

Harvest All You Grow

--- *Increase Profits*



GOOD TURNROWS PUT
MORE COTTON IN THE
PICKER BASKET

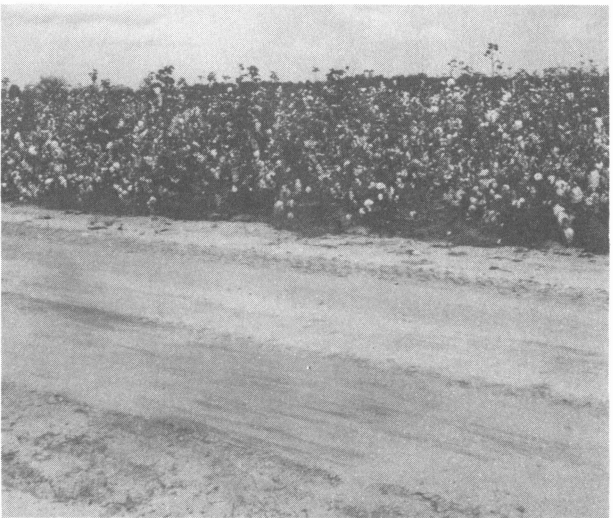
— TEXAS A&M UNIVERSITY —
TEXAS AGRICULTURAL EXTENSION SERVICE
J. E. Hutchison, Director, College Station, Texas

GOOD TURNROWS — MORE COTTON IN THE PICKER BASKET

MODERN COTTON FARMING requires equipment that will perform field operations rapidly and efficiently. Machinery is long, wide and heavy. A two-row cotton picker is 21 feet long, for example, and six-row cultivators are 20 feet wide.

With this large, fast equipment, proper adjustment and precision operation is a must. For instance, raising the head of a mechanical cotton picker only 1 inch too high can decrease the amount of cotton harvested by 4 percent. Also, planter swords bent 1 inch out of alignment can decrease picking efficiency of a two-row machine by as much as 2 percent.

Wide, firm and smooth turnrows permit greater efficiency in all operations and full utilization of equipment and labor throughout the season. They are essential to establishing and maintaining straight rows of uniform widths, uniform distribution of seed and chemicals within each row and many other practices—all of which contribute to greater harvesting efficiency.



A wide turnrow

Turnrow widths should be at least one and one-half times the length of the picker. Two-row pickers (21 feet long) require turnrows 30 feet wide. Twenty-five foot turnrows can be used for one-row pickers which are 18 feet long.

Turnrows of these widths permit the operator to turn the machine, line up with the row, lower the head and obtain proper speed before reaching the stalks.

Wide turnrows also allow for proper location of trailers which reduces the time spent in driving to and from the trailers and in dumping.

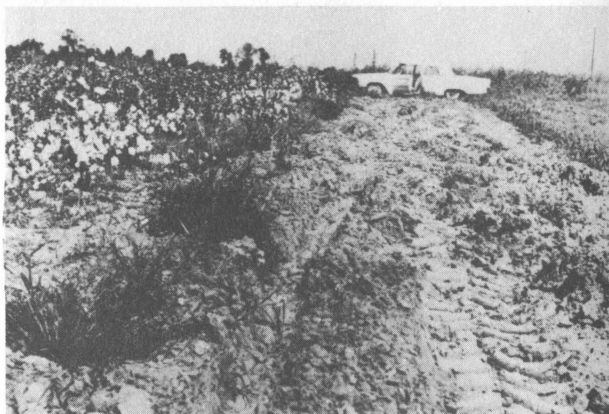


Broken limbs and cotton loss

Field losses increase and quality decreases when turnrows are not adequate for the machine to be aligned and operated at the correct speed when entering the row. Cotton lost on only 2 and one-half feet of row ends amounts to a 1 per cent drop in the amount harvested on 500-foot rows.

Under narrow turnrow conditions, plants do not enter the unit properly. This causes complete stalks to be pushed over or broken. A stripping action develops that knocks off open and

green bolls and increases green leaf and bark in the seed cotton. Spindle speeds cannot be maintained which causes the spindle to string out or drop the fluffy cotton. To avoid serious damage to the machine, the unit has to be operated too high, and low bolls are missed.

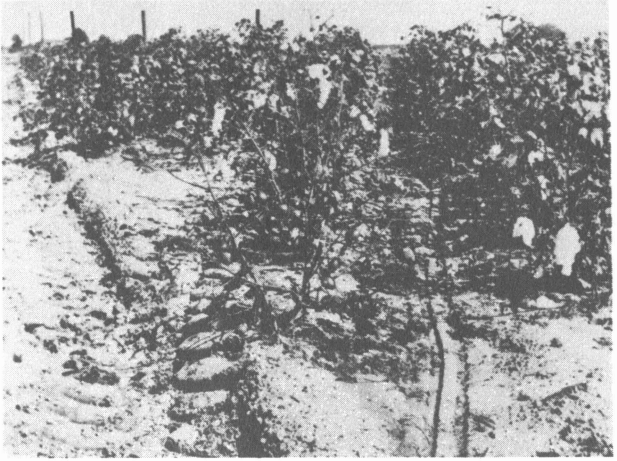


A rough, soft turnrow

Rough, uneven turnrows cause the machine to "bob" and "lurch," resulting in dropped cotton and excessive trash. Time required for turning and dumping can be as high as 30 percent of the total harvesting time, as compared to only 15 percent with wide, smooth turnrows.

When surfaces are rough, operators cannot maintain correct drum height at desired picking speeds. This may cause the unit to dig into the ground and seriously damage it. Roughness causes the unit to bounce until the rear wheel leaves the turnrow. When this occurs, the stalk lifters are as far as 16 feet down the row for a one-row and 17½ feet for a two-row machine. Such bouncing develops a stripping action in the unit and results in losses.

Soft turnrows at harvest time can mean trouble from the standpoint of field losses and total machine performances. Heavy discing or other deep tillage prior to harvesting makes turning and maintaining correct machine speed difficult while entering the row. The guide wheel slides sideways when brakes are applied while turning.



A rough, uneven turnrow

Tire slippage and rolling radius will vary from the soft turnrow to the firm row middles. This difference in soil density will affect unit height until all wheels are back in the row.

Soft turnrows are much slower to dry after a rain, thus delaying picking operation 1 to 2 days or longer after the cotton is dry enough to pick. Traveling to and from the trailer and dumping takes longer in loose soil because of the difficulty in preventing the machine from sliding into the trailer during dumping operations.

Grass and weeds interfere with good machine operation causing loss of cotton and lower grades. Where grass or ground cover is necessary to prevent turnrows from washing, frequent clippings are needed to keep weed seeds to a minimum and grass from entering the picking units.

Weed control chemicals or flame burners can be used to control grasses and weeds during early season and at lay-by. Increased rates of chemicals on turnrows are usually necessary.

Small road graders or tractor blades do a good job of smoothing the turnrow, controlling weeds and grasses and leaving turnrows firm.

Light discing in early season, or several trips with cultivating equipment in combination with



A grassy turnrow

some of the above practices, may be an economical approach on most farms.

Many factors are involved in getting more cotton in the picker basket. However, it is obvious from the points illustrated here that having wide, smooth and firm turnrows is an essential practice.

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