Chemical compounds, if used improperly in parasite control, can remain in lanolin. Follow label instructions and withdrawal times and avoid excessive application of sprays that can cause a crusting over the wool and lead to other dermal and wool problems. Do not spray within a month of shearing.

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

**STRENGTHENING THE AMERICAN WOOL INDUSTRY**

**PAINT BRANDS**
It is illogical to devote conscientious effort to the growing of a white wool clip and then apply colored substances such as brands to the fleece. Unfortunately, branding is common and sometimes required.
- Utilize scourable, lanolin-based branding fluids whenever possible.
- Temporary marking of sheep should be limited to the head and face area.

**INSECTICIDE SPRAYS**
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- Follow label instructions and withdrawal times and avoid excessive application of sprays that can cause a crusting over the wool and lead to other dermal and wool problems.
- Do not spray within a month of shearing.

**PHENOThIANZE STAIN**
Used as a common preparation for stomach worms, this olive-green or grayish-green substance can cause a rapid and permanent wool stain.
- Control of staining by phenothiazine is mostly a matter of common sense and clean workmanship during drenching operations by not using leaky drench guns or touching the fleece with stained hands.

**COPPER SULFATE STAIN**
Copper sulfate is used in foot baths to treat foot rot and in some parts of the world to treat myotic dermatitis, a fungal skin infection.
- Use non-staining products such as zinc sulfate and formalin.

**Have pride in your clip. Market the highest-quality wool possible. Avoid contamination.**
It is often mentioned that wool offered for sale in the United States brings less money per pound than comparable foreign wool, due in part to fleece contamination. Fleece contamination is either natural (produced by the sheep itself, e.g., impure fibers, urine, dung, suint, wool wax), acquired (e.g., vegetable matter, mineral matter, animal matter, polypropylene, jute, strings, cigarette filters, etc.); or applied (e.g., paint brands, pesticides, medications). However, there are steps you can take to ensure a higher-quality clip—regardless of the type of contamination.

American Sheep Industry Association, Inc.
Phone: (303) 771-3500 • Fax: (303) 771-8200
www.sheepusa.org • E-mail: info@sheepusa.org
NATURAL CONTAMINANTS

While this type of contamination cannot be completely prevented, management practices can be used to minimize their effect on wool quality.

COLORED OR BLACK FIBERS
- These types of wool pose a problem since they cannot be dyed for lighter-shade fabrics.
- Cull all animals having colored fibers or evenly dark pigmented skin from a white-wool flock.

MEDULLATED OR KEMP FIBERS & HAIR
- Mill tolerance for these fibers is low because they dye a different shade than wool fibers.
- Select against sheep with these impurities.

WORMING
- Minimize dung contamination by maintaining a sound and timely worming program.

LAMING AND FEEDING
- Crutch sheep prior to lambing and before placement on lush feed.
- Reduce shearing shed stain by withholding feed and water for at least four hours before shearing.

YOLK AND CANARY STAINS
- Reduce excessive yolk over a period of time by selection, culling and to some degree, diet.
- Canary yellow staining occurs if periods of uniformly high atmospheric temperatures and humidity follow a thorough wetting of the fleece. Control canary stains by shearing in spring or early summer before atmospheric temperatures become uniformly high.

ACQUIRED CONTAMINANTS

This form of contamination is the result of the environment in which the sheep are placed.

VEGETABLE MATTER
- Includes hay chaff, grass seeds, weed seeds, burr, straw, twigs, bark, leaves, cactus needles and spear grass.
- Eliminate from the pasture or range those grasses or weed species that cause a contamination problem.
- Graze infested pastures before seeds mature.
- Remove burr and seed contamination from the fleece, particularly from the neck and lower parts, during skirting.
- Do not use straw for bedding prior to shearing.

SHEEP KED
Moderate to heavy infestation of sheep keds may cause fleece descoloration, and reduce wool production and felt quality. The ked, commonly referred to as a tick, is actually a blood-sucking, wingless fly.
- Treat all sheep with approved insecticides immediately after shearing.

ANIMAL MATTER
- To reduce fiber contamination, don’t run sheep with other livestock.
- Clean any area completely when Cashmere or Angora goats have been shorn in sheep shearing facilities.
- Minimize exposure of sheep to the manure of other species.

POLYPROPYLENE
Polypropylene (common hay baling twine) continues to be a serious wool contaminant. Small pieces of poly become entangled with wool fibers and cannot be removed mechanically or chemically.
- Use wire or sisal twine for farming purposes whenever possible.
- Buy/utilize pelleted feeds made from bales that were tied with other than plastic twine.
- Remove all bale ties before tub grinding.
- Skirt belly wool at shearing time.
- Never place small wool clips/oddments in woven polypropylene or polyethylene feed sacks.

MINERAL MATTER
- Includes dirt, soil and mud.
- Feed sheep in several areas, as opposed to one, to help avoid creation of bare, dusty sites.
- Do not bed sheep in wind-blown, bare or burned off areas when better locations are available.
- Select for higher fleece densities to reduce dirt penetration.

YELLOW BANDING
This type of discoloration is brought about by continued wetting of the skin of the sheep. The affected skin releases an exudate that spreads over the skin surface, providing good conditions for the growth of bacteria.
- Reduce your chances for yellow banding, or fleece rot, by selecting against it.

OTHER FIBER CONTAMINATES
Binder twine, jute, orlon, string or any loose-fibered twines should never be allowed to come in contact with wool. Their presence results in small non-wool fibers being mixed with wool fibers which cannot be removed, resulting in defective yarn or fabric.
- Use only paper twine to tie fleeces.
- Use only strong cotton sacking twine to tie ears in the sack and sew the top.
- Make sure that rags, cigarette filters and clothing do not find their way into a wool sack or pack.