

Northwest Plains Pest Management News

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Bailey and Parmer Counties

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Spring seeded crops have been slow to emerge. Most of the corn is up and is off to a good start. Some of the early planted cotton has already been replanted and some others are currently being evaluated. In some instances a good stand emerged in one field but an adjacent field planted the same day had to be replanted. Seed quality, environmental conditions, and production systems all appeared to have played a roll in poor emergence.

When adverse conditions result in poor emergence or an uneven stand, replanting may be necessary. Decisions regarding replanting should be based on objective evaluations of the existing stand, stand uniformity, condition of emerged plants, calendar date and the costs associated with replanting. Thin, skippy stands are usually the primary considerations in the replant decision. Once the decision to replant has been made, consideration must be given to fine tuning the production system to optimize productivity of late planted cotton.

Daily Water Use	
Crop	Inches per day
Wheat	.24
Corn	.12
Cotton	.08
Bermuda grass	.05
Fescue/ Bluegrass	.07

Cotton Heat Unit Accumulation¹			
Location	Current	2004	Long Term ²
Farwell	168	216	
Friona	186	228	
Muleshoe	173	240	125
Muleshoe WR	191		

¹ DD 60 based on May 1

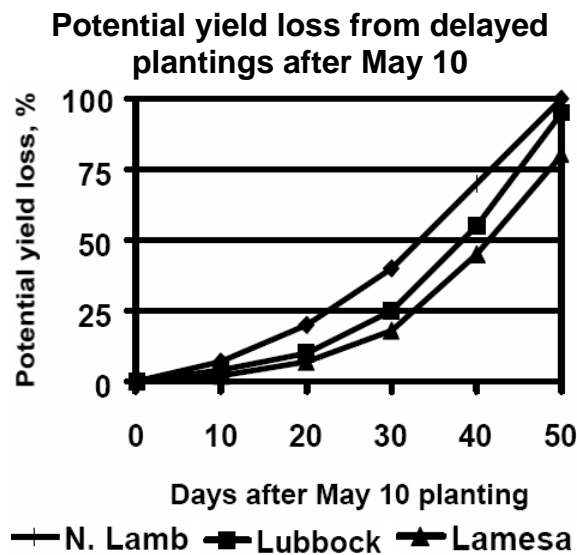
² Based on Muleshoe long term weather data 1971-2000

Cotton spacing studies have been conducted in the United States for more than a century. The optimum plant density for both optimum production and harvesting efficiency ranges from about 25 to 50,000 plants per acre in conventional row spacings. Grower experiences and field tests have demonstrated that acceptable yields can be obtained from stands as low as 13 to 26,000 plants per acre (1 to 2 per foot) if the plants are uniformly spaced.

In Texas High Plains yields rapidly decline in irrigated cotton when plant populations drop below 20,000 plants per acre. It is likely that later maturing, more indeterminate varieties are better able to compensate for low plant densities than are the early maturing, relatively determinate varieties. The short season of the Northwest Plains may limit the ability of cotton to fully compensate for a poor stand.



Plant spacing uniformity is a critical consideration in replant decisions. Poor spacing uniformity, or skips, may cause significant yield reductions even though the average number of plants per acre is adequate for optimum production. Research has shown that skips which decreased stands by 26 and 45%, respectively, lowered yields by 13 and 26%, respectively, even though final plant densities were in excess of 2 plants per foot of row. Studies in Arkansas indicate that stand losses of 20 to 30 percent can occur without yield decreases if the skips are bordered by rows with adequate stands. Skips on adjacent rows greater than 3 feet in length are likely to result in higher yield losses than longer skips within the same row.



Cut-off dates for planting cotton usually coincide with the last practical dates for planting without incurring significant reductions in yield potential. On the Texas High Plains, it has been demonstrated that cotton planted on June 1, June 10 and June 20, yielded 7.6, 23.6 and 48.9%, respectively, less lint than cotton planted on

May 15. In addition to lower yield potentials, later plantings often result in reduced fiber quality, delayed harvest and increased harvesting costs.

Thrips are beginning to move into emerged cotton fields. Most thrips populations were below economic threshold this week. Thrips are slender, straw colored insects about 1/15 inch long, with piercing and sucking mouthparts. Adults are winged and capable of drifting long distances in the wind. One thrips per plant should be used as the treatment level from plant emergence, through the cotyledon stage, to the first true leaf. If there was a soil applied insecticide or seed treatment applied for thrips control there must be 30% or more immature thrips present to justify a subsequent treatment.

Much of the information included in this newsletter was condensed from several publications written by Dr. James Supak, Program Leader and Associate Department Head Soil and Crop Sciences (retired) and Dr. Randy Boman, Extension Agronomist – Cotton. If you would like further information please let me know.

Monti Vandiver



Monti Vandiver
 Extension Agent-Integrated Pest Management
 Texas Cooperative Extension
 401 3rd Street
 Farwell, Texas
 806-481-3300

<http://txipmnet.tamu.edu>
<http://parmer-tx.tamu.edu>

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