

2004 Montana Spring Oat Variety Release and Recommendation Motions

1. Consideration to remove 'Border' from the Oat Recommended list.

Currently recommended for Irrigated production in districts 2,3,4,5 & 6 and irrigated and high rainfall areas in District 1 effective 2005.

There has been no Border in the foundation or certified seed programs in Montana for a number of years.

2. Consideration to remove 'Rio Grande' from the Oat Recommended list effective 2005.

Currently recommended for irrigated and dryland production in districts 2,3,4,5 and 6 effective 2005.

Rio Grande was not in the Certified seed program in Montana in 2003 or 2004.

There is no foundation seed of Rio Grande.

3. Consideration to add 'Monico' to the Oat Recommended list for dryland and irrigated production in districts 1-6 effective 2005.

'Monico', was developed cooperatively by Agricultural Research Service, U.S. Department of Agriculture; the Idaho Agricultural Experiment Station, the Montana Agricultural Experiment Station, and the Colorado Agricultural Experiment Station. Monico is named after the three states joining in its release (Montana, Idaho and Colorado).

Monico is a selection from the cross 83Ab3119/ Monida and was developed utilizing a modified bulk selection program. The parent 83Ab3119 had the pedigree of 'Cayuse'/76Ab6343 (K71299 ('Minn II'/Cayuse))/3/'Otana' //Coker X848-1-1-2/Cayuse). Juvenile plant growth is erect and immature foliage is blue-green in color. Panicles are equilateral and spreading. Leaf sheath, leaf margins, and culm internodes are glabrous. Kernels of Monico are typically plump, mid-long, creamy-white, and similar in appearance to those of Otana, Cayuse, and Monida. Monico was tested as ABSP 9-2 in Montana trials from 1996 to 2004.

Monico heads approximately one day earlier than Otana and three days earlier than Monida (tables 1,2,3 & 10). It is shorter than Otana and Monida but taller than Maverick and Ajay (tables 1,2,3 & 11). Monico has excellent yields and test weights over all Montana locations. Monico yields were equal to Maverick and Monida but higher than Otana, Ajay and Rio Grande (tables 1,2,3,4,5 & 8). Test weights under both dryland and irrigated conditions were equal to Otana and higher than Monida, Rio Grande, Ajay, and Maverick (tables 1,2,3,6,7& 9).

Foundation Seed of 'Monico' is available .

Table 1. 1998-2004 SPRING OAT OVERALL SUMMARY

All Locations

| ID | Pedigree | # | Yield | # | Test Wt | # | Heading | # | Plant Ht. |
|----------|------------|-----|---------|-----|---------|-----|---------|-----|-----------|
| | | Yrs | (bu/ac) | Yrs | (lb/bu) | Yrs | Date | Yrs | inches |
| ABSP 9-2 | Monico | 52 | 134.6 | 52 | 35.9 | 49 | 177.0 | 50 | 32.7 |
| CI 9252 | Otana | 52 | 125.1 | 52 | 36.0 | 49 | 178.2 | 50 | 38.0 |
| CI483126 | Monida | 52 | 131.5 | 52 | 33.5 | 49 | 180.8 | 50 | 35.0 |
| 81Ab5792 | Rio Grande | 52 | 129.3 | 52 | 34.0 | 49 | 176.0 | 50 | 30.8 |
| PI537436 | Ajay | 52 | 118.3 | 52 | 33.7 | 49 | 178.8 | 50 | 25.9 |
| PI583735 | Celsia | 52 | 126.6 | 52 | 33.9 | 49 | 180.9 | 50 | 35.3 |
| 90Ab1322 | Maverick | 52 | 133.4 | 52 | 33.7 | 49 | 178.7 | 50 | 28.8 |
| SITMEAN | Sitemean | 52 | 126.1 | 52 | 35.1 | 49 | 178.6 | 50 | 32.6 |

Table 2. Dryland Locations

| ID | Pedigree | # | Yield | # | Test Wt | # | Heading | # | Plant Ht. |
|----------|------------|-----|---------|-----|---------|-----|---------|-----|-----------|
| | | Yrs | (bu/ac) | Yrs | (lb/bu) | Yrs | Date | Yrs | inches |
| ABSP 9-2 | Monico | 27 | 81.5 | 27 | 34.1 | 25 | 177.8 | 26 | 27.8 |
| CI 9252 | Otana | 27 | 78.0 | 27 | 34.2 | 25 | 178.6 | 26 | 33.3 |
| CI483126 | Monida | 27 | 81.6 | 27 | 32.1 | 25 | 181.3 | 26 | 29.7 |
| 81Ab5792 | Rio Grande | 27 | 81.1 | 27 | 32.3 | 25 | 176.7 | 26 | 26.7 |
| PI537436 | Ajay | 27 | 72.1 | 27 | 32.5 | 25 | 179.1 | 26 | 22.1 |
| PI583735 | Celsia | 27 | 76.3 | 27 | 32.1 | 25 | 181.7 | 26 | 30.0 |
| 90Ab1322 | Maverick | 27 | 81.5 | 27 | 32.0 | 25 | 179.4 | 26 | 24.8 |
| SITMEAN | Sitemean | 27 | 77.2 | 27 | 33.5 | 25 | 179.2 | 26 | 28.0 |

Table 3. Irrigated Locations

| ID | Pedigree | # | Yield | # | Test Wt | # | Headin | # | Plant Ht. |
|----------|------------|-----|-------------|-----|---------|-----|-----------|-----|-----------|
| | | Yrs | (bu/a c) | Yrs | (lb/bu) | Yrs | g Date | Yrs | inches |
| ABSP 9-2 | Monico | 25 | 191.9 | 25 | 37.9 | 24 | 176.3 | 24 | 37.9 |
| CI 9252 | Otana | 25 | 176.0 | 25 | 38.0 | 24 | 177.8 | 24 | 43.1 |
| CI483126 | Monida | 25 | 185.4 | 25 | 35.1 | 24 | 180.2 | 24 | 40.8 |
| 81Ab5792 | Rio Grande | 25 | 181.3 | 25 | 35.8 | 24 | 175.3 | 24 | 35.2 |
| PI537436 | Ajay | 25 | 168.2 | 25 | 35.1 | 24 | 178.4 | 24 | 30.1 |
| PI583735 | Celsia | 25 | 181.0 | 25 | 35.9 | 24 | 180.1 | 24 | 40.9 |
| 90Ab1322 | Maverick | 25 | 189.5 | 25 | 35.5 | 24 | 177.9 | 24 | 33.1 |
| SITMEAN | Sitemean | 25 | 179.0 | 25 | 36.8 | 24 | 177.9 | 24 | 37.6 |

Table 4. 1998 - 2004 Montana Spring Oat 'Monico' Summary

Yield (bu/ac) Dryland Locations

| Variety | Havre | | | | | | | | Sidney | | | | | | | |
|------------|-------|-------|------|------|------|------|------|------|--------|-------|-------|-------|------|-------|-------|-------|
| | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | Ave. | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | Ave. |
| Monico | 93.0 | 111.3 | 77.0 | 29.7 | 72.5 | 25.3 | 72.3 | 68.7 | 146.6 | 168.0 | 152.2 | 111.4 | 65.4 | 128.3 | 153.8 | 132.2 |
| Otana | 100.2 | 108.7 | 73.9 | 33.6 | 67.3 | 21.1 | 69.6 | 67.8 | 147.6 | 160.0 | 143.5 | 102.4 | 61.7 | 125.9 | 135.7 | 125.3 |
| Monida | 97.9 | 103.8 | 80.5 | 37.7 | 70.5 | 24.2 | 73.9 | 69.8 | 151.2 | 178.0 | 152.2 | 117.8 | 52.3 | 124.3 | 147.7 | 131.9 |
| Rio Grande | 103.1 | 97.4 | 81.0 | 36.3 | 65.2 | 26.1 | 83.5 | 70.4 | 140.7 | 164.7 | 134.0 | 95.4 | 70.1 | 114.1 | 154.0 | 124.7 |
| Ajay | 87.3 | 98.0 | 66.0 | 34.5 | 66.4 | 23.9 | 66.1 | 63.2 | 136.5 | 143.0 | 126.8 | 90.2 | 58.2 | 104.4 | 132.7 | 113.1 |
| Celsia | 89.4 | 103.4 | 75.5 | 32.1 | 66.1 | 26.7 | 69.5 | 66.1 | 138.1 | 161.0 | 151.3 | 118.3 | 58.0 | 121.3 | 145.7 | 127.7 |
| Maverick | 98.4 | 106.1 | 72.5 | 37.5 | 78.0 | 29.0 | 77.7 | 71.3 | 144.0 | 169.4 | 149.7 | 116.5 | 69.5 | 122.3 | 147.0 | 131.2 |
| Sitemean | 95.9 | 97.6 | 67.7 | 35.2 | 68.7 | 25.3 | 73.6 | 66.3 | 143.9 | 154.6 | 138.5 | 110.5 | 58.0 | 124.3 | 144.4 | 124.9 |

| Variety | Moccasin | | | | | | | | Huntley | | | | | | Dryland | |
|------------|----------|------|------|------|------|------|------|------|---------|------|------|------|------|------|---------|------|
| | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | Ave. | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | Ave. | Ave. |
| Monico | 61.9 | 76.7 | 75.0 | 88.7 | 49.6 | 24.0 | 69.9 | 63.7 | 81.2 | 71.7 | 33.7 | 31.2 | 69.1 | 61.6 | 58.1 | 81.5 |
| Otana | 78.3 | 74.1 | 72.0 | 76.9 | 56.6 | 21.5 | 72.1 | 64.5 | 62.8 | 51.7 | 31.3 | 26.2 | 65.6 | 66.0 | 50.6 | 78.0 |
| Monida | 88.3 | 70.3 | 81.3 | 83.5 | 53.3 | 26.6 | 74.0 | 68.2 | 65.3 | 64.9 | 40.7 | 15.9 | 67.7 | 58.9 | 52.2 | 81.6 |
| Rio Grande | 65.1 | 79.6 | 81.1 | 96.6 | 44.8 | 23.8 | 81.4 | 67.5 | 78.3 | 68.7 | 43.7 | 29.0 | 73.8 | 57.6 | 58.5 | 81.1 |
| Ajay | 63.5 | 68.2 | 65.6 | 80.0 | 35.8 | 25.1 | 71.0 | 58.4 | 74.8 | 67.9 | 35.5 | 20.0 | 50.6 | 54.4 | 50.5 | 72.1 |
| Celsia | 71.5 | 67.1 | 69.7 | 79.3 | 46.3 | 24.5 | 71.2 | 61.4 | 51.1 | 60.3 | 33.5 | 14.5 | 50.5 | 63.4 | 45.5 | 76.3 |
| Maverick | 78.6 | 69.2 | 74.7 | 84.9 | 46.4 | 25.9 | 72.7 | 64.6 | 80.8 | 67.7 | 35.6 | 23.1 | 61.3 | 61.8 | 55.0 | 81.5 |
| Sitemean | 73.7 | 67.1 | 66.1 | 85.9 | 49.6 | 23.9 | 71.0 | 62.5 | 66.2 | 57.3 | 36.0 | 21.7 | 65.2 | 61.4 | 51.3 | 77.2 |

Table 5. 1998 - 2004 Montana Spring Oat 'Monico' Summary
Yield (bu/ac) Irrigated Locations

| | Bozeman | | | | | | | Sidney | | | | | | |
|------------|---------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|
| Variety | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | Ave. | 1998 | 1999 | 2000 | 2001 | 2003 | 2004 | Ave. |
| Monico | 160.2 | 149.3 | 195.8 | 204.5 | 144.5 | 163.0 | 169.6 | 165.0 | 195.8 | 208.1 | 161.1 | 197.8 | 220.0 | 191.3 |
| Otana | 146.1 | 142.0 | 161.5 | 190.8 | 110.9 | 143.8 | 149.2 | 140.8 | 175.3 | 213.2 | 139.9 | 185.3 | 220.1 | 179.1 |
| Monida | 147.5 | 140.5 | 178.1 | 182.0 | 127.2 | 170.2 | 157.6 | 194.2 | 177.3 | 203.7 | 151.1 | 183.8 | 219.4 | 188.3 |
| Rio Grande | 139.6 | 137.3 | 194.1 | 185.8 | 132.6 | 169.0 | 159.7 | 150.4 | 183.8 | 194.4 | 146.8 | 187.5 | 201.4 | 177.4 |
| Ajay | 130.6 | 126.0 | 172.9 | 173.1 | 133.1 | 148.1 | 147.3 | 147.8 | 180.0 | 190.3 | 143.9 | 164.5 | 183.2 | 168.3 |
| Celsia | 150.5 | 130.7 | 177.1 | 176.5 | 118.6 | 149.4 | 150.4 | 151.5 | 198.4 | 213.7 | 152.5 | 164.7 | 229.9 | 185.1 |
| Maverick | 153.0 | 133.0 | 186.5 | 192.4 | 156.6 | 159.0 | 163.4 | 159.8 | 199.5 | 221.1 | 153.8 | 194.8 | 210.1 | 189.9 |

| | Kalspell High Rainfall | | | | | | | | Huntley | | | | | | | Irrigated |
|------------|------------------------|-------|-------|-------|-------|-------|-------|-------|---------|-------|-------|-------|-------|-------|-------|-----------|
| Variety | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | Ave. | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | Ave. | Ave. |
| Monico | 189.7 | 230.0 | 143.1 | 211.0 | 249.6 | 96.2 | 203.9 | 189.1 | 262.6 | 208.8 | 221.1 | 248.4 | 163.9 | 205.3 | 218.3 | 192.0 |
| Otana | 174.4 | 242.0 | 162.5 | 189.2 | 205.6 | 98.1 | 181.2 | 179.0 | 225.3 | 207.5 | 198.0 | 193.0 | 159.0 | 194.1 | 196.1 | 176.0 |
| Monida | 212.6 | 252.9 | 164.1 | 190.1 | 200.3 | 101.1 | 195.6 | 188.1 | 247.8 | 243.5 | 200.1 | 208.2 | 163.2 | 181.3 | 207.4 | 185.4 |
| Rio Grande | 200.6 | 228.9 | 187.6 | 173.6 | 212.2 | 102.0 | 198.9 | 186.3 | 243.1 | 203.0 | 205.5 | 193.3 | 163.4 | 198.5 | 201.1 | 181.3 |
| Ajay | 190.8 | 211.4 | 177.1 | 165.2 | 211.5 | 84.5 | 163.3 | 172.0 | 233.2 | 183.2 | 202.0 | 187.2 | 120.2 | 182.4 | 184.7 | 168.2 |
| Celsia | 235.4 | 231.1 | 121.7 | 182.8 | 215.6 | 108.2 | 186.1 | 183.0 | 259.9 | 185.1 | 217.0 | 215.6 | 163.6 | 190.0 | 205.2 | 181.0 |
| Maverick | 200.6 | 221.3 | 212.4 | 191.9 | 241.5 | 96.8 | 186.9 | 193.0 | 267.4 | 203.5 | 241.1 | 220.1 | 145.1 | 188.9 | 211.0 | 189.5 |

Table 6. 1998 - 2004 Montana Spring Oat 'Monico' Summary

Test Weight (lb/bu) Dryland Locations

| | Havre | | | | | | | | Sidney | | | | | | | |
|------------|-------|------|------|------|------|------|------|------|--------|------|------|------|------|------|------|------|
| Variety | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | Ave. | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | Ave. |
| Monico | 30.8 | 33.5 | 35.8 | 37.0 | 34.6 | 30.2 | 31.4 | 33.3 | 33.5 | 39.5 | 40.5 | 37.7 | 31.3 | 37.0 | 35.7 | 36.5 |
| Otana | 31.6 | 33.1 | 35.4 | 36.8 | 33.5 | 30.9 | 31.9 | 33.3 | 33.3 | 38.8 | 39.3 | 37.5 | 31.5 | 36.8 | 37.0 | 36.3 |
| Monida | 28.6 | 29.3 | 33.4 | 35.9 | 32.0 | 30.3 | 28.6 | 31.2 | 29.3 | 37.7 | 38.3 | 38.0 | 29.7 | 32.8 | 33.5 | 34.2 |
| Rio Grande | 29.7 | 31.8 | 32.7 | 34.0 | 30.3 | 30.8 | 29.3 | 31.2 | 32.7 | 38.0 | 37.8 | 36.8 | 27.5 | 34.5 | 33.0 | 34.3 |
| Ajay | 28.4 | 30.6 | 32.9 | 35.5 | 31.0 | 29.2 | 28.3 | 30.8 | 31.5 | 36.3 | 38.0 | 36.3 | 27.5 | 35.3 | 33.5 | 34.1 |
| Celsia | 28.0 | 30.0 | 33.9 | 32.2 | 29.7 | 29.3 | 28.3 | 30.2 | 29.7 | 37.8 | 38.7 | 36.8 | 28.7 | 35.3 | 35.5 | 34.6 |
| Maverick | 27.6 | 29.1 | 33.1 | 36.1 | 31.9 | 28.1 | 28.4 | 30.6 | 29.7 | 38.0 | 39.0 | 37.8 | 29.2 | 34.2 | 33.7 | 34.5 |

| | Moccasin | | | | | | | | Huntley | | | | | | Dryland | |
|------------|----------|------|------|------|------|------|------|------|---------|------|------|------|------|------|---------|------|
| Variety | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | Ave. | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | Ave. | Ave. |
| Monico | 36.4 | 30.1 | 31.3 | 34.4 | 34.1 | 29.6 | 28.1 | 32.0 | 28.3 | 38.9 | 40.6 | 25.5 | 33.8 | 40.9 | 34.7 | 34.1 |
| Otana | 39.0 | 32.8 | 31.9 | 35.5 | 34.8 | 29.0 | 29.3 | 33.2 | 28.6 | 37.2 | 40.7 | 24.6 | 35.2 | 38.5 | 34.1 | 34.2 |
| Monida | 36.5 | 27.4 | 35.1 | 32.2 | 32.6 | 28.6 | 27.2 | 31.4 | 26.2 | 37.6 | 37.2 | 20.8 | 31.3 | 36.9 | 31.7 | 32.1 |
| Rio Grande | 35.5 | 27.5 | 32.4 | 30.9 | 33.1 | 28.4 | 27.2 | 30.7 | 25.5 | 37.5 | 39.8 | 24.2 | 31.1 | 39.6 | 33.0 | 32.3 |
| Ajay | 37.6 | 28.0 | 31.7 | 30.6 | 33.7 | 29.9 | 27.8 | 31.3 | 28.2 | 36.8 | 38.8 | 26.7 | 33.1 | 39.2 | 33.8 | 32.5 |
| Celsia | 36.5 | 27.9 | 33.0 | 33.4 | 32.9 | 29.3 | 28.9 | 31.7 | 27.7 | 34.8 | 36.0 | 24.2 | 32.3 | 35.5 | 31.7 | 32.1 |
| Maverick | 37.6 | 28.7 | 30.4 | 29.0 | 33.6 | 27.4 | 27.5 | 30.6 | 26.6 | 38.0 | 38.1 | 21.3 | 30.9 | 38.0 | 32.1 | 32.0 |

Table 7. 1998 - 2004 Montana Spring Oat 'Monico' Summary
Test Weight (lb/bu) Irrigated Locations

| | Bozeman | | | | | | | Sidney | | | | | | | | |
|------------|------------------------|------|------|------|------|------|------|--------|---------|------|------|------|------|------|-----------|------|
| Variety | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | Ave. | 1998 | 1999 | 2000 | 2001 | 2003 | 2004 | Ave. | | |
| Monico | 38.9 | 40.4 | 38.4 | 41.5 | 37.2 | 37.4 | 39.0 | 37.5 | 37.5 | 37.7 | 33.3 | 38.2 | 40.7 | 37.5 | | |
| Otana | 38.4 | 40.0 | 37.7 | 40.3 | 36.6 | 39.4 | 38.7 | 37.5 | 38.7 | 38.2 | 33.0 | 37.2 | 39.3 | 37.3 | | |
| Monida | 34.4 | 36.7 | 33.1 | 38.2 | 34.6 | 35.6 | 35.4 | 36.0 | 35.7 | 35.5 | 29.8 | 34.8 | 36.5 | 34.7 | | |
| Rio Grande | 34.3 | 36.4 | 37.3 | 38.9 | 32.8 | 35.1 | 35.8 | 36.2 | 36.3 | 34.8 | 31.0 | 37.2 | 36.7 | 35.4 | | |
| Ajay | 35.9 | 38.4 | 35.8 | 38.4 | 33.5 | 35.1 | 36.2 | 35.2 | 36.3 | 34.7 | 30.3 | 34.3 | 35.7 | 34.4 | | |
| Celsia | 36.6 | 37.2 | 34.9 | 38.1 | 34.0 | 36.4 | 36.2 | 34.7 | 37.2 | 35.7 | 30.8 | 34.3 | 39.5 | 35.4 | | |
| Maverick | 35.1 | 36.4 | 35.5 | 39.4 | 33.3 | 36.0 | 36.0 | 35.7 | 37.7 | 35.0 | 31.0 | 34.8 | 36.0 | 35.0 | | |
| | | | | | | | | | | | | | | | | |
| | Kalspell High Rainfall | | | | | | | | Huntley | | | | | | Irrigated | |
| Variety | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | Ave. | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | Ave. | Ave. |
| Monico | 37.8 | 38.2 | 33.9 | 35.5 | 36.2 | 38.5 | 39.1 | 37.0 | 37.6 | 42.4 | 36.9 | 38.9 | 35.3 | 39.0 | 38.4 | 37.9 |
| Otana | 39.4 | 39.6 | 36.3 | 36.1 | 36.7 | 36.8 | 37.9 | 37.5 | 38.2 | 41.7 | 35.9 | 38.3 | 36.6 | 39.1 | 38.3 | 38.0 |
| Monida | 38.7 | 36.6 | 31.7 | 33.7 | 33.4 | 34.6 | 35.3 | 34.9 | 36.6 | 40.1 | 33.6 | 34.7 | 31.0 | 36.0 | 35.3 | 35.1 |
| Rio Grande | 38.0 | 38.5 | 34.5 | 31.1 | 33.7 | 36.8 | 35.4 | 35.4 | 35.7 | 40.4 | 33.5 | 35.7 | 37.0 | 37.4 | 36.6 | 35.8 |
| Ajay | 36.8 | 36.7 | 32.1 | 31.8 | 32.1 | 36.4 | 36.3 | 34.6 | 35.6 | 39.8 | 33.3 | 35.0 | 32.0 | 35.7 | 35.2 | 35.1 |
| Celsia | 40.4 | 35.9 | 31.0 | 34.1 | 35.0 | 33.8 | 37.2 | 35.4 | 36.1 | 42.2 | 34.3 | 36.4 | 33.3 | 37.0 | 36.6 | 35.8 |
| Maverick | 38.2 | 37.7 | 32.7 | 31.6 | 34.5 | 34.0 | 38.1 | 35.3 | 36.1 | 41.1 | 34.2 | 36.5 | 30.9 | 36.8 | 36.0 | 35.5 |

Table 8. 1998-2004 Spring Oat T-PAIRED RESULTS vs Monico

All Locations

Yield (bu/ac)

| ID | NAME | ACTUAL MEAN | NO. OBS | MEAN DIFF | T-PAIRED VALUE | P-VALUE |
|----------|------------|----------------|------------|--------------|-------------------|---------|
| CI 9252 | Otana | 125.1 | 52 | -9.5 | -4.7 | .000 |
| CI483126 | Monida | 131.5 | 52 | -3.1 | -1.4 | .165 |
| 81Ab5792 | Rio Grande | 129.3 | 52 | -5.3 | -2.6 | .013 |
| PI537436 | Ajay | 118.3 | 52 | -16.3 | -7.6 | .000 |
| PI583735 | Celsia | 126.6 | 52 | -8.0 | -4.1 | .000 |
| 90Ab1322 | Maverick | 133.4 | 52 | -1.2 | -.6 | .529 |
| SITEMEAN | Sitemean | 126.1 | 52 | -8.5 | -6.4 | .000 |

THE MEAN FOR THE REFERENCE VARIETY ('Monico') IS: 134.6 (N= 52)

Table 9. Test Weight (lb/bu)

| ID | NAME | ACTUAL MEAN | NO. OBS | MEAN DIFF | T-PAIRED VALUE | P-VALUE |
|----------|------------|----------------|------------|--------------|-------------------|---------|
| CI 9252 | Otana | 36.0 | 52 | .1 | .6 | .560 |
| CI483126 | Monida | 33.5 | 52 | -2.4 | -10.6 | .000 |
| 81Ab5792 | Rio Grande | 34.0 | 52 | -2.0 | -9.6 | .000 |
| PI537436 | Ajay | 33.7 | 52 | -2.2 | -11.7 | .000 |
| PI583735 | Celsia | 33.9 | 52 | -2.0 | -9.0 | .000 |
| 90Ab1322 | Maverick | 33.7 | 52 | -2.3 | -11.4 | .000 |
| SITEMEAN | Sitemean | 35.1 | 52 | -.9 | -6.1 | .000 |

THE MEAN FOR THE REFERENCE VARIETY ('Monico') IS: 35.9 (N= 52)

1998-2004 Spring Oat T-PAIRED RESULTS vs Monico (continued)

Table 10. Heading Date (days from January 1, June 27th = 178)

| ID | NAME | ACTUAL MEAN | NO. OBS | MEAN DIFF | T-PAIRED VALUE | P-VALUE |
|----------|------------|----------------|------------|--------------|-------------------|---------|
| CI 9252 | Otana | 178.2 | 49 | 1.2 | 5.3 | .000 |
| CI483126 | Monida | 180.8 | 49 | 3.7 | 13.3 | .000 |
| 81Ab5792 | Rio Grande | 176.0 | 49 | -1.0 | -4.2 | .000 |
| PI537436 | Ajay | 178.8 | 49 | 1.7 | 5.9 | .000 |
| PI583735 | Celsia | 180.9 | 49 | 3.9 | 11.4 | .000 |
| 90Ab1322 | Maverick | 178.7 | 49 | 1.6 | 5.3 | .000 |
| SITEMEAN | Sitemean | 178.6 | 49 | 1.5 | 7.8 | .000 |

THE MEAN FOR THE REFERENCE VARIETY ('Monico') IS: 177.0 (N= 49)

Table 11. Plant Height (inches)

| ID | NAME | ACTUAL MEAN | NO. OBS | MEAN DIFF | T-PAIRED VALUE | P-VALUE |
|----------|------------|----------------|------------|--------------|-------------------|---------|
| CI 9252 | Otana | 38.0 | 50 | 5.3 | 21.2 | .000 |
| CI483126 | Monida | 35.0 | 50 | 2.4 | 8.1 | .000 |
| 81Ab5792 | Rio Grande | 30.8 | 50 | -1.9 | -7.1 | .000 |
| PI537436 | Ajay | 25.9 | 50 | -6.7 | -21.3 | .000 |
| PI583735 | Celsia | 35.3 | 50 | 2.6 | 8.6 | .000 |
| 90Ab1322 | Maverick | 28.8 | 50 | -3.9 | -13.5 | .000 |
| SITEMEAN | Sitemean | 32.6 | 50 | -.0 | -.2 | .848 |

THE MEAN FOR THE REFERENCE VARIETY ('Monico') IS: 32.7 (N= 50)