



## **DR. KENNEDY'S ARTICLE ON SCRAPIE**

### **Straight Talk Sheep**

**1/20/04**

I promised to write about our scrapie problem in our own flock of sheep. Deb and I got back into the sheep business in the year 2000. First time for her and counting my youth the fourth time for me.

We purchased three Dorper ewes and two Dorper rams at the Midwest Sale. Obviously we had too many rams, so before we got home we were well on our way to purchasing an additional 150 ewes, later we added an additional seventy five ewe lambs. We then had too many ewes and we bought more rams.

We bought white face ewes to use in a grading up process. One hundred of the ewes were pure bred Dorset Ewes and ewe lambs from several breeders. This was in the year 2000. I really wasn't concerned about scrapie at the time, but we did want to avoid foot rot which we successfully did.

In year 2002 it was discovered that one of the Dorset source flocks had sold a sheep to another flock that had been diagnosed with scrapie. Further testing in that flock revealed a positive animal that originated from the original Dorset flock.

In 2003 the remaining ewes and offspring from this flock were genotyped in our flock. In August we submitted seven ewes, four Dorsets and three percentage Dorpers to the Minnesota Diagnostic Laboratory. All sheep were asymptomatic, in good health and condition. Subsequently, one of the original Dorset ewes was diagnosed with scrapie. This ewe had lambed three times in our flock producing normal healthy lambs.

Upon recovering this information our flock was placed under quarantine in October 2003. At this point, three years after the original purchase in cooperation with state and federal authorities we genotyped the entire flock, 458 head. As the result, we lost approximately 1/3 of the flock to be euthanized and tested or as in the case of ewe lambs sent to slaughter under permit.

We lost about 2/3 of the Dorpers. We were fortunate in the fact that one of the initial rams we used had carried an R and a high percentage ewe we bought had been RR and we had also used one of his sons. Had this not been the case we probably would have lost almost all of the Dorpers.

We lost less than a third of the White Dorpers and Dorsets. Fortunately our three White Dorper stud rams were QR. We lost all of our Dorper stud rams with the exception of a recently purchased QQ ram that for all practical purposes remains under quarantine because it can't be shipped without a permit.

From what I can determine from genetic testing it appears all of the Dorset, Polpay, and Warren Livestock and White Dorper percentage sheep carried some R factor. None of the full blood Dorpers did with the exception of the one ram we bought early and used only one year. I suspect the R factor in full blood Dorpers is by accident; cross breeding in South Africa then later typed as a full blood Dorper.

As part of the process we were required to disclose to the disease control authorities all sheep we had sold that were born during the time period when the ewe had lambed. So far, I have not had anybody report to me that any were found infected. Many of those owners chose to take the indemnity payment instead of genotyping. Fortunately, a couple of the high dollar sheep were QR and didn't have to be sacrificed.

As of writing this, all of the ewes that originated in our flock have tested negative. The only sheep left in our flock that is QQ is the ram we just purchased and he was never exposed to ewes during lambing time on our farm.

So where do we go from here? We now have a flock that we know that every animal in that flock has been genotyped twice and is resistant to scrapie. They are also micro chipped. From a disease control and prevention state it doesn't get any better than this.

For the next several years we may experience difficulty at times moving sheep across state lines due to the various whims of State Veterinarians. Buy in by state officials of the federal program is progressing and we have recently sent sheep to North Dakota and Missouri without incident.

When possible we will add only RR rams and when going outside the flock QR ewes at a minimum.

In retrospect to the indemnification process, we had all registered ewes, the price was fair. The regulatory officials were helpful and cooperative. The response seems slow, 2000 to 2003 but this is a slow disease and the response was effective.

Had there been no eradication program, several years from now we would have been propagating scrapie.

For further information as to definitions of terminology, status, genetic testing, and the disease in general, the USDA has a web site, [www.aphis.usda.gov/us/na/na/scrapie](http://www.aphis.usda.gov/us/na/na/scrapie).