

(93%) cotton and percent lint was similar in both pickers. The 15-inch row system with 27 000 plants/A gave higher lint yield (1491 lb/A) compared to 40-inch row cotton with 50 000 plants/A (1360 lb/A). Plant canopy closed 3 weeks earlier in twin-row cotton and 4 weeks earlier in 15inch row cotton than in 40-inch row cotton with a potential to eliminate at least one Roundup postemergence application.

Results of this one year study indicate that 15-inch row and twin-row planting systems using equal or less plant populations as that of 40-inch row system could produce lint yield equal or higher than 40-inch row system under both irrigated and non-irrigated conditions. It should be stressed that in 15-inch row system, lint yield was corrected for 80% of land area as 2 of 10 rows were skipped under tire tracks. Lint yields will increase as the number of rows planted per trip increase, for example, correction factor will be 90% for 2 of 20 and 93% for 2 of 30 rows skipped. Presently, no picker is available to harvest cotton in 10-inch twin-row system. However, if an adjustable row picker becomes available, twin-row of 15-inch apart on a 40-inch center is a possibility.

## ► Conservation Tillage Strategies For Corn, Sorghum And Cotton

**Presented by Charles Stichler**

*Agronomist, Stichler Agriculture Services*

Conservation and reduced tillage continues to change and adaptations made to match the conditions of each producer and the problems encountered. With the shift in weeds and herbicide resistant bio-types beginning to appear in fields, producers must be aware and make hard choices. Rotating herbicides and using combinations to kill adapting weeds, will become more important if producers want to continue using reduced tillage as a viable option. Some limited tillage may be necessary to reduce the dependence on herbicides.

Fertilizer placement and compaction are also issues over a long period. Although crop roots are able to pick up nutrients from a small band – it will be important to move the band to different areas near the planted row. Crops with large root systems such as corn – often respond when roots throughout the soil have access to nutrients.

Stale seed beds in higher rainfall areas and strip tillage in other areas are predominately the most successful reduced tillage practices. Permanent equipment patterns, killing sorghum before harvest when possible and cotton as soon as possible after harvest continue to be important management practices.

Formulas work for “dead” things – but not for living organisms. Farming is “living” in the sense that each year, season and crop with its challenges are different.

## ► Conservation Vs Conventional Tillage, Double Cropping And Cover Crop Effects On Crop Production And Water Use In Subtropical South Texas

**Presented by Dr. Bob Wiedenfeld**

*Professor of Soil Science, Texas Ag. Experiment Station*

Water availability for irrigation has become a major concern for South Texas. Conservation tillage offers the advantage of reduced field operations compared to conventional tillage which should result in lower costs, better yields and reduced risk. Water loss is reduced, soil structure improves, and oxidation of organic residues is not as rapid as tillage is reduced. Hopefully this will result more efficient water use as well as lower costs. Water savings due to reduced tillage, however, have thus far not been reported. Double cropping and cover crops offer the potential to increase organic matter accumulation improving soil properties, but will increase initial water requirements. Planting and weed control are major challenges for implementing conservation tillage. The objective of this study is to compare conservation vs conventional tillage, and also to evaluate fall double cropping and cool season cover crops compared to fall fallow under conservation tillage.