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HOMEMAKERS' CHAT

Saturday, November 12, 1938

(FOR BROADCAST USE ONLY)

Subject: "NEWS NOTES FROM WASHINGTON." Information from the Office of Information, United States Department of Agriculture.

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That old saying about wits going wool-gathering seems to apply to our Washington reporter this week. At least she has been wool-news gathering, because she writes about Indian rugs of wool, and wool made from skimmilk.

"Everybody who admires the beautiful handwoven Navajo Indian rugs," her letter says -- "everyone who knows their patterns of natural-color black, grey, brown and white, often enlivened with primitive red, everyone who has had experience with their fine, durable texture will be glad to know that this native craft is not going to be allowed to die out as so many old-time hand industries have done. The Bureau of Animal Industry here in the Department of Agriculture is cooperating with the Bureau of Indian Affairs of the Department of the Interior in a study that is likely to encourage Navajo rug-making and at the same time improve the condition of the Indian weavers.

"At Fort Wingate, New Mexico, a new laboratory was established last year where scientists will work on sheep breeding among other problems. It seems that the sheep which now provide the Indians with wool for rugs are descendants of sheep which the Spaniards brought into New Mexico long ago when they first came into this country. The wool from these sheep is a mixture of coarse and fine fibers, excellent for hand-weaving but not valuable for commercial purposes

"Only a part of the annual wool crop of the Indians goes into the rugs they make. The rest of it goes to market along with sheep sold for meat. But to have a year-round cash income, the Navajoes need to make their rugs and blankets as well as to sell both wool and meat. So the scientists believe that if they can produce a double-purpose breed of sheep that will suit both the commercial wool market and also be right for rug-weaving, the Indians will be much better off.

"The work began last year with a study of the essential characteristics of wool suitable for hand weaving. The Fort Wingate Laboratory had hundreds of ewes producing wool of the Navajo sort. Part of the plan is to purify these breeds. But the scientists chiefly aim to develop new breeds by crossing the ewes with purebred rams of breeds satisfying to the commercial wool market. Romney, Columbia, Corriedale and Rambouillet rams were being tried out during the past year.

"Perhaps you know that it takes weeks, often months, to make a medium-sized Navajo rug. The Indian weaver must clean, card and spin the wool. She usually also must dye some of it. Then she must slowly do the weaving on an upright hand loom. Navajo rugs, if properly cared for, will last a lifetime. They are easily cleaned with soapsuds, or by a dry cleaner. It's a pleasant thought that this fine truly American craft may be encouraged by Government scientists.

"So much for news of wool from sheep. But have you heard about the wool made from skimmilk by two Department of Agriculture scientists? Stephen P. Gould and Earl O. Whittier of the Bureau of Dairy Industry discovered that a fiber resembling wool can be manufactured from casein, a byproduct of milk. The process is similar to that used in making viscose rayon from cellulose. The inventors have applied for a public service patent which allows anyone to use the new process.

"To make wool from milk -- or from casein, the inventors softened the casein in water and dissolved it in a solution of caustic alkali. This makes it a thick, sticky mass which is carefully worked into the proper consistency by aging, by adding modifying agents, and by dilution. Then they force the mass through multiple spinnerets of the kind used in making rayon. Afterward the fibers are separated and hardened in an acid bath which contains formaldehyde among other things.

"Synthetic wool made this way has a chemical composition almost like real wool except that it has a lower sulphur content. (Did you know wool contained sulphur? That was news to me.) The fiber is faintly yellow in color and looks very much like the best grade of thoroughly washed and carded Merino wool, the finest size marketed. It also has the characteristic fine kink of natural wool and will blend with wool to make a cloth that has the resilience of pure wool. Recently, synthetic fibers with this kinky structure have been made from plant materials but since plant fiber will not take wool dye, they are not so useful as fibers from animal products for a wool mixed fabric.

"Because the fibers are smooth rather than scaly like natural wool fibers, they cannot be felted. But for the same reason, this synthetic fiber does not shrink as much as wool. Changing the acid mixture in the manufacture of this wool makes it either soft or harsh. The softer grades are not so strong but they will make up into knitted garments to be worn next to the skin. The manufacturing process also regulates the fineness and the length of the synthetic fiber.

"No doubt you know that casein from skimmilk is already being used to coat paper and in the manufacture of plastics for billiard balls, buttons, buckles, artificial ivory, and so on. Because of the almost unlimited supply of skimmilk in this country, it is possible to produce as much as a billion pounds of casein a year. Skimmilk contains about 3 percent casein. Four thousand pounds of milk -- about the amount produced by the average cow in the United States -- will make about 100 pounds of casein -- after the cream is separated -- or about 100 pounds of casein wool. Of course most skimmilk now remains on the farm and is used in feeding hogs and calves. Whether or not this milk will be more valuable as feed or manufactured into fiber remains to be seen.

"As to the cost of manufacturing fiber from skimmilk, nobody has any definite figures yet because this fiber has only been produced as an experiment. But its inventors believe that it can be manufactured to be sold at a price on a par with that of rayon which is about 50 cents a pound."

That concludes today's letter from our Department of Agriculture correspondent in Washington, D. C.
