GLYPHOSATE OVER-THE-TOP APPLICATION INFLUENCES BOLL DEVELOPMENT OF ROUNDUP READY COTTON. (C02-mery163057-Oral)

Authors:

- R.Mery * - *Texas Agricultural Experiment Station*
- J.T.Cothren - *Texas Agricultural Experiment Station*
- B.L.Burson - *USDA-ARS*
- T.K.Witten - *Texas Agricultural Experiment Station*

Abstract:

Cotton yield can be affected by several parameters including number of plants and bolls per unit area, seed per boll, and fibers per seed. Any factor that reduces these parameters could potentially reduce lint yield. To determine if glyphosate over-the-top applications affect fruiting on Roundup Ready cotton cultivars, DP5690RR was grown under field (2001) and greenhouse (2002) conditions. Glyphosate was applied over-the-top at three different rates and three leaf-stages. Field data showed that as the rate of glyphosate increased and the stage of application was delayed, pollen availability decreased, and less first position fruit was retained within nodes six to ten. Analysis of pollen tube growth showed no differences across treatments. To determine if pollen availability was the only factor affecting first position boll retention, greenhouse studies were conducted during 2002. Embryo development was measured by obtaining normal:abnormal seed ratios per boll, total number of seeds per boll, and number of pollen tubes entering the ovary. Pollen availability and fruit distribution were also analyzed. Data for field and greenhouse studies will be presented.

Corresponding Author Information:

Ramon Mery
Texas Agricultural Experiment Station
Texas AM University Mail Stop 2474
College Station, TX 77843-2474

phone: (979) 845 3404
e-mail: rmery@hotmail.com

Presentation Information:

Presentation Date: Wednesday, November 13, 2002
Presentation Time: 9:15 am

Keywords:
Cotton, Glyphosate, Roundup Ready, Pollen