Texas Agricultural Extension Service

Cotton Journal

For High Plains Producers

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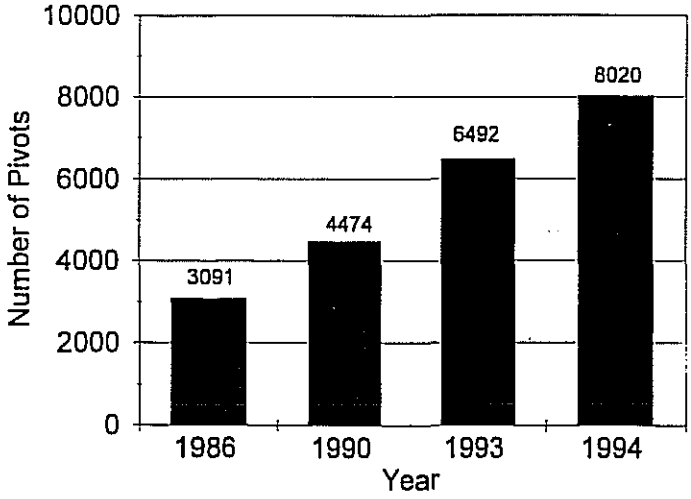
Center Pivots Making A Difference For South Plains Cotton

by Rose Mary Seymour

Cotton producers in the South Plains are going whole hog with center pivots this year. There has been an increasing trend in the purchase of center pivots for a couple of years now. The High Plains Underground Water Conservation District inventories the number of center pivots in the counties they serve every 3 to 4 years, and they just completed a survey of the number of pivots in their area for 1993. They estimated a total of 6492 pivots in the 15 county area they serve. Of their 15 counties, the county with the highest number of pivots has always been Parmer County (1258 pivots in 1993), but now Lamb County is running a close second with 1255 pivots in 1993. All counties in the Southern High Plains in 1994 will see an increase in center pivots. Irrigation distributors for the area expect about 1525 new center pivots to be up and running for the 1994 season. Clearly, pivots are providing growers with benefits in their irrigation management.

Figure 1. Change in number of pivots in the 15 county area of the High Plains Underground Water Conservation District in the last decade (Numbers courtesy of the water district).



One reason for the growth in pivot numbers is the quality of the equipment available today. In recent years there has been increasing variety in applicators for center pivot systems. Some of the many options available are great for saving water and energy in the tough, dry windy climate of the Southern High Plains. With all the new choices, how does a producer choose the applicator that is best for their pivot? Also, how do you manage water with the new center pivot of today?

Applicators Available Today

When you think of water use efficiency with center pivot irrigation, there are many good applicators available today to get the water to the root zone where it can do the most good. Several applicators of today can be used either for conventional center pivots or in a LEPA configuration. The main differences in equipment between a LEPA system and a conventional system are the distance between nozzles on the mainline, the distance of the nozzle above the ground and in most cases operating pressures. LEPA irrigation also assumes that appropriate tillage practices are working with the irrigation equipment to prevent runoff.

LEPA systems usually have lower operating pressures than conventional pivots, but because of improved designs the difference in operating pressures between LEPA and conventional systems is not as great as it used to be. Originally, impact sprinklers were the only style of applicator available for center pivots. Because of high operating pressure requirements and evaporative water loss from their use, they are impractical for new systems of today.

The Rotator™ by Nelson is one of the newer applicators that has a rotating plate just below the nozzle. The force of the water leaving the nozzle hits grooves in the plate causing it to rotate and sling water out. The Rotator™ has a low operating pressure of as little as 10 pounds per square inch (psi).

A similar applicator that rotates faster than the Rotator™ is the Spinner also made by Nelson. The Spinner and Rotator™ look much the same but differ in the speed of rotation and the grooves in their plates. These applicators are very reliable with fewer moving parts to breakdown than impact sprinklers. They provide a wider pattern diameter than spray pads because of their rotation, and they have larger average droplet sizes than most conventional spray pads.

In This Issue

The Texas A&M University System, U.S. Department of Agriculture, and the County Commissioners Courts of Texas Cooperating

Update - The Mexican Cotton Market

by Eduardo Segarra

In a recent trip to eastern and central Mexico, it was found that the prospects for increased U.S. cotton lint exports to Mexico will be very good this coming season. Last year the U.S. exported well over 500,000 bales to Mexico.

Mexican cotton is relatively expensive to produce mainly because of pest pressures. Given that the current financial conditions in the Mexican agricultural sector are not very different than they were last year, in terms of the cost of credit for the production of a crop, such as cotton, which does not receive any production subsidies, and with the adoption of a new income enhancing program called PROCAMPO in the Mexican agricultural sector, which seeks to increase and/or stabilize the income of corn and dry bean producers; it is expected that these two factors will induce further shifts of cropland from cotton production to these staple crops. Thus, it is expected that cotton production will again be down in Mexico this year, increasing the prospects for exports of High Plains Cotton.

The recent political upheavals in Mexico should have little impact on their cotton imports from the U.S. Right now would not be a bad time to start merchandising cotton in Mexico.

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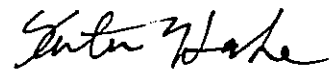
About this Newsletter

Cotton Journal is designed to provide High Plains producers with information they can use to advance the profitability of cotton farming. For a free subscription of this monthly newsletter, contact your local County Extension Office or call 806-746-6101. *Cotton Journal* is edited by Kater Hake (Senior Editor), Michael Hickey and James Leser.



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