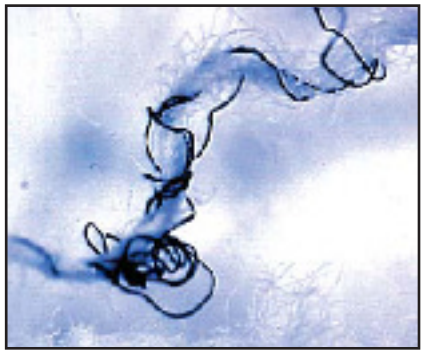
PREVENT LINT CONTAMINATION
. . . clean cotton means satisfied customers!

PROTECT YOUR COTTON FIBER
. . . and you will preserve your markets!

Even the tiniest particles can contaminate seed cotton and lint and result in blemished finished goods.

U.S. cotton producers are competing with man-made fibers and foreign cotton in today's global marketplace, one of cotton's greatest attributes - its pure, natural quality – can be degraded by a variety of contaminants. This impairs producers' relationships with textile manufacturers and also undermines the industry's "value-added" promotional activities.

HOW?



Enlargement reveals contaminant which tangled with cotton fibers during yarnmaking

Contaminants can end up in finished yarn and fabric products. These tainted yarns and fabrics become "seconds." This decreased value and condition shrinks U.S. textile manufacturers' profits and undermines cotton's market appeal. Manufacturers constantly determine which raw materials they can mix for spinning that will offer the best profit potential. There's no place for contaminated cotton in that recipe.

IDENTIFYING MAJOR TYPES OF CONTAMINATES

If U.S. cotton producers and ginners want a marketable product, they must work to eliminate contamination of seed cotton and lint. The most cost-effective way is to prevent contamination, but if impurities are found, steps must be taken to eliminate the contaminants before they are processed through the marketing chain.

The first step is recognizing contaminants and their sources. Contaminants can best be categorized as plastic, rubber, grease and oil, apparel and other materials.

PLASTIC

Storing cotton in modules in the field allows pickers to operate continuously during optimum harvesting conditions. Over time, module covers may deteriorate and tear, leaving pieces of plastic on seed cotton as contamination. More often, the practice of using plastic twine to tie down module covers leads to contamination problems. Even a short piece of plastic twine or rope can contaminate several bales of cotton if the material enters the gin. The foreign material will be shredded and dispersed into the lint.

Plastic irrigation ditch liners left in the field may be picked up by harvesting equipment and become mixed in with the seed cotton. If not removed, this plastic will travel through the gin with the seed cotton, become shredded and remain with the ginned lint. These small pieces of plastic cause major problems at textile mills by increasing spinning costs and by their very presence in fabric. As a result, large quantities of fabric must be sold as defective materials or seconds.

Trash which may have blown into a field from the roadside is also a contaminant. Debris such as small plastic bags can be picked up by harvesters and ginned with the seed cotton.

RUBBER

Black, rubber doffers and moistener pads were used exclusively on spindle pickers at one time. In recent years, though, cotton picker manufacturers are supplying non-contaminating, non-rubber, materials as original equipment.

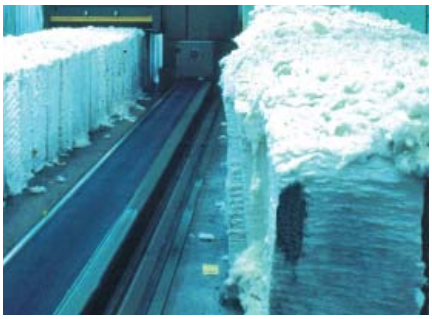
Non-contaminating doffer materials have been tested and found to perform just as well or better than conventional rubber doffers and moistener pads. The widespread use of non-contaminating materials has virtually eliminated black rubber specks from tainting finished textile products. While black rubber doffers and moistener pads still are available in the aftermarket throughout the Cotton Belt, growers are encouraged to use only non-contaminating replacement doffer and moistener pads.

However for pickers which have not been updated with the new non-contaminating doffers, extreme care must be taken to maintain a precise spindle-to-doffer clearance. Misalignment to the point that the doffers and spindles touch causes tiny doffer particles to be ground off and left in seed cotton. An interference of a few thousandths of an inch between just one spindle bar and a black, rubber doffer plate can generate thousands of tiny, black particles that are not visible in seed cotton.

Gin and mill cleaning equipment cannot remove the rubber particles. These rubber particles almost always go undetected until the costly processes of spinning, weaving or knitting, scouring and bleaching are completed. The result: rubber-blemished fabrics or garments.

GREASE AND OIL

Growers are urged to take every precaution to keep grease and oil separated from cotton. Heavy accumulations of grease and grime on picker bars often break off in chunks and mix with the seed cotton. Grease concentrations stain cotton and ultimately end up as flaws in otherwise high quality cotton fabrics.



Prevent grease stains from contaminating bales at the gin and during handling as seen on this bale in the opening room of a mill.

Mills also have reported evidence of sticky cotton traced to oils on cotton. Excessive oil on lint causes processing problems in textile mills because cotton may stick and wrap on mill equipment rather than passing through efficiently.

Excessive use of picker oils in picker moistening systems is believed to be one cause of oil on cotton. Most specialists recommend that water or a solution of water with an approved wetting agent be used in moistening systems to keep plant sap from accumulating on the spindles. Some picker manufacturers have warned that use of oil in the spindle moistening system increases fire hazards.

APPAREL AND OTHER MATERIALS

Cleaning rags, clothes hats and other materials left near harvest, module or gin machinery, especially at gin suction pipes, can be pulled into the gin and chopped up. This puts small pieces of contaminant in the ginned lint. Even textile items made from cotton can cause contamination. When the contaminated bale is mixed with 25 to 50 other bales at the textile mill, a huge loss results.

Although tests show that modern bale packaging materials are not a major source of contamination, some textile mills believe that these materials are a possible contamination source. This should be considered when choosing a packaging material.

Another problem is created when producers, ginners and warehousemen use common spray paint to mark seed cotton modules and packaged bales. When sprayed on cotton, paint stains the lint and cannot be removed in any gin or mill process. This stained cotton then shows up as a defect in finished fabrics. The problem can be avoided by using one of the textile-friendly "marking" products currently on the market.

Residues of plant parts such as bark, grass and seed coat fragments have the potential to become contaminants. They are difficult to remove at the mill. Problems caused by these impurities are one reason why grade penalties are imposed on lint containing these contaminants.

Occasionally, machine parts, pieces of bale ties and other objects are found pressed inside cotton bales. These materials may become trapped in the lint at the gin. Besides posing a fire risk, such materials can seriously damage mill equipment.

PRECATIONS YOU CAN TAKE TO PROTECT SEED COTTON AND LINT FROM CONTAMINATION

PLASTIC:

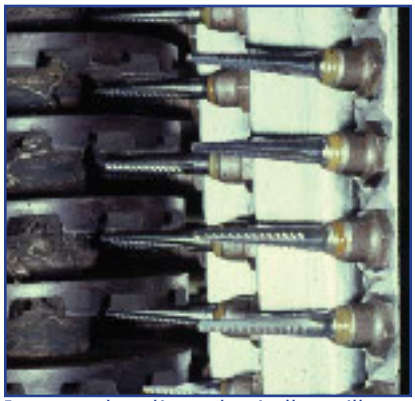
- Avoid using plastic twine for securing tarps on seed cotton modules and trailers. Cotton rope or cotton cord materials are recommended.
- Make sure all covers and tie down materials on or near seed cotton are removed before seed cotton reaches the suction lane or module feeder at the gin.

Care taken during harvesting will prevent debris, such as the plastic protruding from this module, from becoming a lint contaminant.

- Remove all irrigation ditch liners and other foreign materials from fields prior to harvest.
- Cover bales with only those packaging materials which meet the specifications of the Joint Cotton Industry Bale Packaging Committee.
- Consider using cotton rather than plastic tarps for covering seed cotton. If plastic covers are used, make sure they are not worn or frayed.

RUBBER:

- Adjust the spindle-to-doffer clearance to the manufacturer's recommendations.
- Replace worn doffer columns promptly with non-contaminating parts that fully meet the picker manufacturer's standards.



Improperly adjusted spindles will grind doffer pads, creating small rubber particles that contaminate cotton.

- Grind new doffers before putting them on the machine and clean excess particles from the doffer assembly after grinding.
- Maintain proper operation of the moistening system.
- Keep the picker in good mechanical repair. Worn parts, such as spindles, moistener pads, doffers, bearings, bushings, springs and rails should be replaced and adjusted to factory specifications by trained personnel.
- Doffer and moistener pads made from non-contaminating materials are available. Check with your dealer.

GREASE AND OIL:

- Growers are urged to follow the picker manufacturer's recommendations carefully.
- Lubricate pickers daily but use only the necessary amounts of grease and lubricating oils. Wipe excess accumulations from fittings after each lubrication.
- Clean picker heads and assemblies at least once a week to remove accumulations of lubricants.
- Use only a solution of water and approved wetting agents in the moistening system for normal harvesting conditions. If picker oils are absolutely necessary because of special picking conditions, only use oils approved by picker manufacturers. Never use motor oil or diesel oil in moistening systems.

OTHER MATERIALS:

- Keep cleaning rags and clothing, such as gloves, hats and handkerchiefs, away from seed cotton and gin machinery.
- Inform employees of hazards created at textile mills by foreign objects in bales.
- Avoid production and harvesting practices which cause excessive bark.
- Use non-contaminating markers to mark modules and bales. Use only marking products tested and proven to be removable from lint at the mill.

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