

wool is rinsed with water before scouring, the Americans found that the wool acquired a silky lustre and feel. This is not stated by Buntrock, but if it turns out to be the case, its influence on the wool industry will be very great, especially as the lustring is accompanied by an increase in strength.

Rumors are already heard of a syndicate to exploit these results.—The Dyer and Calico Printer.

WOOL WASHING.

The efficient washing or scouring of the raw wool is a subject of considerable interest to the spinner who wants to receive his raw material in such a condition as will enable him to spin his yarn with the minimum of trouble and of waste, and this desideratum is much facilitated by care being exercised in the preliminary stage of wool washing. The fleece, when clipped from the sheep, is naturally dirty, oily, and full of yolk—a yellowish oil or fatty substance secreted by the skin glands, which serves the purpose of a lubricant for the fibre, prevents its matting or felting together, and softens the wool at the same time. It, however, imparts a certain degree of adhesiveness that causes the wool to take up soil and other kinds of dirt from the ground while the sheep is pasturing.

All this dirt and yolk must be removed, and the question comes up in connection with the matter: Is it better to wash the sheep before shearing or not? Different opinions have been expressed on this point. Really the matter is one largely dependent on local circumstances. For instance, in regard to wool of this country, it is preferable, we think, to shear the sheep first, and leave it to the professional wool-washer to deal with it, probably the scouring will be more satisfactorily carried out, and the wool left in better condition for the spinner. On the other hand, with Australian and American wools, it would be better to wash first, provided due care be taken, because if the wool is not scoured, changes may take place during transit, and the wool become stained and so rendered more difficult to bleach, while if heating occurs, which is quite possible, the texture of the fibre may be damaged. Then again, the dirt being removed, there must result a saving in freight between Australia or America and England, and the wool being in a better and more presentable condition the buyer is induced to give a little better price for it. It is not advisable to wash the wool so much as to take out all the yolk—for then the wool is apt to become somewhat harsh and horny, particularly if the washing liquors are rather alkaline. Every endeavor should be made on the part of the wool-washer to retain the soft feel and lustre of the wool.

The wool-washer wants to produce a clean and white wool, but he must be careful not to treat it in any way that will destroy its natural properties. If the wool comes up harsh in feel and of a yellowish tinge, there is most decidedly something wrong somewhere. Generally, if these defects occur, it may safely be put down to the presence of an excess of alkali, particularly of soda, and this will greatly depend on the kind of soap and alkali the wool-washer uses. The best soap is undoubtedly a potash soft soap, but there is a risk of this being adulterated with soda, for by using the latter alkali more water can be got into the soap without showing it. If alkali be added as well as soap, an excess would lead to this same defect. Then, again, if the temperature of the scouring bath is too high and soda be present, the defect is most likely to happen, for the action of the alkali is very much intensified. It is always advisable to test the soap for its contents of water, fatty matter, and alkali, a not very difficult operation, but requiring care.

The quality of the water used in the washing is not without some influence on the success or otherwise of the operation. To obtain the best result soft water must be used, but soft water is not always available, and hard water has often to be used. The hardness of water is due to its containing lime in the form of carbonate and sulphate, and these act on and destroy the soap which is used, forming insoluble lime soaps that collect on the wool, and lead very often to trouble in after-processes of dyeing and milling, for they are not easy to get rid of. When the wool-washer is compelled by force of circumstances to use hard water, it is decidedly cheaper and more preferable to soften the water by means of a proper quantity of lime and soda rather than to use soap, for a certain amount of the latter must be neutralized and destroyed by the lime salts in the water before the remainder can exert any scouring effect. Many forms of water-softening plant have been devised and are in use with excellent results, both as regards economy and better execution of the work for which the water is used. Where a proper softening plant is not available, the addition of 4 lb. caustic soda to 100 gallons of water will soften the water and make it more satisfactory for washing wool.—Textile Mercury.

THE WOOL INDUSTRY OF SOUTH AFRICA.

BY JAMES CASSIDY, IN THE TEXTILE MERCURY.

The woolly sheep now found in South Africa is not an African animal. The native African sheep has no wool, but is clothed with hair. In the eighteenth century, perhaps earlier, the Dutch endeavored to encourage the production of wool as an industry by importing wool-sheep, but the people thought the wool a poor compensation for the flesh and fat of the native animal. In 1790 Colonel Gordon, an officer in the service of the Dutch East India Company, introduced into the colony a number of wooled sheep, which had been presented by the King of Spain to the Government of Holland. The majority were distributed among the farmers, and mingled with the native sheep; the minority—twenty-nine—were "disposed of by sale, taken on to Australia by the English warships *Reliance* and *Supply*, and became the original progenitors of the many millions of fine-wooled sheep for which Australia is now renowned." It is a decidedly interesting fact to know that among the very first sheep sent to Australia were sheep from South Africa.

At the beginning of last century, great efforts were made by the British Government to promote the wool industry in the colony, and stringent laws were promulgated, owing to Earl Caledon's influence, actually prohibiting farmers from keeping the native sheep. But all to no purpose; wool-growing, as an industry, was a failure. However, after the British settlers of 1820 had got upon their feet, some of them attempted to introduce wool-sheep, and were successful; but it was not until after the emancipation of the slaves that sheep-farming and wool-growing became matters of importance. Different varieties of European sheep were tried until the best and most suitable was found, and there are now distributed over the colony some thirteen and a half millions of fine-wooled sheep.

The wool sheep does not become climatized until it has been again and again recrossed, each recrossing inuring the progeny. But, at the fifth descent, a difficulty occurs—the animal develops a tendency to drop its wool, so that it becomes absolutely necessary, if the quality of the wool is to be maintained, to reintroduce the European sheep. The best sheep runs are in the Karoo, and there are now de-