

PROJECT TITLE: 1991 Montana Uniform Oat Performance Trial

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Research Center-Huntley  
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Joyce Eckoff-Eastern Ag. Research Center-Sidney  
Leon Welty, and Todd Keener-Northwestern Ag. Research  
Center-Kalispell

OBJECTIVE: To determine the adaptability of new and introduced oat varieties to Montana. The Northwestern Uniform Oat Nursery is grown throughout the state in several locations under irrigation, high moisture, or dryland conditions.

RESULTS: DRYLAND LOCATIONS-

Havre, and Huntley dryland locations had high yields this year which were equal to, or greater than, 1990, while Sidney averaged slightly lower. Moccasin was hailed out. 81Ab5792 had the highest mean yield for the dryland locations. Newdak averaged 88.9 (highest yielding named variety) and Otana averaged 81.2 bu/a statewide. Test weights were nearly the same as 1990. The high test weight over all dryland sites was Pennuda a naked oat (42.6), and 86Ab1867 (35.8), Otana had a statewide test weight of 33.5 lb/bu. Plant heights were approximately 10 inches taller than 1990. Heading date averages were equal to 1990.

IRRIGATED AND HIGH MOISTURE LOCATIONS-

The Northwestern Uniform Oat nursery was planted in two irrigated (Sidney and Huntley) and two high moisture (Bozeman and Kalispell) locations in 1991. Yields were lower in 1991 at each location, with the four location average being just over 150 bu/a (199 bu/a in 1990). Kalispell yields were equal to last year (182.4) while Bozeman, Sidney, and Huntley had significant decreases from 1990 average yields (138.2, 123.8, and 168.0 bu/a respectively). The high yielding line averaged over all locations was 80Ab5322 at 186.4 bu/a. Otana averaged 150.0 bu/a over the four irrigated locations. The test weight means for all irrigated nurseries in 1991 was equal to 1990 (36.7 lb/bu). As in the dryland locations Pennuda had the highest test weight (44.4), with Otana 37.8 lb/bu. State-wide heights were greater this year at Bozeman and Huntley, and heading dates were later when compared with 1990. Lodging occurred at all locations. Huntley had severe lodging in all plots, but not analyzed. Only NPB 86801, and 82Ab1142 had no lodging at the 3 locations listed.

FUTURE PLANS: Variety evaluation will continue in the future.

## 1991 SPRING OAT STATEWIDE DRYLAND SUMMARY YIELD (bu/ac)

| ID       | PEDIGREE                  | HAVRE | SIDNEY | HUNTLEY | AVG  | BYX  | RSQ  |
|----------|---------------------------|-------|--------|---------|------|------|------|
| 80AB5322 | Border/74Ab1956           | 83.5  | 66.5   | 100.1   | 83.4 | 0.97 | 0.91 |
| 80AB5807 | 80Ab5807                  | 92.6  | 63.8   | 87.0    | 81.1 | 0.85 | 0.85 |
| 81AB5792 | 81Ab5792                  | 100.1 | 63.5   | 123.0   | 95.5 | 1.79 | 0.97 |
| 82AB1142 | 74Ab1952/74Ab2608         | 85.3  | 69.0   | 100.5   | 84.9 | 0.91 | 0.91 |
| 82AB1178 | 74Ab1952/75Ab1576         | 91.8  | 60.6   | 94.2    | 82.2 | 1.13 | 0.98 |
| 82AB248  | Cayuse/Monida             | 84.7  | 66.0   | 99.2    | 83.3 | 0.98 | 0.94 |
| 83AB3250 | Cayuse/Monida             | 84.4  | 71.2   | 83.9    | 79.9 | 0.44 | 0.94 |
| 83AB3725 | 74Ab1952/74Ab2608         | 94.7  | 67.7   | 92.3    | 84.9 | 0.87 | 0.92 |
| 83Ab3119 | Cayuse/76Ab6843           | 81.2  | 66.5   | 87.7    | 78.5 | 0.66 | 0.99 |
| 86AB1867 | 81Ab5772/Ogle             | 94.0  | 73.4   | 95.8    | 87.7 | 0.75 | 0.98 |
| 86AB664  | Ogle/75Ab861              | 87.6  | 73.6   | 94.9    | 85.4 | 0.65 | 0.98 |
| 87AB5125 | Ogle/75Ab861              | 85.4  | 70.0   | 108.6   | 88.0 | 1.07 | 0.82 |
| 87AB5932 | 79Ab3811/S7884            | 82.0  | 58.3   | 76.6    | 72.3 | 0.68 | 0.82 |
| CI 6611  | Park                      | 86.5  | 60.3   | 85.8    | 77.5 | 0.88 | 0.94 |
| CI 8263  | Cayuse                    | 91.3  | 64.9   | 105.5   | 87.2 | 1.24 | 0.98 |
| CI 9252  | Otana                     | 94.4  | 59.2   | 90.0    | 81.2 | 1.10 | 0.89 |
| CI 9267  | Appaloosa                 | 86.4  | 62.4   | 87.3    | 78.7 | 0.84 | 0.96 |
| CI 9401  | Ogle                      | 93.2  | 66.4   | 103.2   | 87.6 | 1.15 | 0.99 |
| CI467882 | Border                    | 91.3  | 69.9   | 102.3   | 87.9 | 0.99 | 0.98 |
| CI483126 | Monida (ID 751170)        | 79.4  | 63.9   | 84.5    | 75.9 | 0.65 | 1.00 |
| ND820603 | Valley                    | 88.2  | 60.0   | 87.5    | 78.6 | 0.95 | 0.94 |
| ND852107 |                           | 100.8 | 65.4   | 103.4   | 89.9 | 1.28 | 0.98 |
| ND860416 | Otana/Valley              | 85.5  | 64.0   | 98.0    | 82.5 | 1.03 | 0.98 |
| NEWDAK   | Newdak                    | 98.2  | 67.1   | 101.5   | 88.9 | 1.15 | 0.99 |
| NPB86801 | Ogle/OT 32-15, Sel. NZ 84 | 65.4  | 58.9   | 79.2    | 67.9 | 0.55 | 0.76 |
| OT 308   | Calibre                   | 81.3  | 52.5   | 97.5    | 77.1 | 1.37 | 0.98 |
| PI518513 | Pennuda (Nuprime/Noble//  | 64.5  | 42.7   | 75.0    | 60.7 | 0.99 | 0.99 |
| SD810109 | Trucker (Moore//Dal/Nodaw | 90.6  | 50.4   | 108.6   | 83.2 | 1.80 | 0.99 |
| W 80474  | Riel (RL 3057/Otana)      | 88.2  | 55.9   | 95.9    | 80.0 | 1.29 | 1.00 |
| W 82056  | Robert (OT 212/RL 3064)   | 92.7  | 57.7   | 82.8    | 77.7 | 0.97 | 0.78 |
| *****    | SITE MEAN *****           | 87.5  | 63.1   | 94.4    | 81.7 | 1.00 | 1.00 |

## 1991 SPRING OAT STATEWIDE DRYLAND SUMMARY TEST WEIGHT (lb/bu)

| ID       | PEDIGREE                  | HAVRE | SIDNEY | HUNTLEY | AVG  | BYX  | RSQ  |
|----------|---------------------------|-------|--------|---------|------|------|------|
| 80AB5322 | Border/74Ab1956           | 27.1  | 31.8   | 24.9    | 27.9 | 1.02 | 0.95 |
| 80AB5807 | 80Ab5807                  | 30.0  | 33.2   | 30.3    | 31.1 | 0.52 | 0.97 |
| 81AB5792 | 81Ab5792                  | 30.2  | 36.0   | 31.6    | 32.6 | 0.86 | 0.90 |
| 82AB1142 | 74Ab1952/74Ab2608         | 29.9  | 36.6   | 26.8    | 31.1 | 1.46 | 0.95 |
| 82AB1178 | 74Ab1952/75Ab1576         | 29.9  | 34.9   | 28.6    | 31.1 | 0.99 | 0.99 |
| 82AB248  | Cayuse/Monida             | 26.0  | 31.7   | 27.8    | 28.5 | 0.80 | 0.84 |
| 83AB3250 | Cayuse/Monida             | 26.2  | 32.5   | 27.8    | 28.8 | 0.92 | 0.89 |
| 83AB3725 | 74Ab1952/74Ab2608         | 31.5  | 36.6   | 26.6    | 31.5 | 1.36 | 0.83 |
| 83Ab3119 | Cayuse/76Ab6843           | 28.2  | 31.9   | 27.5    | 29.2 | 0.71 | 1.00 |
| 86AB1867 | 81Ab5772/Ogle             | 35.4  | 39.7   | 32.4    | 35.8 | 1.04 | 0.90 |
| 86AB664  | Ogle/75Ab861              | 29.1  | 34.4   | 27.2    | 30.2 | 1.10 | 0.97 |
| 87AB5125 | Ogle/75Ab861              | 30.9  | 34.7   | 25.0    | 30.2 | 1.24 | 0.72 |
| 87AB5932 | 79Ab3811/S7884            | 32.2  | 40.4   | 33.9    | 35.5 | 1.23 | 0.92 |
| CI 6611  | Park                      | 29.7  | 34.5   | 29.5    | 31.2 | 0.85 | 0.99 |
| CI 8263  | Cayuse                    | 26.7  | 31.6   | 28.3    | 28.8 | 0.68 | 0.83 |
| CI 9252  | Otana                     | 31.7  | 35.8   | 33.0    | 33.5 | 0.58 | 0.84 |
| CI 9267  | Appaloosa                 | 26.2  | 29.9   | 26.8    | 27.7 | 0.58 | 0.95 |
| CI 9401  | Ogle                      | 30.9  | 37.2   | 31.7    | 33.3 | 1.00 | 0.96 |
| CI467882 | Border                    | 26.2  | 32.7   | 28.9    | 29.3 | 0.84 | 0.75 |
| CI483126 | Monida (ID 751170)        | 27.6  | 32.5   | 29.3    | 29.8 | 0.67 | 0.82 |
| ND820603 | Valley                    | 32.4  | 37.0   | 32.5    | 34.0 | 0.78 | 0.99 |
| ND852107 |                           | 32.1  | 38.8   | 28.9    | 33.3 | 1.48 | 0.95 |
| ND860416 | Otana/Valley              | 31.3  | 39.4   | 27.6    | 32.8 | 1.77 | 0.96 |
| NEWDAK   | Newdak                    | 32.1  | 37.2   | 31.5    | 33.6 | 0.93 | 1.00 |
| NPB86801 | Ogle/OT 32-15, Sel. NZ 84 | 27.0  | 34.6   | 26.3    | 29.3 | 1.38 | 1.00 |
| OT 308   | Calibre                   | 29.3  | 34.3   | 32.4    | 32.0 | 0.55 | 0.53 |
| PI518513 | Pennuda (Nuprime/Noble//  | 40.4  | 45.8   | 41.5    | 42.6 | 0.81 | 0.92 |
| SD810109 | Trucker (Moore//Dal/Nodaw | 37.0  | 42.4   | 34.6    | 38.0 | 1.18 | 0.96 |
| W 80474  | Riel (RL 3057/Otana)      | 32.8  | 38.7   | 27.9    | 33.1 | 1.51 | 0.87 |
| W 82056  | Robert (OT 212/RL 3064)   | 30.0  | 36.8   | 29.9    | 32.2 | 1.17 | 0.99 |
| *****    | SITE MEAN *****           | 30.3  | 35.8   | 29.7    | 31.9 | 1.00 | 1.00 |

## 1991 SPRING OAT STATEWIDE DRYLAND SUMMARY PLANT HEIGHT (inches)

| ID       | PEDIGREE                  | HAVRE | SIDNEY | HUNTLEY | AVG  | BYX  | RSQ  |
|----------|---------------------------|-------|--------|---------|------|------|------|
| 80AB5322 | Border/74Ab1956           | 27.9  | 28.0   | 31.5    | 29.1 | 0.68 | 0.89 |
| 80AB5807 | 80Ab5807                  | 30.8  | 30.7   | 37.0    | 32.8 | 1.21 | 0.92 |
| 81AB5792 | 81Ab5792                  | 32.8  | 32.0   | 36.5    | 33.8 | 0.83 | 0.98 |
| 82AB1142 | 74Ab1952/74Ab2608         | 26.4  | 26.3   | 30.0    | 27.6 | 0.70 | 0.92 |
| 82AB1178 | 74Ab1952/75Ab1576         | 29.1  | 26.0   | 30.0    | 28.4 | 0.63 | 0.74 |
| 82AB248  | Cayuse/Monida             | 30.8  | 30.3   | 34.0    | 31.7 | 0.68 | 0.96 |
| 83AB3250 | Cayuse/Monida             | 29.9  | 31.3   | 35.5    | 32.2 | 0.87 | 0.73 |
| 83AB3725 | 74Ab1952/74Ab2608         | 28.1  | 28.0   | 31.0    | 29.0 | 0.57 | 0.93 |
| 83Ab3119 | Cayuse/76Ab6843           | 27.6  | 27.7   | 33.0    | 29.4 | 1.03 | 0.91 |
| 86AB1867 | 81Ab5772/Ogle             | 29.3  | 28.0   | 34.5    | 30.6 | 1.19 | 0.99 |
| 86AB664  | Ogle/75Ab861              | 33.9  | 33.7   | 39.0    | 35.5 | 1.01 | 0.93 |
| 87AB5125 | Ogle/75Ab861              | 29.8  | 29.0   | 35.0    | 31.3 | 1.12 | 0.97 |
| 87AB5932 | 79Ab3811/S7884            | 38.0  | 31.3   | 42.5    | 37.3 | 1.85 | 0.89 |
| CI 6611  | Park                      | 37.6  | 36.7   | 45.5    | 39.9 | 1.66 | 0.96 |
| CI 8263  | Cayuse                    | 33.4  | 33.0   | 38.5    | 35.0 | 1.04 | 0.95 |
| CI 9252  | Otana                     | 39.1  | 36.3   | 45.5    | 40.3 | 1.64 | 1.00 |
| CI 9267  | Appaloosa                 | 32.6  | 31.0   | 36.5    | 33.4 | 0.99 | 1.00 |
| CI 9401  | Ogle                      | 35.2  | 31.7   | 39.0    | 35.3 | 1.25 | 0.96 |
| CI467882 | Border                    | 32.5  | 32.3   | 37.0    | 33.9 | 0.89 | 0.93 |
| CI483126 | Monida (ID 751170)        | 36.5  | 35.7   | 39.5    | 37.2 | 0.70 | 0.99 |
| ND820603 | Valley                    | 34.4  | 34.7   | 37.5    | 35.5 | 0.56 | 0.87 |
| ND852107 |                           | 39.5  | 34.0   | 40.5    | 38.0 | 1.00 | 0.67 |
| ND860416 | Otana/Valley              | 37.1  | 34.7   | 40.0    | 37.3 | 0.91 | 0.96 |
| NEWDAK   | Newdak                    | 36.2  | 33.0   | 40.5    | 36.6 | 1.30 | 0.98 |
| NPB86801 | Ogle/OT 32-15, Sel. NZ 84 | 23.3  | 24.0   | 28.5    | 25.3 | 0.89 | 0.83 |
| OT 308   | Calibre                   | 40.3  | 37.3   | 42.0    | 39.9 | 0.76 | 0.85 |
| PI518513 | Pennuda (Nuprime/Noble//  | 32.6  | 27.7   | 35.0    | 31.8 | 1.19 | 0.83 |
| SD810109 | Trucker (Moore//Dal/Nodaw | 38.8  | 32.7   | 41.5    | 37.6 | 1.42 | 0.81 |
| W 80474  | Riel (RL 3057/Otana)      | 36.9  | 33.3   | 39.0    | 36.4 | 0.93 | 0.87 |
| W 82056  | Robert (OT 212/RL 3064)   | 36.5  | 35.7   | 38.5    | 36.9 | 0.51 | 1.01 |
| *****    | SITE MEAN *****           | 33.2  | 31.5   | 37.1    | 34.0 | 1.00 | 1.00 |

1991 SPRING OAT STATEWIDE DRYLAND SUMMARY      HEADING DATE (days from Jan. 1)

| ID       | PEDIGREE                  | HAVRE | SIDNEY | HUNTLEY | AVG   | BYX  | RSQ  |
|----------|---------------------------|-------|--------|---------|-------|------|------|
| 80AB5322 | Border/74Ab1956           | 191.7 | 176.0  | 176.5   | 181.4 | 1.00 | 1.00 |
| 80AB5807 | 80Ab5807                  | 189.3 | 174.0  | 176.5   | 179.9 | 0.92 | 0.99 |
| 81AB5792 | 81Ab5792                  | 186.3 | 171.0  | 170.5   | 175.9 | 1.01 | 0.99 |
| 82AB1142 | 74Ab1952/74Ab2608         | 188.3 | 172.3  | 174.5   | 178.4 | 0.97 | 0.99 |
| 82AB1178 | 74Ab1952/75Ab1576         | 186.7 | 172.0  | 172.0   | 176.9 | 0.95 | 1.00 |
| 82AB248  | Cayuse/Monida             | 191.3 | 175.0  | 177.0   | 181.1 | 1.00 | 0.99 |
| 83AB3250 | Cayuse/Monida             | 190.3 | 175.0  | 177.0   | 180.8 | 0.94 | 1.00 |
| 83AB3725 | 74Ab1952/74Ab2608         | 188.7 | 172.3  | 173.5   | 178.2 | 1.03 | 1.00 |
| 83AB3119 | Cayuse/76Ab6843           | 189.7 | 174.3  | 175.0   | 179.7 | 0.98 | 1.00 |
| 86AB1867 | 81Ab5772/Ogle             | 182.7 | 168.3  | 166.5   | 172.5 | 0.99 | 0.98 |
| 86AB664  | Ogle/75Ab861              | 189.3 | 173.0  | 173.5   | 178.6 | 1.05 | 1.00 |
| 87AB5125 | Ogle/75Ab861              | 189.0 | 173.0  | 173.5   | 178.5 | 1.02 | 1.00 |
| 87AB5932 | 79Ab3811/S7884            | 187.3 | 171.7  | 172.5   | 177.2 | 0.99 | 1.00 |
| CI 6611  | Park                      | 188.7 | 172.0  | 173.0   | 177.9 | 1.05 | 1.00 |
| CI 8263  | Cayuse                    | 189.0 | 172.7  | 174.0   | 178.6 | 1.02 | 1.00 |
| CI 9252  | Otana                     | 188.7 | 173.7  | 174.0   | 178.8 | 0.96 | 1.00 |
| CI 9267  | Appaloosa                 | 190.0 | 174.7  | 175.5   | 180.1 | 0.97 | 1.00 |
| CI 9401  | Ogle                      | 183.3 | 168.0  | 168.0   | 173.1 | 1.00 | 1.00 |
| CI467882 | Border                    | 189.7 | 174.3  | 175.0   | 179.7 | 0.98 | 1.00 |
| CI483126 | Monida (ID 751170)        | 189.7 | 174.3  | 176.0   | 180.0 | 0.95 | 1.00 |
| ND820603 | Valley                    | 189.3 | 172.7  | 172.0   | 178.0 | 1.10 | 0.99 |
| ND852107 |                           | 187.0 | 172.0  | 172.0   | 177.0 | 0.97 | 0.99 |
| ND860416 | Otana/Valley              | 190.0 | 173.3  | 175.0   | 179.4 | 1.03 | 1.00 |
| NEWDAK   | Newdak                    | 185.0 | 168.3  | 166.5   | 173.3 | 1.14 | 0.98 |
| NPB86801 | Ogle/OT 32-15, Sel. NZ 84 | 192.3 | 173.7  | 177.0   | 181.0 | 1.11 | 0.98 |
| OT 308   | Calibre                   | 190.7 | 173.0  | 175.0   | 179.6 | 1.09 | 1.00 |
| PI518513 | Pennuda (Nuprime/Noble//  | 179.7 | 165.7  | 164.0   | 169.8 | 0.96 | 0.98 |
| SD810109 | Trucker (Moore//Dal/Nodaw | 185.7 | 170.3  | 171.0   | 175.7 | 0.98 | 1.00 |
| W 80474  | Riel (RL 3057/Otana)      | 187.7 | 173.0  | 173.0   | 177.9 | 0.95 | 1.00 |
| W 82056  | Robert (OT 212/RL 3064)   | 189.3 | 174.3  | 177.0   | 180.2 | 0.89 | 0.98 |
| *****    | SITE MEAN *****           | 188.2 | 172.5  | 173.2   | 178.0 | 1.00 | 1.00 |

## 1991 SPRING OAT STATEWIDE IRRIGATED SUMMARY YIELD (bu/ac)

| ID       | PEDIGREE                  | KALISPELL | BOZEMAN | SIDNEY | HUNTLEY | AVG   | BYX  | RSQ  |
|----------|---------------------------|-----------|---------|--------|---------|-------|------|------|
| 80AB5322 | Border/74Ab1956           | 258.0     | 146.9   | 139.1  | 201.5   | 186.4 | 1.99 | 0.93 |
| 80AB5807 | 80Ab5807                  | 180.2     | 130.6   | 135.9  | 186.5   | 158.3 | 0.99 | 0.83 |
| 81AB5792 | 81Ab5792                  | 169.7     | 155.9   | 138.0  | 159.0   | 155.7 | 0.45 | 0.84 |
| 82AB1142 | 74Ab1952/74Ab2608         | 228.1     | 123.5   | 130.7  | 209.5   | 172.9 | 1.91 | 0.92 |
| 82AB1178 | 74Ab1952/75Ab1576         | 219.8     | 113.5   | 125.6  | 180.2   | 159.8 | 1.74 | 0.89 |
| 82AB248  | Cayuse/Monida             | 165.8     | 131.0   | 142.3  | 183.9   | 155.7 | 0.68 | 0.60 |
| 83AB3250 | Cayuse/Monida             | 193.8     | 142.8   | 147.4  | 182.7   | 166.7 | 0.90 | 0.91 |
| 83AB3725 | 74Ab1952/74Ab2608         | 195.5     | 114.2   | 113.7  | 184.5   | 152.0 | 1.60 | 0.94 |
| 83Ab3119 | Cayuse/76Ab6843           | 232.7     | 139.1   | 137.1  | 212.7   | 180.4 | 1.80 | 0.95 |
| 86AB1867 | 81Ab5772/Ogle             | 189.7     | 159.4   | 128.7  | 174.0   | 162.9 | 0.93 | 0.92 |
| 86AB664  | Ogle/75Ab861              | 173.0     | 133.9   | 131.3  | 168.3   | 151.7 | 0.80 | 0.95 |
| 87AB5125 | Ogle/75Ab861              | 227.7     | 157.5   | 138.7  | 169.8   | 173.4 | 1.29 | 0.81 |
| 87AB5932 | 79Ab3811/S7884            | 124.9     | 118.0   | 90.9   | 121.4   | 113.8 | 0.48 | 0.70 |
| CI 6611  | Park                      | 146.1     | 136.8   | 114.8  | 147.1   | 136.2 | 0.50 | 0.79 |
| CI 8263  | Cayuse                    | 179.0     | 143.7   | 140.1  | 166.1   | 157.2 | 0.68 | 0.97 |
| CI 9252  | Otana                     | 168.2     | 154.7   | 117.6  | 159.3   | 150.0 | 0.72 | 0.75 |
| CI 9267  | Appaloosa                 | 134.5     | 118.5   | 132.9  | 138.4   | 131.1 | 0.16 | 0.24 |
| CI 9401  | Ogle                      | 208.5     | 149.1   | 120.8  | 176.7   | 163.8 | 1.38 | 0.97 |
| CI467882 | Border                    | 174.1     | 145.8   | 139.9  | 166.9   | 156.7 | 0.61 | 0.99 |
| CI483126 | Monida (ID 751170)        | 189.7     | 152.1   | 139.7  | 176.8   | 164.6 | 0.85 | 1.00 |
| ND820603 | Valley                    | 175.9     | 139.8   | 121.7  | 171.4   | 152.2 | 0.95 | 0.97 |
| ND852107 |                           | 199.5     | 137.9   | 119.8  | 166.2   | 155.9 | 1.28 | 0.97 |
| ND860416 | Otana/Valley              | 166.5     | 148.3   | 114.9  | 158.5   | 147.1 | 0.77 | 0.83 |
| NEWDAK   | Newdak                    | 150.5     | 156.6   | 127.3  | 168.8   | 150.8 | 0.40 | 0.38 |
| NPB86801 | Ogle/OT 32-15, Sel. NZ 84 | 192.2     | 122.7   | 119.2  | 156.9   | 147.8 | 1.23 | 0.93 |
| OT 308   | Calibre                   | 204.1     | 135.8   | 103.7  | 144.2   | 146.9 | 1.42 | 0.83 |
| PI518513 | Pennuda (Nuprime/Noble//  | 107.5     | 108.3   | 52.1   | 113.2   | 95.3  | 0.78 | 0.53 |
| SD810109 | Trucker (Moore//Dal/Nodaw | 155.9     | 141.8   | 105.3  | 132.3   | 133.8 | 0.62 | 0.61 |
| W 80474  | Riel (RL 3057/Otana)      | 154.4     | 154.6   | 120.6  | 176.5   | 151.5 | 0.61 | 0.50 |
| W 82056  | Robert (OT 212/RL 3064)   | 205.9     | 133.5   | 125.1  | 187.3   | 163.0 | 1.47 | 0.98 |
| *****    | SITE MEAN *****           | 182.4     | 138.2   | 123.8  | 168.0   | 153.1 | 1.00 | 1.00 |

## 1991 SPRING OAT STATEWIDE IRRIGATED SUMMARY

TEST WEIGHT (lb/bu)

| ID       | PEDIGREE                  | KALISPELL | BOZEMAN | SIDNEY | HUNTLEY | AVG  | BYX   | RSQ  |
|----------|---------------------------|-----------|---------|--------|---------|------|-------|------|
| 80AB5322 | Border/74Ab1956           | 36.7      | 32.3    | 38.3   | 35.3    | 35.7 | 1.38  | 0.75 |
| 80AB5807 | 80Ab5807                  | 35.3      | 34.1    | 38.3   | 38.3    | 36.5 | 1.24  | 0.87 |
| 81AB5792 | 81Ab5792                  | 35.9      | 34.7    | 38.2   | 36.2    | 36.2 | 0.87  | 0.94 |
| 82AB1142 | 74Ab1952/74Ab2608         | 37.5      | 34.1    | 36.8   | 37.9    | 36.6 | 0.70  | 0.43 |
| 82AB1178 | 74Ab1952/75Ab1576         | 37.3      | 32.0    | 37.8   | 35.3    | 35.6 | 1.30  | 0.63 |
| 82AB248  | Cayuse/Monida             | 34.0      | 31.6    | 36.3   | 36.6    | 34.6 | 1.34  | 0.85 |
| 83AB3250 | Cayuse/Monida             | 34.7      | 30.0    | 37.0   | 37.3    | 34.8 | 1.89  | 0.81 |
| 83AB3725 | 74Ab1952/74Ab2608         | 36.5      | 32.0    | 37.9   | 37.2    | 35.9 | 1.50  | 0.82 |
| 83Ab3119 | Cayuse/76Ab6843           | 36.8      | 32.1    | 37.3   | 34.8    | 35.2 | 1.15  | 0.61 |
| 86AB1867 | 81Ab5772/Ogle             | 38.3      | 40.8    | 40.5   | 39.5    | 39.8 | 0.00  | 0.00 |
| 86AB664  | Ogle/75Ab861              | 34.9      | 32.0    | 36.7   | 37.0    | 35.1 | 1.29  | 0.82 |
| 87AB5125 | Ogle/75Ab861              | 37.4      | 32.4    | 37.0   | 38.9    | 36.4 | 1.23  | 0.50 |
| 87AB5932 | 79Ab3811/S7884            | 40.0      | 40.3    | 43.3   | 42.0    | 41.4 | 0.86  | 0.82 |
| CI 6611  | Park                      | 35.3      | 30.0    | 37.2   | 33.1    | 33.9 | 1.62  | 0.70 |
| CI 8263  | Cayuse                    | 34.1      | 29.7    | 35.5   | 33.7    | 33.2 | 1.40  | 0.81 |
| CI 9252  | Otana                     | 35.9      | 36.6    | 38.8   | 39.7    | 37.8 | 0.80  | 0.51 |
| CI 9267  | Appaloosa                 | 32.0      | 28.5    | 35.0   | 32.5    | 32.0 | 1.63  | 0.96 |
| CI 9401  | Ogle                      | 35.6      | 35.4    | 38.0   | 37.7    | 36.7 | 0.78  | 0.85 |
| CI467882 | Border                    | 33.7      | 31.4    | 36.8   | 37.3    | 34.8 | 1.58  | 0.83 |
| CI483126 | Monida (ID 751170)        | 35.8      | 30.1    | 36.7   | 37.0    | 34.9 | 1.69  | 0.71 |
| ND820603 | Valley                    | 38.0      | 38.3    | 40.8   | 40.0    | 39.3 | 0.75  | 0.80 |
| ND852107 |                           | 35.3      | 36.1    | 40.7   | 35.5    | 36.9 | 1.14  | 0.51 |
| ND860416 | Otana/Valley              | 35.1      | 37.3    | 39.0   | 39.0    | 37.6 | 0.67  | 0.35 |
| NEWDAK   | Newdak                    | 35.1      | 37.5    | 37.5   | 35.2    | 36.3 | 0.00  | 0.00 |
| NPB86801 | Ogle/OT 32-15, Sel. NZ 84 | 31.1      | 33.1    | 35.8   | 33.6    | 33.4 | 0.83  | 0.48 |
| OT 308   | Calibre                   | 38.4      | 33.0    | 39.2   | 39.3    | 37.5 | 1.59  | 0.72 |
| PI518513 | Pennuda (Nuprime/Noble//  | 40.5      | 48.6    | 48.4   | 40.1    | 44.4 | -0.08 | 0.00 |
| SD810109 | Trucker (Moore//Dal/Nodaw | 40.4      | 41.9    | 42.3   | 40.4    | 41.2 | 0.10  | 0.03 |
| W 80474  | Riel (RL 3057/Otana)      | 36.5      | 39.5    | 39.3   | 37.5    | 38.2 | 0.02  | 0.00 |
| W 82056  | Robert (OT 212/RL 3064)   | 36.6      | 37.8    | 40.3   | 38.2    | 38.2 | 0.73  | 0.57 |
| *****    | SITE MEAN *****           | 36.2      | 34.8    | 38.6   | 37.2    | 36.7 | 1.00  | 1.00 |

1991 SPRING OAT STATEWIDE IRRIGATED SUMMARY PLANT HEIGHT (inches)

| ID       | PEDIGREE                  | BOZEMAN | SIDNEY | HUNTLEY | AVG  | BYX  | RSQ  |
|----------|---------------------------|---------|--------|---------|------|------|------|
| 80AB5322 | Border/74Ab1956           | 34.2    | 32.0   | 41.7    | 36.0 | 0.94 | 0.75 |
| 80AB5807 | 80Ab5807                  | 39.9    | 33.3   | 44.7    | 39.3 | 1.21 | 0.98 |
| 81AB5792 | 81Ab5792                  | 39.0    | 35.0   | 38.3    | 37.4 | 0.41 | 0.80 |
| 82AB1142 | 74Ab1952/74Ab2608         | 32.7    | 29.7   | 40.0    | 34.1 | 1.02 | 0.80 |
| 82AB1178 | 74Ab1952/75Ab1576         | 33.7    | 31.0   | 39.7    | 34.8 | 0.86 | 0.81 |
| 82AB248  | Cayuse/Monida             | 38.1    | 32.0   | 37.0    | 35.7 | 0.63 | 0.81 |
| 83AB3250 | Cayuse/Monida             | 37.6    | 31.7   | 43.0    | 37.4 | 1.20 | 0.96 |
| 83AB3725 | 74Ab1952/74Ab2608         | 36.0    | 31.0   | 40.3    | 35.8 | 0.99 | 0.97 |
| 83Ab3119 | Cayuse/76Ab6843           | 34.7    | 30.3   | 40.7    | 35.2 | 1.06 | 0.90 |
| 86AB1867 | 81Ab5772/Ogle             | 34.5    | 32.3   | 41.0    | 35.9 | 0.85 | 0.76 |
| 86AB664  | Ogle/75Ab861              | 42.7    | 35.7   | 41.0    | 39.8 | 0.68 | 0.74 |
| 87AB5125 | Ogle/75Ab861              | 38.5    | 31.0   | 41.7    | 37.0 | 1.18 | 1.00 |
| 87AB5932 | 79Ab3811/S7884            | 43.3    | 33.3   | 45.3    | 40.7 | 1.37 | 0.98 |
| CI 6611  | Park                      | 46.5    | 38.3   | 41.7    | 42.2 | 0.53 | 0.36 |
| CI 8263  | Cayuse                    | 43.0    | 36.0   | 45.3    | 41.4 | 1.04 | 0.99 |
| CI 9252  | Otana                     | 47.3    | 39.0   | 49.3    | 45.2 | 1.17 | 0.98 |
| CI 9267  | Appaloosa                 | 41.3    | 32.7   | 40.3    | 38.1 | 0.94 | 0.85 |
| CI 9401  | Ogle                      | 38.8    | 32.3   | 44.3    | 38.5 | 1.27 | 0.97 |
| CI467882 | Border                    | 42.3    | 34.3   | 45.3    | 40.7 | 1.22 | 1.00 |
| CI483126 | Monida (ID 751170)        | 44.3    | 35.7   | 47.3    | 42.4 | 1.30 | 1.00 |
| ND820603 | Valley                    | 40.4    | 33.7   | 41.7    | 38.6 | 0.91 | 0.98 |
| ND852107 |                           | 44.3    | 37.3   | 45.7    | 42.4 | 0.95 | 0.98 |
| ND860416 | Otana/Valley              | 44.7    | 35.0   | 44.7    | 41.5 | 1.15 | 0.91 |
| NEWDAK   | Newdak                    | 43.0    | 34.0   | 43.0    | 40.0 | 1.07 | 0.91 |
| NPB86801 | Ogle/OT 32-15, Sel. NZ 84 | 28.5    | 29.3   | 37.0    | 31.6 | 0.67 | 0.45 |
| OT 308   | Calibre                   | 50.4    | 37.3   | 49.7    | 45.8 | 1.49 | 0.89 |
| PI518513 | Pennuda (Nuprime/Noble//  | 34.6    | 30.0   | 37.7    | 34.1 | 0.83 | 0.99 |
| SD810109 | Trucker (Moore//Dal/Nodaw | 42.8    | 35.7   | 43.7    | 40.7 | 0.93 | 0.96 |
| W 80474  | Riel (RL 3057/Otana)      | 45.4    | 39.3   | 47.7    | 44.1 | 0.93 | 1.00 |
| W 82056  | Robert (OT 212/RL 3064)   | 44.1    | 38.0   | 49.0    | 43.7 | 1.17 | 0.97 |
| *****    | SITE MEAN *****           | 40.2    | 33.9   | 42.9    | 39.0 | 1.00 | 1.00 |

1991 SPRING OAT STATEWIDE IRRIGATED SUMMARY

HEADING DATE (days from Jan. 1)

| ID       | PEDIGREE                  | KALISPELL | BOZEMAN | SIDNEY | HUNTLEY | AVG   | BYX  | RSQ  |
|----------|---------------------------|-----------|---------|--------|---------|-------|------|------|
| 80AB5322 | Border/74Ab1956           | 187.7     | 194.0   | 174.3  | 174.5   | 182.6 | 1.01 | 0.99 |
| 80AB5807 | 80Ab5807                  | 186.7     | 192.2   | 173.3  | 176.0   | 182.1 | 0.92 | 1.00 |
| 81AB5792 | 81Ab5792                  | 180.7     | 188.8   | 171.0  | 169.0   | 177.4 | 0.93 | 0.97 |
| 82AB1142 | 74Ab1952/74Ab2608         | 185.7     | 190.0   | 172.0  | 174.5   | 180.5 | 0.89 | 0.99 |
| 82AB1178 | 74Ab1952/75Ab1576         | 181.7     | 189.0   | 170.7  | 171.0   | 178.1 | 0.92 | 1.00 |
| 82AB248  | Cayuse/Monida             | 187.3     | 193.2   | 122.0  | 177.0   | 169.9 | 2.57 | 0.58 |
| 83AB3250 | Cayuse/Monida             | 188.0     | 193.0   | 174.7  | 175.5   | 182.8 | 0.94 | 0.99 |
| 83AB3725 | 74Ab1952/74Ab2608         | 184.0     | 190.0   | 171.7  | 173.0   | 179.7 | 0.91 | 1.00 |
| 83Ab3119 | Cayuse/76Ab6843           | 188.0     | 193.0   | 174.0  | 173.5   | 182.1 | 1.01 | 0.98 |
| 86AB1867 | 81Ab5772/Ogle             | 175.7     | 183.5   | 167.7  | 165.0   | 173.0 | 0.84 | 0.95 |
| 86AB664  | Ogle/75Ab861              | 184.3     | 191.8   | 172.0  | 172.5   | 180.1 | 0.99 | 0.99 |
| 87AB5125 | Ogle/75Ab861              | 185.3     | 192.8   | 173.7  | 175.0   | 181.7 | 0.93 | 0.99 |
| 87AB5932 | 79Ab3811/S7884            | 184.0     | 191.0   | 170.3  | 171.0   | 179.1 | 1.05 | 1.00 |
| CI 6611  | Park                      | 184.7     | 190.0   | 171.0  | 171.0   | 179.2 | 1.00 | 0.99 |
| CI 8263  | Cayuse                    | 183.0     | 191.8   | 173.0  | 173.5   | 180.3 | 0.91 | 0.98 |
| CI 9252  | Otana                     | 183.7     | 191.0   | 172.7  | 173.0   | 180.1 | 0.92 | 1.00 |
| CI 9267  | Appaloosa                 | 186.7     | 193.0   | 174.3  | 175.5   | 182.4 | 0.93 | 1.00 |
| CI 9401  | Ogle                      | 178.0     | 186.0   | 168.0  | 166.0   | 174.5 | 0.95 | 0.97 |
| CI467882 | Border                    | 186.3     | 193.0   | 174.0  | 175.5   | 182.2 | 0.94 | 1.00 |
| CI483126 | Monida (ID 751170)        | 185.7     | 192.0   | 171.7  | 173.5   | 180.7 | 1.01 | 1.00 |
| ND820603 | Valley                    | 184.3     | 191.2   | 172.0  | 171.0   | 179.6 | 1.01 | 0.99 |
| ND852107 |                           | 182.3     | 190.5   | 171.3  | 170.0   | 178.5 | 0.99 | 0.98 |
| ND860416 | Otana/Valley              | 184.7     | 191.2   | 174.7  | 174.5   | 181.3 | 0.84 | 0.99 |
| NEWDAK   | Newdak                    | 177.0     | 187.2   | 168.0  | 167.0   | 174.8 | 0.95 | 0.95 |
| NPB86801 | Ogle/OT 32-15, Sel. NZ 84 | 188.3     | 193.0   | 174.7  | 174.0   | 182.5 | 0.99 | 0.99 |
| OT 308   | Calibre                   | 186.3     | 192.2   | 173.0  | 174.0   | 181.4 | 0.98 | 1.00 |
| PI518513 | Pennuda (Nuprime/Noble//  | 175.0     | 182.0   | 166.7  | 162.0   | 171.4 | 0.88 | 0.92 |
| SD810109 | Trucker (Moore//Dal/Nodaw | 180.0     | 188.0   | 170.0  | 169.5   | 176.9 | 0.91 | 0.99 |
| W 80474  | Riel (RL 3057/Otana)      | 183.7     | 189.0   | 171.0  | 170.5   | 178.5 | 0.95 | 0.99 |
| W 82056  | Robert (OT 212/RL 3064)   | 186.3     | 192.0   | 174.3  | 173.5   | 181.5 | 0.94 | 0.99 |
| *****    | SITE MEAN *****           | 183.8     | 190.5   | 170.3  | 172.1   | 179.2 | 1.00 | 1.00 |

## 1991 SPRING OAT STATEWIDE IRRIGATED SUMMARY      LODGING INDEX

| ID       | PEDIGREE                  | KALISPELL | BOZEMAN | SIDNEY | AVG  | BYX   | RSQ  |
|----------|---------------------------|-----------|---------|--------|------|-------|------|
| 80AB5322 | Border/74Ab1956           | 0.0       | 7.6     | 3.7    | 3.8  | -0.14 | 0.81 |
| 80AB5807 | 80Ab5807                  | 41.7      | 2.2     | 8.4    | 17.4 | 0.86  | 1.00 |
| 81AB5792 | 81Ab5792                  | 73.7      | 6.7     | 7.8    | 29.4 | 1.55  | 1.00 |
| 82AB1142 | 74Ab1952/74Ab2608         | 0.0       | 1.7     | 0.0    | 0.6  | -0.02 | 0.29 |
| 82AB1178 | 74Ab1952/75Ab1576         | 0.0       | 23.1    | 1.9    | 8.3  | -0.32 | 0.38 |
| 82AB248  | Cayuse/Monida             | 93.0      | 23.6    | 11.3   | 42.6 | 1.75  | 0.96 |
| 83AB3250 | Cayuse/Monida             | 99.0      | 11.2    | 18.1   | 42.8 | 1.98  | 1.00 |
| 83AB3725 | 74Ab1952/74Ab2608         | 5.9       | 36.8    | 0.7    | 14.5 | -0.35 | 0.20 |
| 83Ab3119 | Cayuse/76Ab6843           | 0.0       | 19.7    | 0.9    | 6.9  | -0.27 | 0.35 |
| 86AB1867 | 81Ab5772/Ogle             | 0.0       | 0.0     | 3.7    | 1.2  | -0.04 | 0.20 |
| 86AB664  | Ogle/75Ab861              | 94.7      | 2.2     | 9.7    | 35.5 | 2.08  | 1.00 |
| 87AB5125 | Ogle/75Ab861              | 21.8      | 1.7     | 4.6    | 9.4  | 0.44  | 1.00 |
| 87AB5932 | 79Ab3811/S7884            | 64.7      | 0.0     | 17.6   | 27.4 | 1.33  | 0.96 |
| CI 6611  | Park                      | 85.4      | 2.5     | 15.8   | 34.6 | 1.80  | 0.99 |
| CI 8263  | Cayuse                    | 95.3      | 20.3    | 18.3   | 44.6 | 1.77  | 0.99 |
| CI 9252  | Otana                     | 97.7      | 0.0     | 13.2   | 37.0 | 2.14  | 1.00 |
| CI 9267  | Appaloosa                 | 99.0      | 20.9    | 15.3   | 45.1 | 1.88  | 0.98 |
| CI 9401  | Ogle                      | 0.0       | 2.8     | 8.4    | 3.7  | -0.12 | 0.49 |
| CI467882 | Border                    | 96.0      | 3.4     | 11.1   | 36.8 | 2.08  | 1.00 |
| CI483126 | Monida (ID 751170)        | 91.2      | 10.1    | 22.2   | 41.2 | 1.77  | 1.00 |
| ND820603 | Valley                    | 8.9       | 2.9     | 20.3   | 10.7 | -0.04 | 0.01 |
| ND852107 |                           | 96.0      | 1.7     | 13.0   | 36.9 | 2.08  | 1.00 |
| ND860416 | Otana/Valley              | 97.7      | 12.6    | 28.9   | 46.4 | 1.82  | 0.99 |
| NEWDAK   | Newdak                    | 75.7      | 2.2     | 20.4   | 32.8 | 1.53  | 0.97 |
| NPB86801 | Ogle/OT 32-15, Sel. NZ 84 | 0.0       | 0.0     | 0.0    | 0.0  | 0.00  | 0.00 |
| OT 308   | Calibre                   | 91.7      | 1.7     | 9.3    | 34.2 | 2.02  | 1.00 |
| PI518513 | Pennuda (Nuprime/Noble//  | 0.0       | 0.0     | 6.1    | 2.0  | -0.06 | 0.19 |
| SD810109 | Trucker (Moore//Dal/Nodaw | 40.7      | 0.6     | 15.6   | 18.9 | 0.78  | 0.90 |
| W 80474  | Riel (RL 3057/Otana)      | 89.3      | 6.7     | 15.6   | 37.2 | 1.84  | 1.00 |
| W 82056  | Robert (OT 212/RL 3064)   | 0.0       | 4.0     | 7.4    | 3.8  | -0.13 | 0.74 |
| *****    | SITE MEAN *****           | 52.0      | 7.6     | 11.0   | 23.5 | 1.00  | 1.00 |