus). They may be 98% Wagyu but they have 2 or 3% something else that might milk better, and could potentially milk better than a fullblood Wagyu,” he says.

It may depend on the individual breeding program of a specific ranch. “We see a lot of cattle from various breeders in different parts of the country, that we work with for their AI and/or ET programs. Genetics, nutrition and management all play a role in the milking ability of the cows,” he explains. Cows on lush irrigated pasture will milk better than cows out on the range, for instance. Weaning programs are different on every ranch, as well. If the calves are on surrogate mothers that milk well, they probably don’t need to wean early.

NUTRITION, ENVIRONMENT AND GENETICS MAKE A DIFFERENCE

Dr. Thomas R. Seitz, Assistant Professor of International Studies, University of Wyoming raises Wagyu seedstock and genetics, and says Wagyu are notoriously limited milkers. There are many thoughts on this issue. “Some people say Wagyu milk is like mares’ milk (which is fairly rich), since mares don’t get much of a bag, either. I don’t know, because I’ve never had the milk tested or analyzed. I have tried to select and breed for milk whenever I can, but with limited results,” he says.

“We’ve found that milking ability of the mom can certainly affect growth rates of fullblood Wagyu calves, but other conditions can also play a role. Nutrition and weather can be factors. Our severe winters here in southern Wyoming are hard on the cows, hard on the pregnancies, and hard on their ability to lactate. We have to give them a lot of extra food because their basal metabolism demands so much energy that there’s not enough left for milk production. There is enough to get the calves through, but they don’t grow as fast as calves raised on other cows,” Seitz explains.

“When we used to calve in March, our fullbloods were at a disadvantage. The Wagyu fullbloods just don’t do very well in our kind of cold. The calves arrive with low body mass (smaller than most breeds), making them more vulnerable to late winter cold and storms. The dams feel the stress of winter far more than our Angus and our F1 cows. We have trouble getting fullbloods to gain weight in winter (aside from just the extra weight of pregnancy). Then when the calves are born, the dams are hard pressed to keep up the milk supply,” says Seitz.

“When we moved our calving to May rather than March, the entire equation seemed to change. Not only did the calves seem to do better, but the dams had a ready supply of milk. Those calves grew at a better rate than calves born in March. The fullblood dams never had large udders, but they did have milk. Just like oxygen masks that deploy in emergencies in an airplane, you could say, “although the bag will not inflate, milk IS flowing!” The calves do okay even without a large udder. The Wagyu cow raises a very nice calf, given the right feed, the right conditions and the time.”
Seitz has worked with Wagyu breeders all over the world. “In Inner Mongolia, we breed Fleckvieh Simmental cows AI to make Wagyu F1 cattle. The Fleckvieh don’t stand extreme cold very well either, and possibly because of this, the F1 calves born in early April come out looking like bags of bones. However, the Fleck cows are great milkers and the calves spruce up quickly,” he says.

Whether the calves are raised by their own fullblood mothers or by a surrogate cow (embryo transfer) makes a difference in growth. “A couple years in a row we used Angus as surrogate moms, and they milked better than the Wagyu and those calves did fine. Our Wyoming winters are really hard on the young animals, however,” he says.

“In one case, I received two embryo pregnancies about the same time. One surrogate mother was a red white-face baldy cow while the other was a Pinzgauer. Both embryos were from the same flush, and were bull calves with the same pedigree. The one with the Pinzgauer surrogate mom grew faster and was heavier at weaning and at yearling weight. I never had the milk of either of these cows analyzed, but the Pinzgauer always seemed to have a big, full udder and her bull calf nursed all the time,” he says.

F1 females tend to milk better than the fullblood Wagyu. “Some F1 females milk really well. For a while I had a purebred program, trying to breed better milking ability into the breed. In addition to the Angus dams, I was using Normande and Brown Swiss genetics, trying to improve milk production. The heifers from those crosses were usually great milkers,” says Seitz.

“One challenge we face as a breed is that many people think Wagyu have to be fullbloods or they are nothing. But as Charlie Gaskins once said to me, the only way we can put improved traits into the breed is to bring them from other breeds.” One example is polled Wagyu.

“I just bought more cattle from Jon Marchi in Polson, Montana where he’s been breeding polled Wagyu. I can’t imagine any way to do this except by infusing other genetics. Having polled stock is a boon when we sell heifer bulls for use on commercial herds. The same approach should improve the milking ability of purebreds,” says Seitz.

Breeders need to fine-tune their breeding programs to fit their own goals and situation. Some breeders might find an advantage to breeding the F1s and having the next generation be ¾ Wagyu but having the benefit of a little more milk.

“We will have to innovate, if we want more milk. I tried to breed for milk with the genetics available among the fullbloods, and it proved very slow going.” Some strains milk a little better than others, but are still not as good as the typical beef cow. This is a dilemma for breeders who want to raise calves on their dams (for seedstock or for meat). They have to find a way to get over the hurdle of the cows not milking as much as desired.

“When I had the experience with the 2 embryos from the same flush, the way those 2 young bull calves grew at different rates was striking. The Pinzgauer mother nursed her calf all the time and he had lots of energy and impressive growth. He was chasing rabbits in the snow! He was full of energy in the dead of winter,” says Seitz.

“I have to agree with the people who say the milking ability of the breed could be improved, and that surrogate mothers of better milking breeds can make a difference in calf growth. Embryos are the only way to build a herd quickly, but in the long term, most breeders will eventually want a herd of cattle that could milk adequately to raise an adequate calf in a wide range of conditions,” he says.

“Angus have no trouble with our cold winters. At our ranch headquarters, the lowest area where we feed cattle is at 6500 feet, and we have many nights below zero. The Angus gain weight after we wean their calves in the fall. There is definitely a difference in suitability of the breed for the climate. I have to concede that severe winters are not good for the fullblood Wagyu unless they are sheltered,” he says.

“One year, we grew half our calf crop on the east side of the Continental Divide at Wheatland, Wyoming where weather is very different from that at the ranch. All the calves that year were embryo calves, born within 3 weeks of each other. The cattle raised on the east side of the Divide were significantly bigger at a year of age than yearlings that stayed on the ranch. Clearly, local conditions are a big factor. They impact gestation, especially for the fullbloods, and milking after the calf is born,” says Seitz.

**LINEBREEDING/INBREEDING REDUCES MILK**

Ken Tew, a Wagyu breeder near Baker City, Oregon, has been raising Wagyu since the late 1990’s. “We had the first female fullblood Wagyu born in the U.S. here at our ranch. My predecessor purchased her as an embryo, from Japan, and paid $50,000 for that embryo,” he says.
“Over the years we’ve had fullblood and high-percentage purebred Wagyu cattle. My opinion is that there is not much difference between them. Most Wagyu cows produce enough milk to raise their own calf. Some of the problems people run into is when they inbreed too tightly. Highly inbred cows don’t milk very well and it’s harder for them to raise a calf,” says Tew.

Linebreeding Wagyu cattle can create some problems, and this has happened frequently in the U.S. “The Wagyu have genetics for marbling that is superior to any other breed. The Japanese breeders created an animal that has enough milk to raise its calves and also the desired marbling trait. But if you focus too much on the Tajima line that has superior marbling, you reduce a lot of the milking ability of the cows. This has happened to a lot of breeders in this country because they tried to increase the marbling of their cattle by heavy emphasis on linebreeding Tajima,” explains Tew.

“In some cases this is fine, if you are creating a bull to be used on other breeds, such as Angus (that have plenty of milk). But takes all the milk out of the Wagyu females produced by that linebreeding and they have trouble raising their calves. If U.S. breeders would do what Japanese breeders have traditionally done to raise their cattle—and not linebreed them so closely—the cows would have milk,” he says.

“When we didn’t have very many Wagyu cattle in the U.S. in the beginning, we started breeding Wagyu bulls to Angus cows because this cross produced what some call American Kobe beef. It was awesome meat, and a lot better than what Americans were accustomed to eating. But to do that, breeders wanted Wagyu bulls with extremely high marbling. They started linebreeding the Wagyu, using the Tajima strain, which is the best marbling line of Wagyu cattle,” he says.

“This created Wagyu bulls with great marbling, and they sired great F1 calves because the calves were half Angus, raised by Angus mothers with lots of milk. The problem is that the females born from that linebreeding (that was meant to produce bulls) were put on the market as breeding animals, and lacked milk,” he explains.

“The other Wagyu cows that were not selectively bred just for the marbling trait had adequate milk for their calves. At our ranch here at Baker City we don’t linebreed for marbling. We are very careful in our breeding (with both fullblood and purebred Wagyu) and subsequently our cows have milk to raise their calves.”

“The big market right now in the Wagyu breed is not for feeding out purebreds or fullblood calves as beef. The market for those and is very small. The biggest market is selling bulls to commercial breeders to improve their herds. Many Wagyu breeders are linebreeding very closely to produce the highest marbling bulls to put on the Angus and complement that breed,” Tew says.

This is risky if you keep females from these breedings—if you want them to have enough milk to raise their calves. “I feel that cows should produce enough milk for their calves, no matter what breed. My understanding is that the Japanese use about 30% Tajima, whereas American breeders use much more than that. The Japanese, however, are breeding their bulls to Wagyu cows and they want the offspring to be able to milk.” They want to keep a balance and not focus completely on a single trait.

“It is a delicate balance, and not as black and white as some people think. On our ranch, we don’t breed to raise Wagyu steers for beef. We breed to raise bulls to improve other breeds—for herd improvement. When you look at any seedstock breeders, whether Angus, Charolais, Simmental, or any other registered herd, they are not breeding animals to eat. They are creating bulls to improve other herds and other breeds. My opinion is that this is what we should be doing with Wagyu,” he says. But it’s still important to not go overboard and linebreed so much that the females won’t milk.

“Whenever I buy replacement heifers (which is not often, because we usually raise our own) I look carefully as to how they are bred. If they are too tightly bred for the single trait of marbling, I know they won’t have milk and I don’t buy them,” says Tew.

“I was at a seminar once where a guy stood up and said he wanted people who plan to raise Wagyu to realize they don’t have much milk. I countered him and said that maybe his cows didn’t have enough milk but mine do. You can easily breed it out of them, or you can keep it in them,” he says. The cow is a factory and must be able to raise a calf,” Tew says.

“If someone tells me they have a high-marbling cow they want to sell, I stay away from it. You want a cow to be a milk-producing animal; you want her to be the factory for raising calves. You don’t want her to be the highest thing in marbling!” You are not buying her to eat; you want her to raise calves for a long productive life.

“Yet some people look at it the opposite way. And when you have a Wagyu cow, you have to be very selective about the bull you choose for her, or you start things going downhill in the genetics of her
trial and error. If it works, we stick with it, and if it doesn’t work, we try something else,” he says.

“Whatever combination of genetics that works best, we have to figure out by looking at extremes,” says Hartman. “We haven’t found the magic answer!”

“We’ve had some checked right after they calve, and they have good colostrum. We were checking one year, because we had scour problems and were wondering if the cows’ colostrum had enough antibodies. They had good colostrum, and everything was satisfactory; they just don’t have much quantity,” he says.

“But the outcrosses improve in milking ability. We just calved out 30 heifers and most of those have nice udders and milk. The ones that don’t have much udder and look like they will be poor milkers, if we look at the pedigree, it goes back to the Michifuku bloodline. Those cattle don’t milk but they do produce wonderful meat. The really high-marbling cattle are not the best milkers. But everyone keeps breeding these because they are after that meat quality. You just have to be careful when keeping them for cows,” explains Hartman.

“We start creep-feeding our calves as soon as they go out of the calving pasture, which is about 2 weeks of age. They are on a creep ration, free choice, while they are with their mothers, then when they come in for weaning they are on that same ration. We feed up to 4 pounds per head per day until they reach 6 months of age and then we switch to a grower ration. On our ranch, the calves are on grain their whole life, so they grow nicely even if their mothers don’t milk very well,” he says.

“The calves raised on recip cows do better and look good. There are different ways of raising these fullbloods. We are after meat quality so we start grain feeding them early, wean calves at 4 months of age and get the cow back into production and breed back. The majority of calves we raise are for meat; almost all bull calves become steers. We keep one now and then as a bull but almost all of them go to the feedlot,” he says.

“Now we have enough cattle that some of the heifers are going to the feedlot, too. During the past 10 years we’ve kept most of our heifers to grow our herd but now the herd is about as big as we can grow here, so heifers can go to the feedlot, too.” There’s a lot of variety in how people raise Wagyu calves, depending on whether they are raising them for meat or seedstock.

“Some breeders just run them on pasture like other beef cattle, but milking ability is such that they need to be on really lush pasture or supplementing the calves. They won’t do well on rangeland. When we first started, we tried that, raising them just like regular cattle, and found it didn’t work. You have to raise them a little different. That’s why we creep feed the calves with a grain ration,” he says.

Each breeder has to figure out what works best for their own situation. “It’s trial and error. You have to decide on your end goal, and then figure out how to get there, and create the best product. There’s no perfect solution that fits everyone. We haven’t found the magic answer!” says Hartman.

“I’ve been here with Bob Estrin since we bought our first bull and we’ve figured out what works and what doesn’t work. The guys who work with me, when they first come on the ranch, I tell them there’s a reason why we do things the way we do. It may take them a few months and then they realize that I do know what I’m talking about!”

“Our ultimate goal, from when we first started, was the meat market, so that’s what we’re after in how we raise these calves. Whatever combination of genetics that works best, we have to figure out by trial and error. If it works, we stick with it, and if it doesn’t work, we try something else,” he says.
“When we bought our base herd from Jerry Pittenger in Ellensburg, Washington, the way he raised his calves was to pull every calf off the cow and bottle feed it, like some of the Japanese breeders. There is a reason why they were doing that. When I first saw that, I thought they were crazy! I decided I didn’t ever want to do that. We don’t bottle feed but we do supplement the calves enough to make up for that lack of milk.”

“If you are a seedstock producer you have to raise a good-looking calf whether it’s a bull or a heifer. That’s hard to do with this breed because they don’t look like the typical beef animal. But it’s the meat that counts. Every farm and ranch is different and people have to figure out what works for their own situation. You can have a group of calves with the same pedigree but if you raise them on recips or fullbloods there will be a difference in them,” says Hartman.

**WAGYU COWS ARE GOOD MOTHERS**

The Wagyu cow is very motherly and loves babies, sometimes even those that aren’t hers. “When we go out there to tag our calves we have to be careful we don’t tag the wrong calf because the mothers will let other calves nurse them,” says Tew. “I often tag a calf nursing a cow and then find out that it belonged to a different mother.”

“It’s not uncommon to see all the cows at one end of the pasture, and at the other end of the pasture there are a dozen calves lying there with one cow taking care of all of them,” he says.

“These cows are excellent moms in all other maternal aspects except milk,” says Seitz. “I’ve never had a fullblood Wagyu turn her back on a calf or try to kick one or bash it death, like some Angus have done, as well as a few of our Fleckvieh heifers in northern China. The Wagyu are good moms and very protective, and the only area where they can’t seem to deliver is the milk! I don’t want to paint a dark picture about that however, because there are ways to work around it,” he says.