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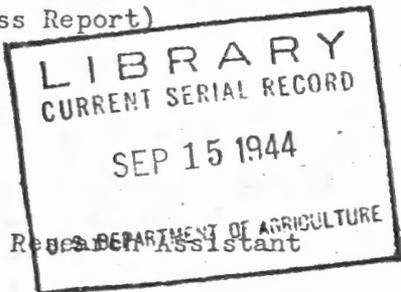
Home Economics Pamphlet #2

November, 1943



SERVICEABILITY OF FABRIC BLENDS
OF NEW AND RECLAIMED WOOL

(A Progress Report)



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#2



SERVICEABILITY OF FABRIC BLENDS
OF NEW AND RECLAIMED WOOL

(A Progress Report)

By Helen M. Ward, Research Assistant

What is the wearing quality of garments made from blends of new and reclaimed wool? How do they compare with clothes made from all new wool? What percentage of reclaimed wool may be used in a fabric without seriously decreasing its serviceability?

These are a few of the questions in the minds of many homemakers today as they buy clothes for their families. They realize that wool manufacturers are now making a common practice of extending their stock of new wool by blending it with reclaimed wool. They also know that these manufacturers are required by law to indicate in the form of labels the percentage of each type of wool used in any product containing wool.

In order to help answer these questions, the Textile Research Department of the South Dakota Agricultural Experiment Station has been experimenting for the past three years with skirts made of fabrics containing different proportions of new and reclaimed wool. New wool from Rambouillet sheep raised at South Dakota State College and a high quality of sweater clippings (wool waste from processed but unused knit material) were blended and woven into four fabrics having different proportions of new and reclaimed wool. The fabrics were then dyed navy blue.

Twelve 4-gore flannel skirts made from these fabrics were worn by twelve State College girls for a 1,000 hour period. This length of time is about equal to the time a girl wears a skirt during a school year. After each 150 hours of wear, the skirts were inspected and measured, dry-cleaned, and inspected and measured again to check for any stretching or shrinking.

Answers to Questions

The following paragraphs contain some of the results of this experiment.

Strength of fabrics.

Fabrics of 100 per cent new wool were almost twice as strong as the fabrics woven of 25 per cent new wool and 75 per cent reclaimed wool. The new wool fiber was 40 per cent longer than the reclaimed wool fiber and had 10 per cent more crimps per inch.

The material having 75 per cent new wool had 12 per cent less strength than the 100 per cent new wool material. This loss was due to the fiber blending. The fabric having half of each kind of wool had 28 per cent less strength than the all-new-wool fabric. It should be remembered that the loss in strength reported here due to blending may hold true only for the specific quality and percentage of new and reclaimed wool used in these blends.

Shrinkage caused by dyeing.

Following the dyeing process, all fabrics showed evidence of shrinking. The 100 per cent wool fabric had the greatest loss in yardage.

5.8 per cent. The smallest percentage of shrinkage, 3.1, was in fabrics containing 75 per cent new wool and 25 per cent reclaimed wool.

Effect of wear and cleaning

The wearing period of 1,000 hours, during which the skirts were dry-cleaned seven times, did not cause any great loss in strength of the fabric blends. However, one laboratory test revealed a marked loss in strength for the three skirts made from the 100 per cent wool fabric. Although this strength loss due to wear showed up more for the 100 per cent new wool fabric, this fabric was still the strongest of all blends and would very likely rank first in future service.

From the skirt measurements that were taken before and after dry cleaning, it appears that the stretching from wear tends to offset any permanent shrinkage which might be caused by dry cleaning.

There was some chemical deterioration of the wool fiber during the wearing period.

Effect of storage

Serviceability of fabrics was not affected by storage, this experiment showed. A sample of each fabric blend was stored for about two years at room temperature and in sealed boxes, which were used to prevent moth infestation. No changes occurred in the fabrics to make them less serviceable.

Quality Information Needed on Labels

Today the law requires that fabrics contain-

ing any wool must be labeled to indicate the percentage of different types of wool used. This information is helpful to the consumer, but it is difficult for her to interpret the labels wisely because of variations in the quality of wool.

Ordinarily a garment of 100 per cent new wool would be expected to give better service than a garment containing some reclaimed wool. However, this assumption is not always correct because the fabric quality is dependent on the original quality of the fiber. When the original quality of the fiber in the 100 per cent wool fabric is considerably lower than that of the fiber used in the fabric containing some reclaimed wool, the all-new-wool fabric may be inferior.

More definite information on fabric quality is needed, not only because adequate labeling is the consumer's only guide to wise purchases, but also because in the future there will probably be more and more blended fabrics on the market.