

Crossbreeding: The Guernsey Advantage

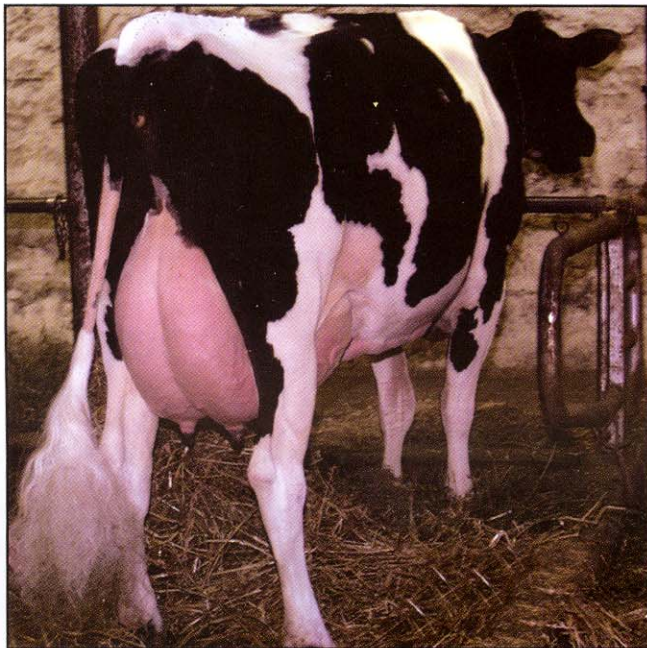
By Seth Johnson

Crossbreeding. The word stirs debate in the dairy industry like no other. I readily expect a segment of our subscribers to stop reading this article after the first sentence and I might fully endorse that decision. If you are the owner of a herd of 100% Registered Guernseys, please feel free to spend your valuable reading time reviewing the many interesting articles and items to be found in this issue and give no further thought to anything but purebred breeding yourself. However, if you have a commercial group of cattle that need to test higher to take advantage of inviting component premiums and you are spending too many nights assisting with difficult calvings, read on, because the Guernsey breed has something more to offer you.

The concept of crossbreeding was long ago adopted by the commercial livestock industry and is now the norm for pork, beef and chicken producers, but the dairy industry has stuck to purebreds through the years. Crossbreeding was researched by the US dairy industry in the 1950's and has enjoyed a much-publicized renaissance in the past three years. With the large population of commercial black and white cattle as the obvious target, all the traditional US dairy breeds have been used somewhere for crossing, in addition to some "exotic" choices from Europe that have recently received lots of press. Some AI organizations have even begun marketing crossbred sires, a practice that actually reduces potential hybrid vigor if these sires are used on one of the parent breeds, versus a purebred on purebred cross. The stated goal of many crossbreeding programs has been to increase hybrid vigor in the resulting offspring, which will typically improve reproductive performance and longevity. However, as in purebred breeding, you get out what you put in. This is where the Guernsey breed can provide a real advantage in a crossbreeding program. While the American Guernsey Association certainly would like to see every crossbred Guernsey be bred to a Guernsey sire and progress towards a higher percentage of Guernsey genetics, we realize that Guernsey genetics can also play an important role in dedicated crossbreeding programs.

When Seth Spencer moved his small herd of Registered Guernseys south from Gresham to Lebanon in Oregon several years ago, he purchased a large operation that came

with nearly 300 black and white cows. For a lifelong Guernsey breeder, it was a disappointment to give up the high component premiums he had been receiving for his quality Guernsey milk prior to the move. Since the move, Spencer has used Guernsey clean-up bulls across the herd and, for the past six months, has bred all heifers on the farm AI to a Guernsey sire. In addition, any black and white cow without sire ID was bred to a Guernsey bull to "absolutely avoid the pos-



This super crossbred at Snider Homestead in New Enterprise, Pa. gets lots of attention from visitors to the herd. She is the result of a Holstein cow bred to a purebred Guernsey sire.

sibility if inbreeding." This has resulted in a number of Guernsey-sired crossbreds that Spencer is very happy with.

"Not a single crossbred was culled in the first lactation and most are still in the herd today in their third and fourth lactations" states the satisfied dairyman.

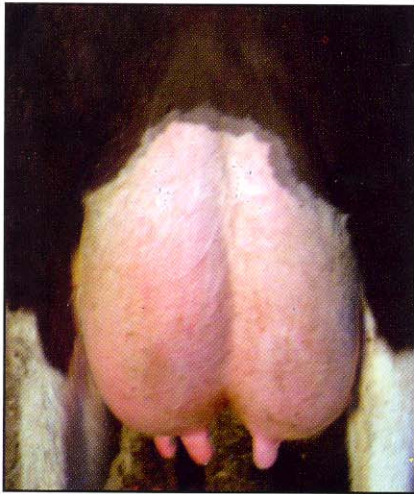
The 20 crossbreds in the herd now (all 50% Guernsey) have achieved a rolling herd average of 21,395M 3.9% 840F 3.2% 676P compared to the 23,345M 3.7% 868F 3.1% 731P for the 205-head commercial herd. Spencer stresses that there is a difference between the crossbred daughters of top Guernsey sires and herd bulls. Many think that just the act of crossbreeding will result in improved offspring. "The genetics make a difference", says Spencer. Using top Guernsey sires on commercial cows has yielded higher producing crossbreds. A pair of Marodore Enhancer Regis-ET daughters recently finished with 3-00 365D 36,510M 1,423F 1,155P and 2-03 365D 28,510M 1,151F

841P. A third-lactation daughter of Nells Glow Enhancer Patton has over 100,000M already and a top record of 3-03 365D 31,750M 1,252F 1,023P.

Ripley Farms in Cortland, New York, has a long and proud history in the Guernsey breed. Roland Ripley is a nationally recognized judge who has officiated at Guernsey shows in Canada and Australia. He milks over 300 cows three times per day with his sons Tom and Dan. When the herd expanded from two 70 tie-stall barns to the large freestall with a parallel parlor that it is today, many commercial cattle were added to quickly expand. However, the Ripleys valued the high components and calm disposition of a good Guernsey cow and almost immediately began using Guernsey herd sires on all the heifers in the herd. Twenty-five of the crossbreds currently milking are by AI sires, with the balance sired by home-bred bulls used naturally on the heifers. Using the AGA's Genetic Recovery Program, Ripley Farms identifies all heifers and continues to breed most of their crossbreds to Guernsey sires in order to gain the benefits of having fully registered Guernseys. However, their crossbreeding program means that there is always a string of 50% and 75% Guernseys, almost all of which are black and white. These crossbreds (any percentage Guernsey that is not fawn and white) are kept in a separate DHI string from the Holsteins and the Registered Guernseys, but they are all managed as one herd.

Tom states, "we started out breeding all the heifers to Guernsey sires for calving ease, but we were pleasantly surprised by how well the crosses performed, and we have not had any problems with the second and third crosses (most to Guernsey sires). They have milked and lasted really well too."

The crossbred string of 71 cows is averaging 22,747M 4.2% 952F 3.1% 699P compared to the 102 Holstein's output of 23,141M 3.8% 888F 3.0% 689P. The average days open for the Holsteins is 216 with a 15.9 month calving interval while the crossbreds average 175 days open and a 13.5 month interval between calvings. The crossbred cows average ten less days to first service than their purebred counterparts and 15% less of the breeding herd is open over 100 days. It is obvious that Ripley Farms is seeing the benefits of increased reproductive performance due to hybrid vigor while en-



The rear udder of a Ripley Farms cross.

joying more efficient production of fat and protein.

The calf that results from using a Guernsey sire on a black and white cow is nearly indistinguishable from a typical commercial calf. Almost always black and white, it will be of similar frame size to an average to small commercial animal. Using a Guernsey sire will be similar to using an extreme calving ease sire and will result in a healthier, more vigorous calf and a dam that starts her lactation without the stress of a difficult calving. "It is difficult to tell the 50% Guerneys from the Holsteins," states Tom Ripley, "and we don't notice a difference in bull calf prices between the purebreds and the crossbreds." The bull calves will not be discounted at market as they will be identical to 95% of the other bull calves that pass through a market on a normal day, not priced with many of the other crossbred or colored-breed calves. The resulting cows will appear similar to any other commercial cow and will fit easily into existing facilities designed for large-breed cattle. Test the market for the difference in price between a black and white springer and her smaller, all-black crossbred relative. There is added value in marketing Guernsey cross replacements and bull calves, that will not be realized with other crosses. Appearance is where the similarities end however, the Guernsey cross cow is equipped to be a more profitable animal in today's dairy industry.

Guernsey cows experience very few calving problems. This calving ease will be passed on to Guernsey crossbreds as well. In addition to the direct calving ease realized from using a Guernsey sire on a heifer or cow prone to calving problems, the crossbreds themselves will experience easier calvings. This benefit is realized in the maternity pens at Ripley Farms, where they rely largely on family labor. The Holstein herd has 6% of their observed calvings listed at a score of 3 or higher (on a scale of 1 to 5) while the crossbreds have not had a calving scored higher than a 2 in the past twelve months.

The crossbred herd has had 20% less calves born dead during this same time span.

"My crossbred cows have easily calved with both Holstein and Guernsey-sired calves with no problems," a relieved Seth Spencer observes. "I feel the Guernsey pelvis is shaped differently than the Holstein's. This difference carries through to the crossbreds and results in much easier calvings."

"After pulling every calf from a Holstein sire rated 6% for calving ease, I decided to breed all our heifers to Guernsey sires. We have eliminated major calving problems in first-calf heifers," Spencer concludes.

Increased fat and protein in Guernsey milk has been returning more dollars to dairymen's pockets for more than one hundred years. Choosing Guerneys for a crossbreeding program makes sense in areas that receive premiums for fat and protein. Guernsey crosses will test higher than commercial cattle. Both Ripley Farms and Spencer Dairy have increased their protein percent by a full point while increases in fat percent range from two to four points when compared to the purebred commercial strings. Choosing to use component improvers from among the Guernsey sires available will yield impressive results when the offspring enter the milking string.

"We have been crossbreeding Holsteins with Guerneys for a while now. Mainly Holstein heifers bred to our Guernsey bull," stated Robin Marsh of Oregon on an internet chat site recently. "The crosses have had nice conformation with a large frame, great feet and udders, and most important, they can milk. I like the vigor in the crosses. They are easier to settle."

Diane Miller of Chesapeake, Maryland, echoed these sentiments on the same site. "We have had great success with crossbred-

ing Holstein and Guernsey here. We like the frame (larger than a Jersey/Holstein cross) of the Guernsey cross and the feet and udders have not suffered. Their temperaments are superb and they seem to milk and test well"

While crossbreeding isn't for everyone, many dairymen are willing to give it a try in order to combat some of the problems experienced with today's milk cows. It is also an excellent way for expanding dairymen to add Guernsey genetics to their herd while taking advantage of the ready supply of commercial replacements that are available in most areas. Crosses to Guernsey sires can improve fat and protein production, calving ease and marketability of the crossbred offspring, in addition to the added hybrid vigor that makes a Guernsey cross a more efficient, longer lasting commercial dairy animal.

Look for more information on the AGA web site at www.usguernsey.com/crossbreeding.htm.

TABLE 1.1
Ripley Farms Guernsey Crosses

ID#	lact. #	305d ME	Sire
1795	1	34,560	Herd Bull
1749	1	34,330	AI
1745	1	32,710	Herd Bull
1769	1	32,420	Herd Bull
1778	1	31,990	Herd Bull
1733	1	31,620	AI
1848	1	31,510	Herd Bull
1636	1	31,360	Herd Bull
1756	1	31,350	AI
1486	2	31,100	AI
1755	1	30,860	Herd Bull
1648	1	30,700	AI
1594	2	30,640	AI
1780	1	29,950	Herd Bull
1840	1	29,910	Herd Bull



Just a few of the crossbreds at Ripley Farms in Cortland, NY. The Ripley family may have the largest string of Guernsey X Holstein crosses in the country.