

INTRODUCTION

Cotton performance trials were conducted during 2004 at Lubbock, Halfway, and Pecos, Texas Agricultural Experiment Stations. The Lamesa Dryland variety test was planted on the AG-CARES research farm. An irrigated variety test was also planted near Tulia on the Dale Swinburn farm and near Lamesa on the Donald Love farm.

The Lubbock Station tests were planted in either Amarillo or Olton soils, the Halfway Station tests in Pullman clay loam soils and the Pecos Station tests were planted in Hoban silty clay loam soils.

The 2004 season began with excellent soil moisture conditions but turned dry in April and May, which impeded dryland planting and emergence in dryland fields. Rains began in earnest by mid June and continued at a record pace through the season and into harvest. The 2004 season had the second highest rainfall on record with 33.25 inches. The late start for some dryland acreage was detrimental to yields and fiber maturity, however some yielded as much as 2.5 bales/A. Irrigated yields in excess of 4 bales/A have been reported. The average across all acres is predicted at about 682 pounds. A record production year is on track with 4.6 million bales projected for 3.24 million acres. The absence of widespread weather damage has kept much of the planted acreage in play as compared to last year's heavy weather losses. The abundant rainfall has maximized the genetic potential for most fiber characteristics but abnormally low temperatures in August have resulted in significantly lower Micronaire. Weather probably reduced production from a hypothetical optimal level by 18% this year compared to 48% last year. Cool, foggy, rainy weather during the first part of the harvest season kept harvest equipment out of the field and has resulted in significant bark problems. The prevalence of many picker varieties has increased the stringing out of lint in response to an early snowstorm coupled with above average rainfall in September, October and November although higher yield potential may balance this loss. A delayed plant-killing freeze occurred in late November. Ginning of this crop will extend into March of 2005.

Insects reduced yield by 4%, up from 1.5% last year. But reduced weather losses and record yields will mask most of this loss. Thrips infestations were prolonged and extremely heavy this year in the northern acreage but surprisingly low to the south of Lubbock. Use of preventative Cruiser seed treatments or Temik still lags behind some previous years and is used on far fewer acres than recommended. Many northern fields required a foliar insecticide application on top of the at-planting preventative treatment because of the heavy, long lasting infestation. Square retention was generally exceptionally high with most fields averaging over 95% for the first 4 weeks of squaring. The absence of area-wide cotton fleahopper or western tarnished plant bug infestation, coupled with good growing conditions contributed to this high square set. Both of these pests were a minor problem in most fields during the early season with some increases in plant bugs later in the season. Above normal rainfall and exceptional weed host growth probably kept the bugs out of cotton.

Boll weevil numbers were generally very low with the exception of the Permian Basin zone, which continued to be contaminated by the St. Lawrence zone. This zone finally voted in eradication and started their diapause program in September. This will bring considerable financial relief to the Permian Basin zone primarily but also secondarily to the Western High Plains, Southern Rolling Plains, Southern High Plains, and Rolling Plains Central zones that were also contaminated to a lesser degree. No weevils were caught in the Northwest Plains zone or the new Panhandle zone. Most of the High Plains is in Maintenance Phase I with greatly reduced trapping and an aggressive remedial action plan if weevils are caught. This has significantly reduced staffing and cost. Some zones will experience further reductions next year by entering Phase II.

Bollworm infestations were more widespread compared to last year but mostly around our nominal threshold level of 10,000 larvae per acre, ranging between 2,500 and 25,000. Much of this could be ignored but more time was spent in decision-making and follow-up inspections than needed for more acute infestation. Pyrethroids continued to do good service with several generic pyrethroids appearing on the market. Increased tolerance to cypermethrin was detected in areas where pink

bollworm applications of pyrethroids were numerous. Bollgard acreage was up a little, providing excellent control of the infestations we experienced this year. Other caterpillar pests were generally absent. Aphids were largely not a problem even where pyrethroids were used sparingly. Natural enemies generally held them in check. Repeated pyrethroid sprays for pink bollworm did necessitate as many as 5 applications for aphids.

Pink bollworm infestation continued to expand in the area southwest of Lubbock near the New Mexico state line, especially in Gaines and Yoakum counties. Bollgard acreage increased accordingly with most producers using the 20% sprayed refuge provision. This acreage often came under heavy pink bollworm attack with as many as 22 applications needed before the end of the season. Otherwise, Bollgard performed flawlessly. Area-wide late season trapping has shown that moths are flying in all counties in the High Plains. The potential for a considerable problem is evident. A High Plains Pink Bollworm Task Force was formed and has met to address this growing pest problem.