

FARM ADAPTED BREEDS-CROSSBREEDS

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Background

My partner, Margo Tucker, and I began our farm, Ewetopia Sheep Dairy, in the Fall of 1997 with sheep that we purchased from Major Farm as well as an additional ram from Diane Kauffman at Sundance Hill Farm in Wisconsin. Since I had worked for the Majors in 1996, I was familiar with many of the sheep or their dams and sires. With only 2 years experience with these animals being milked as our own flock, I am drawing heavily on the 11 years of experience of the Majors for this talk. Further, I have also been in contact with Diane Kauffman, Yves Berger, and Ken Kleinpeter from Old Chatham seeking their input.

In the Spring of 1997, not being certain that the Major Farm animals would be available to us, or even our best option, we began looking for sheep predominantly in the United States, though we also looked into a few of the main breeders in Canada. This included a cross-country trip that with stops in New York, Ontario, and Wisconsin. We were predominantly looking at Friesian-crosses rather than pure-breds since, the pure-breds were not, and are not, readily available at prices that we felt comfortable paying. We also were concerned about our experience level, and all the unknowns that come with starting a new business in a relatively new industry. We felt that there were too many risks to warrant spending potentially a lot of money on animals with so much uncertainty. However, if we could afford it, we are not at all adverse to buying pure Friesian genetics provided that they had the records to back up a reasonable price.

Issues of Concern

In general, we continue to be concerned with certain aspects of dairy sheep breeding stock sales here in North America. First, we find a tendency for breeders to treat all Friesian genetics alike. We are supposed to expect that since they are Friesian, they are automatically worth more than any other dairy sheep, even if they don't have the records to back this up. Looking at DHIA reports on cow dairies in Vermont, one can see that there are Holstein herds with 28,000 pound averages, and there are also Holstein herds with under 16,000 pound averages. This means that there are Holstein cows producing 40,000 pounds and others producing only 10,000 pounds. No cow dairy farmer is going to pay high amounts of money for grade Holstein cows, just because they are Holsteins. Likewise, I can not accept that I should pay high amounts for Friesian genetics, without the milk records to back up the price. Talking with people who have pure Friesian in their flock, their production ranges from 200 to 1500 pounds. Some people selling genetics aren't even milking them at all, and don't really know what they have. Ideally, we would be able to buy sires that have been proven milk improvers, rather than ram lambs from proven milk improvers, or that we could affordably get AI done with semen from superior sires with reliable results. Both of these options are still not truly available now in my opinion, though hopefully coming soon down the road.

Our second concern is that milk records are not yet standardized in North America. Farms are calculating their flock averages and production records for individuals with different methods, and are reporting them differently. Lactation periods can be quite variable in length, especially depending on which weaning techniques are used. If we want to truly improve milk production for dairy sheep on this continent, then this needs to change.

Our last concern is that we frequently see people basing production potential on the percentage Friesian, and further basing animal pricing around this concept. We see no basis for this. Once cross-breeding starts, it adds a great deal of variability to the flock. Especially if the Friesian sire is not even a proven milk improver, it is impossible to say what the potential is for the progeny without reliable dam milk records. Even with these milk records, there still is potential for a great deal of variation. We have ewes with low percentage Friesian and no Friesian in them, that are better producers than some of our higher percentage Friesians. This is partly because the production of our higher percentage animals is all over the board. Even some of the ewes that have come from some of our top dams are not producing consistently higher than their mothers, though overall milk production has dramatically increased since Friesian genetics were added to the parent flock in 1994. This great deal of variability means that selection pressure needs to be great in order to get consistent milk improvement. It has been suggested to me on more than one occasion that, particularly without proven sires, our flock of 120 is too small for us to expect the type of milk improvement increase at the rate that we feel we need to be economically viable. We hope this is not the case.

Production at Ewetopia and Major Farm

At Ewetopia, we lamb in April, and the ewes and lambs head out to pasture as soon as lambing is complete in mid-April. Like Major Farm, we leave the lambs on the ewes for 29-36 days before weaning, and do not start milking until after they are weaned. At Ewetopia, milkers are given new grass every 12 hours, and supplemented with 1/2 pound of whole corn each milking, as well as a little hay for fiber. We meter the milk one morning each week and dry-off any ewe that produces less than .5 pound at metering. The top milkers (about 64 out of 115 ewes) will be in the parlor for 137-151 days. A significant number of ewes are milked for between 90-137 days (about 30 ewes), and the remainder dry off at various points during the summer. We calculate our flock average by dividing the total amount of milk produced during the season by the number of ewes milked for two weeks or longer. Ewes that come into the parlor and immediately dry off (within 2 weeks), or come in with mastitis, which usually results in them drying off, are not counted in the flock average, but instead are tracked as "flock shrinkage". Individual production is calculated by taking the individual ewe meter index total and dividing it by the average index total and multiplying it by the flock average. When the Major Farm started milking in 1988, their Tunis-Dorset-Rambouillet crosses only produced 60 pounds each for the entire lactation. Through selection, milk production climbed slowly, but steadily. In 1994, the flock average was 139 pounds. In 1993, the Majors purchased a 57% Friesian (Swiss genetics)/43% Rideau Arcott ram from Hani Gasser in British Columbia. His first progeny were first milked in 1995 when the flock average climbed to 148 pounds. By then, another ram (a 50-50 cross) had been purchased from Hani Gasser, and his

progeny began to be milked in 1996. From 1995-1997, almost no selection pressure was placed on the flock, since the Majors were doubling the size of the flock in order to start a sheep dairy for the short-lived Vermont Sheep Dairy Education Center at the Patch Farm. This flock would eventually become the basis for our operation. The flock averages for Major Farm in 1996 and 1997 were 186 pounds and 201 pounds, respectively. During these years, the highest producing ewe was a non-Friesian that produced 700 pounds. We have used two of her sons by the 50-50 ram in our breeding program, though have yet to milk their progeny. During 1996 and 1997, the Patch Farm flock average was 217 and 183 pounds respectively. The drop in 1997 was undoubtedly due to lack of selection pressure as the flock climbed from 80 to 140 milkers.

We began milking the Patch Farm flock in 1998. With the exception of the one ram from Diane Kauffman, we have used the same rams as Major farm, and have not milked any ewes yet from the Wisconsin genetics. We chose to buy a ram from Diane Kauffman because she had good flock records and her pasture-based management style was similar to our own, something that we feel is an important consideration. The flock average from the 105 milked in 1998 was only 183 pounds. Factors that influenced this average included the lack of selection pressure and also that an accident with a grain bin lead to 36 sheep out of 145 being ill or dying from acidosis, including some of our best milkers. In addition, during June, it was cold and rainy with high parasite loads in the fields coming out of a warm winter. This undoubtedly affected milk production, since the Major Farm flock average also dropped to 193. In 1999, a dry, warm year, milk production on both farms increased by over 30%. The Major Farm flock of 129 sheep averaged 267 pounds, with one ewe at over 700 pounds, 1 >600, 5 between 500-600 pounds, 16 between 400-500 pounds and 23 greater than 300 pounds. The longest producing ewes at Major Farm were milked for 180 days. Our flock average increased to 248 pounds for the 107 ewes milked, with 1 ewe >500 pounds, 3 between 400-500 pounds, and 20 greater than 300 pounds. At least 2 dozen could have probably been milked for another month. On both farms, most all of the top producers are now Friesian crosses, though not exclusively. Much of the milk improvement has also come from the maturing of the flock as most of the ewes are now in their second, third, and fourth lactations. In 2000, we will milk ewes that we actually selected out of our top milkers and hope to see equally impressive production improvements as 1999, though we recognize that the genetic variability in our cross-breeds prevents us from making any concrete predictions.

We are watching very closely the experiences of other sheep dairies in order to see if there are any consistent trends, and to monitor our own progress. We hope to see the sheep dairy industry build a genetic improvement strategy that leads to producer cooperation and honest data collection rather than competition for breeding stock sales. We see this as necessary for the long-term sustainability of sheep dairying in North America.