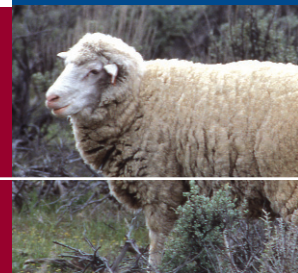


# PACKAGING

*A series of bulletins containing valuable information for the wool grower.*



## New Packaging Opens International Markets

Over the past 10 years, the material and form that wool is packaged in from the farm or ranch level has evolved. This evolution is a worldwide effort to decrease wool contamination and improve wool handling efficiency. In 1997, major buyers of U.S. wool requested that the U.S. wool industry consider changing its packaging form to better position the U.S. wool clip in the international wool market.

### **Baled or Bagged**

Traditionally, the United States used a round wool bag for packaging wool at the farm or ranch level, which is a different form of packaging than that of other countries. The U.S. wool industry and infrastructure evolved around the use of the wool bag as the standard including rigorous sampling and testing methods specifically designed for a round wool bag. In addition, entire systems for handling and shipping efficiency were created to accommodate and facilitate the process of wool movement to U.S. wool mills.



While the United States packaged its wool in round bags, many international competitors used a 440-pound square bale to package wool. This allowed for improved transportation efficiency because square bales are easier to stack and required less space for storage due to greater density. Because large volumes of wool were

packaged in square bales internationally, wool mills designed handling systems to accommodate this package design; the square design allows for easier handling and more efficient storage.

Over the years, U.S. bagged wool has become somewhat less attractive to many mills as it is perceived by some to be more difficult to handle and store and lacks transportation efficiency. U.S. wool buyers have made the recommendation to package wool in square bales similar to other wool available internationally. Many mills will not consider purchasing wool unless it is baled; others may automatically discount wool that is not packaged in bales.



Baled wool should be classed at shearing time to ensure the entire bale contents are uniform for fiber diameter, staple length and strength, and style. Flocks need to be large enough to produce uniform lines of wool with a minimum full bale of similar wool.

*Hand-packed wool bales are not recommended for shipment to mills.* The density is not sufficient to allow for efficient handling and shipment. Hand-packed bales seldom retain their square shape and create storage problems. Hand-packed bales should be repackaged to produce a bale of sufficient density, weight and shape for shipment to the mill.



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## Baled wool is not the answer for every U.S. sheep producer

Wool warehouses that handle and re-grade wool from small grower lots still recommend wool bags for wool growers. These warehouses open up each wool bag or bale to re-grade smaller volumes of wool into commercial sale lots. These commercial sale lots are then baled in a form that is acceptable for shipment to the mills. A warehouse may have more than 15 different lines or types of wool that they prepare to maximize the marketing options for the woolgrower.

Speak with your marketing representative before baling wool to determine if the square bale pack will be the most effective and efficient way to handle your wool.

## Nylon or Plastic

Worldwide efforts to eliminate jute or burlap wool packaging material began more than 10 years ago. Jute fibers of packaging-material origin were found to be a source of wool contamination. Stray or loose fibers from the material, as well as fibers resulting from routine handling, resulted in additional costs for wool mills. Additionally, disposal of the used material at the mill level was becoming an environmental issue, particularly in Europe.

Nylon wool packs were developed for packaging wool in square bales. Nylon will dye along with wool and is therefore considered an acceptable wool-packaging material. Initially, the cost of nylon wool packs limited their use to the very high-valued wool. Recently, Australia banned the importation of both high-density polyethylene and jute wool packs to reduce wool contamination. With this ban, more nylon wool packs are in use and the price has been reduced dramatically. Today, nylon wool packs are comparable in price to the other packaging materials available.

Efforts in Australia and the United States also resulted in a clear, polyethylene film packaging

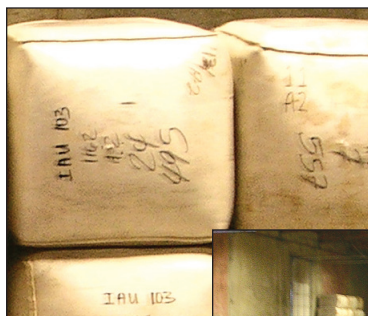
material that nearly eliminated the contamination issue. In Australia, a film pack was developed and used in a highly visible Wool Quality Assurance Program. The United States' effort resulted in the square bale pack, which used straps to close the opening and keep wool inside the pack.

At the same time, polyethylene film bags were developed to replace the traditional U.S. jute wool bags. In addition to reducing contamination, the clear film material resulted in an increased awareness of wool quality improvement. Clearly visible through the material, it was easy to determine if the wool had been packaged properly at shearing time. Obvious differences in wool quality can also be detected.

As with any new product, modifications were made to improve performance. Film-packaging material contains many small holes or micro-pores, which allow the wool to 'breathe.' In addition, a rough surface was created to help keep the wool in the bale or bag while filling it and reduce slipping during storage.

While the use of film packaging material, in either bale or bag form, has presented some challenges for the wool industry, many of these challenges can be easily overcome. For example, difficulty in closing film bags can be dealt with by simply not packaging bags too full. Wool bags can be sewn closed with cotton string similar to jute bags. Film bags and bales do require more attention during handling to prevent tearing or broken bags and bales.

Wool that is wet or damp at shearing creates an additional challenge for packaging in film square packs or wool bags. Regardless of the packaging material, wet wool should not be sheared. The film-packaging material does require wool to be dry at shearing time. Wool in any packaging material should not be stored in direct sunlight or on the ground.



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