

**Dr. Brent Bean**

Agronomist, Texas Agricultural Extension Service, and Professor, Soil and Crop Sciences, Texas A&M University  
**Email: [b-bean@tamu.edu](mailto:b-bean@tamu.edu)/ Ph: 806-359-5401**

**PAGE  
ONE**

*Panhandle Ag Extra*  
July 2000 Volume 2, Issue 4

In contrast to the last couple of years, the 1999 - 2000 wheat crop is not one that will be remembered fondly by most area producers. Overall the year was not favorable for high wheat yields across the Texas High Plains. The following is a summary of the year and variety performance from several variety trials across the area. This newsletter was prepared with the help and input of Dr. Mark Lazar, Wheat Breeder, Texas A&M Agricultural Experiment Station Wheat Breeder, in Amarillo.

***1999 - 2000 Wheat Crop***

Dry weather in the fall prevented the establishment of dryland wheat by many producers. This was followed by very heavy infestation of greenbugs throughout the region from October through early spring. Many fields that were not sprayed for greenbug were completely destroyed by the pest. In some cases multiple applications of insecticide did not save the crop. A warmer than normal winter contributed to the greenbug problem as well as causing the wheat to consume valuable soil moisture during the winter months. A third problem was widespread wheat infection with wheat streak mosaic virus. Other diseases present were barley yellow dwarf and take-all root rot. In the Dalhart area, soil-borne mosaic virus was confirmed in several fields. There are varieties that are tolerant to soil-borne mosaic and should be used in fields with a history of the disease. Dry hot weather in the late spring resulted in an earlier than normal harvest. It also led to low test weights and grain protein in many fields.

***Wheat In the Beginning***

Recent DNA fingerprinting comparing wild wheat to those of cultivated wheat indicate the earliest domestication of grain occurred in southeast Turkey, where the Tigris and Euphrates Rivers run close together. This is also where Biblical scholars identify as the most likely location for the Garden of Eden.  
Source: Connections 1, no. 1 (1999): 1

***Wheat Variety Trial Results***

Wheat variety trials were established and harvested by Texas A&M at six locations in the Texas Panhandle and South Plains (see accompanying table). Under irrigation, four varieties were in the top 10 at both the Sunray and Bushland sites. These were Tam 110, Tam 302, Tam 400, and Trego. Tam 110 is very similar in characteristics to Tam 107 with the exception of having greenbug tolerance. Because of its greenbug tolerance we fully expect this variety to grow in popularity. Tam 302 is a variety released out of Dallas that has performed well in tests throughout the Panhandle the last four years especially when well-watered. However, this variety has a history of low test weight. At Sunray its test weight was less than 50 lb/Bu. Its winter hardiness is also a potential concern. Tam 400 is a new variety that was recently released by Texas A&M. It is designed for central Texas, but may be adapted to the eastern and southern panhandle counties. Trego is a **white wheat** from Kansas. White wheat should only be planted where it can be kept segregated from hard red wheat. At the Sunray location, wheat streak mosaic virus was present throughout the test area. Varieties were rated on wheat streak mosaic tolerance based on the amount of yellowing of the leaves. Varieties expressing little leaf yellowing in the presence of the disease were Thunderbolt, Longhorn, Jagger, 2137, Akron, AP-7510,

Coronado, Hickok, Rowdy, Tam 302, Tam 400, and Triumph. Varieties with the most yellowing were Ike, Scout, Tam 109, and Tomahawk.

In the Lamesa trial, the top five varieties were Tam 200, Tam 201, Tam 110, Trego, and Hickok. This is the first year Texas A&M has conducted a wheat trial in this area in a number of years. Tests will need to be conducted for a couple of more years before a good recommendation on variety selection can be made.

In the three dryland tests, Tam 107, Tam 110, Tam 200, Tam 202, Jagger, and Custer were in the top 10 varieties at each location.

Each crop year is somewhat unique. For this reason, always look at yield data from at least three to four years in making variety selections. It is always a good idea to plant more than one variety. Variety test results from previous years can be found at the following three web sites:

<http://soil-testing.tamu.edu/publications/833080-2000-13PDF.PDF>

<http://soil-testing.tamu.edu/publications/832728-scs-98-25.PDF>

<http://amarillo2.tamu.edu/amaweb/pln-gen.htm>

### ***Variety Recommendations***

Okay, so what do we recommend? Based on our observations TAM 200, 2137, Hickok, and Ogallala are proven varieties that should yield well in most years under irrigation.

Dryland wheat varieties that historically perform well are TAM 105, TAM 110, TAM 202, and Custer. There are certainly other good varieties that can be planted, but it is hard to go wrong with these selections. Varieties to watch in the future are Thunderbolt and possibly TAM 302. Jagger is a variety that does well in the northern panhandle, while Tomahawk has performed well in the eastern panhandle under irrigated and dryland conditions. Be sure and notice the height and lodging ratings in the accompanying table. Under poor soil or light moisture conditions, a tall variety is often desirable. Where heavy irrigation and nitrogen application is used, choose a variety with a low lodging score.

<b><i>Variety Recommendation</i></b>	
<b>Irrigated</b>	<b>Dryland</b>
TAM 200	TAM 105
2137	TAM 110
Hickok	TAM 202
Ogallala	Custer

### ***Wheat Survey***

A wheat survey recently completed by the Texas Ag Statistics Service and sponsored by the Texas Wheat Producers Board produced some interesting results. The most popular varieties planted in the Texas Panhandle were TAM 105, TAM 200, Longhorn, TAM 110, Jagger, Ogallala, and TAM 202. Over the last five years, 44% of survey respondents planted wheat for grain only, 33% grazed their wheat and harvested grain, while 19% either grazed-out or hayed their wheat. By far the most troublesome weeds reported were mustards and bindweed. However, only 24% of wheat acres are treated with herbicide each year while on average 18% of the acres are sprayed for insects. When nitrogen was applied to dryland wheat an average of 54 lbs/Ac was used. In irrigated wheat 120 lbs/Ac of nitrogen was applied. Several other questions pertaining to wheat production were asked in the survey. The results of the state wide survey are available at the Texas Wheat Producers Board or from my office. Survey questions are being broken down by different regions of the state and will be available in a couple of weeks.

<b><i>Top Planted Varieties in 1999</i></b>	
<b>Variety</b>	<b>Acres Planted</b>
Tam 105	364,500
Tam 200	211,700
Longhorn	157,100
Tam 110	102,200
Jagger	91,100
Ogallala	89,500