

## No Wool? No Problem!

**A** thick coat of wool is one of the most recognizable features of sheep. Even when seeing a sheep that has been recently sheared, we know that the wool will soon reappear. But what if there were sheep that had no wool at all—but instead, hair that is similar to humans’?

Believe it or not, there are a few breeds of sheep raised in the United States that have just that. Some of these breeds have been around for more than 50 years. Now Agricultural Research Service scientists are determining through genetics which breeds should be mated to produce “easy-care” sheep. Work on this sheep breeding project began in 2000 and is led by geneticist Kreg A. Leymaster of the Roman L. Hruska U.S. Meat Animal Research Center (MARC) in Clay Center, Nebraska.

According to Leymaster, the price of wool has been going down. Consequently, the cost of shearing a sheep sometimes exceeds the price at which the wool can be sold. On the other hand, demand for the meat of sheep—especially within certain ethnic groups—is increasing dramatically, and U.S. producers cannot keep up. Many of the chops and other lamb cuts in our markets actually come from Australia and New Zealand. ARS is conducting research to help U.S. ranchers become more competitive in selling sheep for food.

“The U.S. sheep industry encouraged evaluation of hair breeds as a possible

means to increase profits for ranchers,” Leymaster says. So now he is investigating which combination of sheep—using both wool and hair breeds—would be best for farmers and consumers alike. Sheep with hair don’t need to be sheared, and that means lower labor costs.

Leymaster bred rams of four breeds. He used two hair breeds (Katahdin, which was developed in the 1950s in Maine; and Dorper, which was brought to the United States from South Africa 7 years ago) and two wool breeds (Rambouillet and Dorset). He mated the four breeds to 360 Romanov ewes in 2000, 2001, and 2002. Romanov sheep are known for their early sexual maturity, and they produce more lambs than other breeds. Leymaster is trying to find the combination of breeds that can produce meat most efficiently.

This study is the first to directly compare the two hair breeds, and there is only

limited information on hair breeds in general, Leymaster says. Both Dorper and Rambouillet have evolved under extensively dry conditions, while Dorset and Katahdin have been bred in more favorable environments.

The research should help U.S. ranchers find the most profitable and efficient breed of sheep for their farm type. Leymaster hopes to evaluate 300 crossbred ewes of each breed through the 3 years of mating.—By **David Elstein**, ARS.

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Sheep that produce hair (like this Dorper ram, in the foreground) instead of wool don’t need shearing, an expensive, labor-intensive process. Elimination of shearing may increase profits for producers interested in producing meat rather than wool. Behind the Dorper ram in the photo is a Romanov ewe.