

V - HARVESTING

A. HARVEST EFFICIENCY

Harvest Losses Decreased

Marshall Machado

Over 95 percent of the cotton crop in Arizona is harvested mechanically. Previous observations of harvest operations have shown that machine harvest losses in Arizona have been rather high. Improvements were needed in plant preparation and machine adjustment.

Tests were conducted in 1965 by the Extension Specialist and Fred Abel of the National Cotton Council on harvest efficiencies of spindle pickers. It was found that on the average 90 percent of the available crop was harvested. These efficiencies were for spindle machines harvesting first pick cotton. This is a 5 percent increase in harvest efficiency over similar tests conducted by the specialist in 1964. This may be attributed to better plant preparation and more attention given to machine operations and adjustments.

Machine harvest losses occurred most frequently when the picking heads on the machine were being operated too high. Many of the most mature bolls were left on the plant. Other factors contributing to harvest losses were too much clearance between doffers and spindles; too great a distance between ends of spindles and pressure plates; and not entering the row at full throttle. The specialist and Abel found that after making needed adjustments efficiencies were improved 2 to 3 percent.

A harvest loss slide rule developed by W. E. Larsen, Extension Agricultural Engineer, was produced and distributed by the National Cotton Council. The slide rule helps growers make in-the-field checks of pre-harvest and harvest losses.

A greater awareness of the causes of harvest losses is needed in order to decrease these losses for 1966. Use of the harvest-loss slide rule and making proper machine adjustments will aid in the improvement of picking efficiency.

* * * * *