



# The Agriculture Program

The Texas A&M University System

## 2000 - 2001 Wheat Variety Trials in the Texas Panhandle

### Texas Agricultural Extension Service

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#### *2001 Wheat Crop*

The 2000 - 2001 wheat crop was disappointing to some farmers while being an excellent year for others. The crop got off to a rocky start due to our exceptionally dry fall. In many cases a wheat stand was not established as a result of the dry fall weather. However, once winter snows arrived we had almost ideal weather for growing wheat through harvest. Those farmers who were able to get their wheat established ended up with a good to excellent crop. Cool weather coupled with timely spring rains caused an increase in late tiller production as well as more grain being produced per wheat head. Insect and disease infestation were minimal throughout the spring.

#### *Wheat Variety Trial Results*

Wheat variety trials were harvested from seven locations across the Panhandle. Each trial consisted of 30 wheat varieties (See accompanying tables). The dryland trials were established near Silverton, Sunray, Perryton, and Canadian. Limited irrigated trials were located near Wellington and Wilderado, and a site near Dimmitt was fully irrigated.

In the dryland trials the varieties that yielded in the top 20% were very consistent between locations. Top varieties were Jagger, TAM 105, Thunderbolt, 2174, Tonkawa, Cutter and Dumas. Jagger is an early maturing Kansas wheat that has yielded particularly well the last couple of years. It is considered a good grazing wheat that can be planted deep and has good resistance to most diseases. TAM 105 has been around since the mid 70s but continues to perform well year in year out, despite the fact that it is susceptible to most diseases. Thunderbolt has been impressive since its release by AgriPro in 1998. Tonkawa is an Oklahoma wheat with a TAM 105 background that also has been a very consistent performer. Two new varieties in this year's trials are Cutter and Dumas. These are AgriPro varieties that will not be available until 2002. Cutter looked particularly good in dryland tests yielding 75 bu/Acre in the Canadian trial this year.

In the fully irrigated trial near Dimmitt, several varieties yielded more than 100 bu/Acre. Varieties yielding over 115 bu/Acre were Dumas, Jagger, Prairie Red, Thunderbolt, TAM 201,

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and TAM 400. Prairie Red is essentially TAM 107 with Russian wheat aphid tolerance. TAM 201 has been tested for several years and generally performs best in the Rolling Plains area of Texas. TAM 400 was developed as a south Texas wheat but has performed very well in irrigated trials in the Panhandle the last two years. This is a variety that if it continues to perform well should be considered in the future.

### ***Variety Recommendations***

Each year is different. For this reason, always look at yield data from at least three consecutive years before selecting a variety for planting. It is also a good idea to plant more than one variety since varieties perform differently under various environmental conditions. Some varieties also tend to perform better in different parts of the Panhandle. Past results from variety trials performed around the Panhandle can be viewed at the following web sites:

97-98 Results: <http://soil-testing.tamu.edu/publications/832728-scs-98-25.PDF>

98-99 Results: <http://soil-testing.tamu.edu/publications/833080-2000-13PDF.PDF>

99-00 Results: <http://amarillo.tamu.edu/amaweb/Programs/Agronomy/pageone/p10701.pdf>

When considering a variety, characteristics such as plant height, disease and insect tolerance, coleoptile length (determines how deep the variety can be planted), and fall grazing potential should be considered along with yield data. Under dryland conditions it is hard to go wrong with Custer, Jagger, TAM 105, TAM 110 or Thunderbolt. All five varieties have good yield histories. Custer and Jagger are considered good grazing wheats, and TAM 110

| <b><i>Variety Recommendation</i></b> |                |
|--------------------------------------|----------------|
| <b>Irrigated</b>                     | <b>Dryland</b> |
| Hickok                               | Custer         |
| Jagger                               | Jagger         |
| Ogallala                             | TAM 105        |
| TAM 200                              | TAM 110        |
| TAM 110                              | Thunderbolt    |

has greenbug tolerance. Thunderbolt has good straw strength along with good tolerance to wheat streak mosaic and leaf rust. Under full irrigation Hickok has been a consistent performer. Jagger, Ogallala, TAM 200, and TAM 110 should perform well under a wide range of conditions. Other irrigated varieties to consider are TAM 302 and 2137. Varieties to watch are Dumas and TAM 400.

# Dryland Wheat Variety Trials 2000 - 2001

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| Variety <sup>1)</sup> | Silverton        |                   |         | Canadian         |                   |         | Sunray           |                   |         | Perryton |
|-----------------------|------------------|-------------------|---------|------------------|-------------------|---------|------------------|-------------------|---------|----------|
|                       | Plant<br>Ht. In. | Test Wt.<br>lb/Bu | bu/Acre | Plant<br>Ht. In. | Test Wt.<br>lb/Bu | bu/Acre | Plant<br>Ht. In. | Test Wt.<br>lb/Bu | bu/Acre | bu/Acre  |
| 2137                  | 23.0             | 60.2              | 28.3    | 26               | 56.0              | 37.1    | 24               | 60.6              | 45.3    | 28.7     |
| 2174                  | 23.0             | 63.6              | 34.7    | 25               | 58.7              | 47.0    | 27               | 61.3              | 51.0    | 37.4     |
| Akron                 | 26.0             | 59.5              | 36.2    | 26.5             | 55.4              | 44.3    | 24               | 58.6              | 41.4    | 30.2     |
| Custer                | 21.0             | 58.7              | 31.0    | 27               | 53.7              | 38.7    | 22               | 59.6              | 41.6    | 29.1     |
| Cutter                | 24.0             | 59.8              | 44.5    | 29.5             | 61.5              | 82.2    | 30               | 61.3              | 55.7    | 36.1     |
| Dumas                 | 20.0             | 60.0              | 32.5    | 27               | 56.8              | 41.6    | 27               | 61.6              | 59.6    | 41.7     |
| Hickok                | 18.0             | 58.6              | 29.9    | 24               | 54.7              | 29.7    | 27               | 62.4              | 55.0    | 27.8     |
| Jagger                | 24.0             | 60.1              | 43.1    | 27               | 59.7              | 75.5    | 25               | 60.5              | 44.7    | 38.5     |
| Lockett               | 23.0             | 56.3              | 27.6    | 30               | 56.3              | 37.3    | 23               | 56.7              | 39.4    | 23.4     |
| Longhorn              | 29.0             | 55.8              | 30.7    | 30               | 57.0              | 39.1    | 21               | 58.9              | XXXX    | 32.1     |
| Ogallala              | 21.0             | 60.2              | 36.1    | 26               | 59.0              | 46.9    | 25               | 60.7              | 46.6    | 33.7     |
| Prairie Red           | 20.0             | 56.6              | 31.1    | 26.5             | 53.0              | 35.7    | 25               | 59.3              | 46.9    | 38.2     |
| Rowdy                 | 19.0             | 55.2              | 25.2    | 25               | 52.2              | 30.1    | 26               | 58.7              | 47.6    | 25.8     |
| Scout 66              | 37.0             | 58.2              | 46.1    | 39               | 59.7              | 58.0    | 32               | 58.1              | 35.8    | XXXX     |
| TAM 105               | 26.0             | 58.2              | 39.9    | 30               | 57.3              | 60.8    | 24               | 59.7              | 45.4    | 39.5     |
| TAM 107               | 24.0             | 55.8              | 26.9    | 25               | 54.2              | 32.5    | 22               | 56.8              | 38.2    | 25.9     |
| TAM 109               | 25.0             | 58.7              | 36.3    | 26               | 53.9              | 40.2    | 26               | 58.1              | XXXX    | 31.3     |
| TAM 110               | 22.5             | 57.6              | 31.0    | 28               | 53.2              | 39.1    | 27               | 57.9              | 40.1    | 33.6     |
| TAM 200               | 20.0             | 58.7              | 28.1    | 29               | 57.2              | 31.0    | 23               | 59.9              | 38.9    | 28.7     |
| TAM 201               | 17.0             | 53.5              | 27.6    | 29               | 57.2              | 46.4    | 22               | 59.3              | 38.7    | 26.0     |
| TAM 202               | 19.0             | 58.4              | 34.5    | 28               | 53.8              | 31.9    | 21               | 58.6              | 45.2    | 34.3     |
| TAM 302               | 23.0             | 54.9              | 28.7    | 26.5             | 54.7              | 36.3    | 23               | 56.6              | 49.6    | 28.8     |
| TAM 400               | 18.0             | 60.3              | 31.1    | 26               | 53.6              | 29.9    | 19               | 61.2              | 41.8    | 27.9     |
| Thunderbolt           | 22.0             | 59.7              | 38.9    | 36               | 59.4              | 52.8    | 23               | 59.1              | 40.9    | 38.8     |
| Tomahawk              | 21.0             | 55.2              | 32.9    | 30               | 50.3              | 26.2    | 26               | 58.7              | 47.9    | 31.4     |
| Tonkawa               | 22.0             | 61.9              | 37.1    | 28               | 60.2              | 50.9    | 25               | 64.6              | 56.6    | 32.9     |
| Trego                 | 26.0             | 59.6              | 38.8    | 28               | 57.2              | 47.0    | 22               | 62.9              | 58.4    | 33.3     |
| Triumph 64            | 29.0             | 63.7              | 33.8    | 33               | 59.3              | 46.3    | 28               | 59.5              | 40.4    | 31.2     |

<sup>1)</sup> Seeding rate was 45 lb/Ac at Silverton, and Canadian, 90 lb/Ac at Sunray, and 60 lb/Ac at Perryton.

Trego is a hard white winter wheat variety from Kansas.

Cutter and Dumas are AgriPro varieties that will not be available until 2002.

# Irrigated Wheat Variety Trials 2000 - 2001

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| Variety <sup>1)</sup> | Wellington <sup>2)</sup> |                |         | Wilderado     |                |         | Dimmitt   |               |                |         |
|-----------------------|--------------------------|----------------|---------|---------------|----------------|---------|-----------|---------------|----------------|---------|
|                       | Plant Ht. In.            | Test Wt. lb/Bu | bu/Acre | Plant Ht. In. | Test Wt. lb/Bu | bu/Acre | % Lodging | Plant Ht. In. | Test Wt. lb/Bu | bu/Acre |
| 2137                  | 27.0                     | 59.4           | 35.8    | 39            | 62.0           | 68.5    |           | 35            | 59.2           | 112.1   |
| 2174                  | 24.0                     | 60.8           | 35.7    | 35            | 63.1           | 78.5    |           | 35            | 50.9           | 106.5   |
| Akron                 | 25.0                     | 58.6           | 43.7    | 34            | 62.3           | 77.2    |           | 42            | 55.2           | 92.6    |
| Custer                | 22.5                     | 61.1           | 36.3    | 37            | 62.6           | 73.5    |           | 34            | 59.2           | 110.2   |
| Cutter                | 24.0                     | 61.5           | 44.5    | 41            | 64.0           | 72.6    |           | 35            | 56.0           | 109.4   |
| Dumas                 | 23.0                     | 62.7           | 38.9    | 35            | 64.5           | 79.8    |           | 31            | 60.0           | 122.0   |
| Hickok                | 22.0                     | 62.9           | 31.9    | 34            | 65.1           | 88.8    |           | 31            | 61.3           | 101.7   |
| Jagger                | 26.0                     | 60.7           | 39.3    | 38            | 64.5           | 83.9    |           | 35            | 61.3           | 119.1   |
| Lockett               | 25.0                     | 58.2           | 37.8    | 41            | 62.0           | 67.3    | 68        | 40            | 53.7           | 81.4    |
| Longhorn              | 30.0                     | 60.5           | 36.4    | 41            | 62.7           | 64.4    |           | 39            | 51.3           | 93.9    |
| Ogallala              | 22.0                     | 61.2           | 35.7    | 36            | 64.8           | 69.7    |           | 31            | 59.3           | 105.5   |
| Prairie Red           | 23.0                     | 59.3           | 38.6    | 38            | 61.7           | 74.5    |           | 35            | 56.6           | 116.8   |
| Rowdy                 | 21.0                     | 61.5           | 38.1    | 28            | 63.8           | 72.9    |           | 31            | 60.2           | 109.6   |
| Scout 66              | 28.0                     | 61.0           | 41.4    | 46            | 63.1           | 67.5    | 38        | 42            | 58.1           | 78.2    |
| TAM 105               | 23.0                     | 60.4           | 46.1    | 37            | 62.3           | 87.5    |           | 35            | 55.4           | 85.7    |
| TAM 107               | 23.0                     | 57.1           | 34.1    | 35            | 61.7           | 76.1    |           | 34            | 52.0           | 110.7   |
| TAM 109               | 26.0                     | 58.7           | 40.8    | 32            | 61.9           | 77.7    |           | 34.5          | 48.4           | 83.5    |
| TAM 110               | 22.0                     | 60.1           | 40.1    | 34            | 62.1           | 84.7    |           | 36            | 57.9           | 111.7   |
| TAM 200               | 24.0                     | 61.1           | 36.1    | 35            | 64.3           | 89.3    |           | 32            | 60.1           | 108.6   |
| TAM 201               | 22.0                     | 59.9           | 35.0    | 34            | 62.2           | 71.9    |           | 34.5          | 53.0           | 124.6   |
| TAM 202               | 21.0                     | 60.3           | 37.7    | 31            | 64.3           | 87.6    |           | 33            | 58.0           | 113.1   |
| TAM 302               | 21.0                     | 58.9           | 39.1    | 36            | 60.3           | 83.6    |           | 37            | 53.4           | 107.0   |
| TAM 400               | 20.0                     | 62.4           | 37.2    | 35            | 65.1           | 75.1    |           | 35            | 59.9           | 123.3   |
| Thunderbolt           | 28.0                     | 61.4           | 40.9    | 35            | 64.3           | 74.4    |           | 38            | 55.1           | 103.5   |
| Tomahawk              | 25.0                     | 59.3           | 42.6    | 32            | 61.6           | 70.5    |           | 36            | 55.7           | 110.9   |
| Tonkawa               | 25.0                     | 61.2           | 35.1    | 38            | 63.0           | 70.2    |           | 37            | 59.3           | 115.1   |
| Trego                 | 21.0                     | 62.4           | 40.6    | 35            | 63.2           | 85.9    |           | 34            | 55.1           | 93.5    |
| Triumph 64            | 28.0                     | 61.9           | 32.7    | 40            | 63.7           | 61.3    | 80        | 42            | 60.5           | 95.2    |

<sup>1)</sup> Seeding rate was 90 lb/Acre.

Trego is a hard white winter wheat.

Dumas and Cutter are new varieties that will not be available until 2002 and 2003, respectively.

<sup>2)</sup> Wellington and Wilderado locations received limited irrigation. Dimmitt location was fully irrigated.