

INTRODUCTION

Cotton performance trials were conducted during 2002 at the Lubbock, Halfway, and Pecos, Texas Agricultural Experiment Stations. The Lamesa dryland variety test was planted on the AG-CARES research farm. Two irrigated variety tests were also grown 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 2002 season, like 2001 began with considerable promise due to the good soil moisture conditions from winter rains. Also, another cold winter promised to provide some relief from pests. Unfortunately, from May through mid-September only June provided normal rainfall amounts. The remaining period was generally dry for most of the area. Significant rainfall did not occur again until October, when rainfall events actually caught us back up to historical averages for the year. This dry period and soil surface moisture loss due to excessive winds, resulted in a loss of about 684,000 planted acres, which never achieved a stand during the acceptable window and were failed for insurance purposes. Later spotty rains did cause some of this cotton to germinate in fields that had been replanted to sorghum or haygrazer, causing later problems for the boll weevil eradication program. Severe storms, mostly as 3 events prior to mid June, resulted in more losses totaling 210,000 acres, of which 160,000 did not get replanted back to cotton. This resulted in a total of 3.65 million acres planted but only 2.85 million acres surviving to harvest. Bollgard cotton varieties represented about 235,000 planted acres. Fibermax varieties represented about 9% of the acreage.

The harvest period was plagued with rainy conditions delaying stripper operations but fortunately not causing much yield or quality losses. Growing conditions for irrigated cotton were near optimal. Over 2,500 heat units were accumulated during the growing season for the Lubbock area. Nighttime temperatures were warm while daily highs were moderate, with only 3 days recording a temperature of 100° or better.

Higher than normal humidity levels probably moderated temperatures and moisture conditions as well. Losses due to diseases was low (2%) as was the case for insects (2.4%). With boll weevil eradication in progress across all acreage, the top crop was assured of making it to the gin. Consequently, record yields exceeding five bales per acre were reported in several fields with either sprinkler or drip irrigation. But since the dryland crop was limited by moisture and represents a large portion of the acreage, the average yield across the area was 545 lbs. per acre.

Early season thrips infestations were again a problem across much of the area and significant damage was documented in several tests conducted this year. However, because environmental conditions were near ideal, this early damage was more than compensated for by the end of the season. Both Lygus bugs and cotton fleahoppers were a minor issue again this year. Some consultants suggested that Lygus was a problem in some fields with lowered square retention levels but surveys did not detect any significant numbers of either pest. With only a very few exceptions, no fields were infested at damaging levels during any part of the season. In fact, two tests planned to address these 2 pests were unsuccessful because of their absence.

The biggest story as far as insects were concerned was the near absence of boll weevils for the first time since 1995. Early trapping and surveys of overwintering sites indicated very low survival of boll weevils during the winter. Consequently, the Texas Boll Weevil Eradication Foundation (TBWEF) decided to use 3rd year field application trap trigger values in the two new areas entering their first full season programs. Overall the eradication program was a success with only a few isolated problems. A field north of Levelland in the Southern High Plains/ Caprock zone developed very high boll weevil numbers as evidenced by September trap catches averaging between 600-800 weevils per trap week. This field, along with other problem fields was put on a 5-day schedule of treatment. Another serious problem developed in the Permian Basin zone where there was a blowup which was not detected early enough to prevent many fields in the surrounding area and adjacent Rolling Plains Central zone from being infested. This problem probably resulted in an additional million-acre applications. Migration from northern Glasscock County (not in an active zone) and undetected boll weevil infestation development on late germinating cotton plants in failed cotton fields planted back to sorghum or haygrazer were two causes of this problem. It would appear the

TBWEF has succeeded in gaining control of these problems by the end of the season.

Bollworms appeared to “blow” into the area from the southeast on winds that normally come from the southwest. The epicenter of the problem was in Lubbock County. Other areas were also affected to a lesser degree. There were several complaints about pyrethroid performance. Larval examinations indicated populations were 100% bollworm. Coverage issues were thought to be the main cause of some of these control problems but the resistance issue was still a consideration. A statewide resistance monitoring program will be initiated next year. Following on the heels of this bollworm flight was an invasion of beet armyworms. While the epicenter was again in Lubbock County which occupied a zone that was in its first full season year of eradication, there was no consistent pattern of beet armyworm infestations to sprayed fields. However, the TBWEF did alter the trap triggers for this county and some work units in Hockley and Hale counties for a period of 4 weeks. This reduced accumulative weekly sprayed acreage by work unit 10 from 10-15%. Fall armyworms appeared toward the tail end of the beet armyworm problem in August. Intrepid worked very well for both armyworm species.

Aphid infestations developed in late July and early August but did not persist very long. Their short duration was generally not due to predation, parasitism, or diseases. Because infestations did not persist, insecticide screening was difficult and sticky cotton was a non-issue. Intruder was the insecticide of choice even though Furadan was available through a Section 18. Intruder provided outstanding control.

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