

Harvest All You Grow

--- *Increase Profits*



PICK DRY COTTON

— TEXAS A&M UNIVERSITY —
TEXAS AGRICULTURAL EXTENSION SERVICE
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PROPER CONTROL OF MOISTURE during harvesting can mean more high quality cotton in the basket and more dollars at the gin. Moisture control during the picking process involves waiting until the cotton is dry enough to harvest and then adding only enough water in the picker moistening system for smooth operation of the machine.

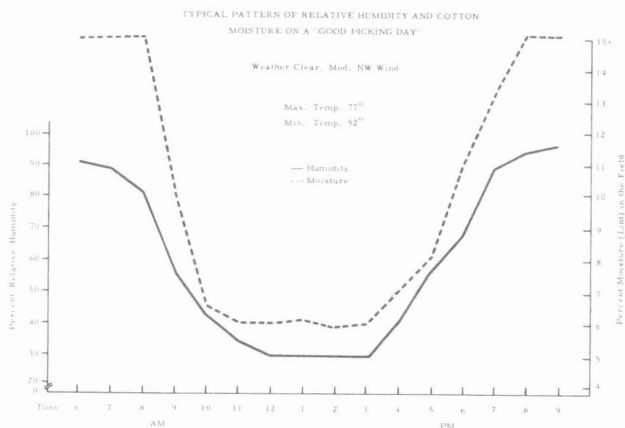
Harvesting cotton when it is too wet, or adding too much water through the moistening system, can reduce the efficiency of spindle-type pickers as much as 3 to 5 percent. In most fields of spindle picking areas of Texas, this can mean a loss of \$4 to \$8 per acre.

Variations in moisture during harvest can cause as much as a full grade difference in machine-picked cotton at the gin. This reduction in grade, caused by too much moisture, can easily reduce cotton income another \$10 per bale. In recent tests, cotton harvested at 8 percent lint moisture was worth nearly \$6 more per bale than cotton harvested at 10 percent lint moisture when both were dried to a 6 percent level for ginning.

Know the Moisture Source

For many years cotton producers thought excessive moisture in seed cotton was caused by adding too much water during the picking process. While *too* much water can be added to the spindles, studies show that much more of the moisture in machine-picked cotton comes from air moisture.

Figure 1 shows a typical pattern of atmospheric moisture to be found on a good day for picking cotton. Typical relationship between humidity and the percent of lint moisture in seed cotton are also shown. Humidity is nearly always above 90 percent in the early morning. On good picking days it drops to a low of 30 to 40 percent during the daytime. It starts to rise again in mid-afternoon, and generally reaches about



90 percent at boll height in fields to be spindle picked during the early evening hours.

Wait Until Field is Ready

Consider the amount of open cotton and green leaves on the stalks in determining when to begin picking. Green leaves and other trash add considerable moisture to seed cotton, cause lint stain and cause spindles to gum up. Leaves and trash lower picker efficiency and make more drying and cleaning necessary at the gin. However, field losses are increased and color is lost when harvesting is postponed.

The time to start mechanical pickers is a problem which must be faced each morning. Moisture varies depending on the amount of dew, relative humidity, rainfall, amount of green leaf, cloud cover, sunlight, wind velocity and many other factors. Moisture also rises above the critical level in late afternoon at different hours on different days.

Regardless of how dry the weather, never harvest cotton at night, early morning or late evening. Even on driest days, cotton is seldom dry enough for machine harvest until after 8 a.m. It generally is profitable to delay harvesting until the dew has dried off and the relative humidity has dropped below 60 percent at boll height in the field. Harvest in defoliated fields.

Defoliation speeds drying of seed cotton on the plant because more air movement is permitted.

Protect the Color

The present cotton grading system places high emphasis on color. Recent studies show that lint grade is affected by the moisture content at picking time. Cotton picked in early morning graded almost a full grade lower than that picked in the afternoon. Much of the grade difference in these tests was because of color loss while stored in trailers. The normal delay in ginning cotton during the rush season can be anywhere from 8 to 72 hours. Therefore, it is important to pick cotton only when it is thoroughly dry to avoid color loss.

Excess moisture creates problems in ginning, as well as in storage. It makes no difference whether this excess moisture was applied during the picking process or was present in the cotton before picking. The wide variation in moisture content causes ginners to over-dry some bales, thereby, reducing staple length and other fiber qualities. Cotton containing more than a certain level of moisture clings together in wads. This can cause machinery to choke and break down. If wet cotton does get through the ginning system, it gins poorly and gives a rough lint preparation appearance that carries a severe penalty, in addition to reducing grade.

Cooperate with the Ginner

Producer-ginner cooperation is necessary for highest bale value and best gin operation. The farmer should harvest only dry cotton, then handle it so that the cotton he delivers to the gin requires a minimum drying and cleaning. The producer also should allow the ginner to group his cotton with other loads which require about the same amount of drying and cleaning. If it becomes absolutely necessary to harvest damp cotton, the producer should keep it separate from dry cotton, and be sure to notify the ginner that

the cotton is high in moisture. The ginner can then give it special treatment.

The ginner needs to have the equipment necessary to handle all types of cotton arriving on his gin yard. He needs to know the moisture content of the cotton so that he can properly process cotton at different moisture levels. It's impossible for him to do this if moisture content of cotton on the same trailer load varies considerably.

Good producer-ginner cooperation turns out a grade satisfactory to the farmer and a quality that gives a good accounting when it reaches the spinner. The inherent quality of cotton can be preserved only when both the farmer and the ginner pay strict attention to moisture. Everybody benefits!

The information in this leaflet was prepared by State and Federal Extension Specialists with the assistance of the National Cotton Council.