

NOT FOR PUBLICATION

2012

**DURUM WHEAT QUALITY
VARIETY EVALUATION**



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Table 1. Mean of quality traits of the durum varieties grown in the Advanced Yield Trials, **Average of locations 2012.**

| Variety | OBS | Test | Vit | 1000 | | Fall | | Wheat | Semo | Total | Sem | Semo | Pasta | Cook | Cook | Mean | Glutograph | | | | | |
|-------------|-----|--------|------|------|----|------|-----|-------|------|-------|------|------|-------|------------|------|------|------------|--------|------|-------|-----|------|
| | | Weight | kern | kwt | Lg | Sm | no | Sed | prot | prot | ext | ext | | | | | ash | Specks | Mixo | color | wt | loss |
| | | lb/bu | % | g | % | % | sec | mm | % | % | % | % | % | #/10 sq in | | g | % | g cm | | | BU | |
| Alkabo | 7 | 60.4 | 88 | 39.5 | 41 | 5 | 439 | 49 | 14.8 | 13.3 | 70.5 | 64.3 | 0.72 | 26 | 6 | 9.3 | 29.9 | 6.6 | 4.9 | 58 | 32 | 184 |
| Alzada | 6 | 57.6 | 93 | 40.2 | 48 | 4 | 566 | 64 | 15.6 | 14.3 | 71.5 | 65.7 | 0.78 | 25 | 8 | 8.8 | 29.8 | 6.8 | 5.2 | 94 | 112 | 105 |
| Belfield | 3 | 58.6 | 93 | 35.4 | 27 | 7 | 650 | 71 | 16.2 | 14.4 | 70.5 | 64.3 | 0.67 | 20 | 8 | 9.7 | 29.5 | 6.4 | 5.1 | 96 | 112 | 98 |
| Ben | 5 | 59.7 | 98 | 40.3 | 41 | 4 | 459 | 48 | 16.4 | 14.7 | 70.2 | 65.3 | 0.75 | 24 | 6 | 8.9 | 30.1 | 6.4 | 4.8 | 53 | 17 | 209 |
| Carpio | 7 | 60.3 | 84 | 40.8 | 47 | 4 | 469 | 58 | 14.8 | 13.4 | 70.3 | 64.2 | 0.75 | 24 | 8 | 9.3 | 30.5 | 6.7 | 4.9 | 90 | 96 | 124 |
| Commander | 7 | 59.0 | 95 | 38.2 | 37 | 5 | 566 | 63 | 15.1 | 13.6 | 71.6 | 65.2 | 0.72 | 24 | 8 | 9.3 | 29.9 | 6.9 | 5.5 | 95 | 125 | 96 |
| DG Max | 5 | 60.7 | 97 | 40.2 | 41 | 4 | 439 | 51 | 15.5 | 14.0 | 70.9 | 65.5 | 0.68 | 23 | 6 | 9.0 | 27.7 | 6.4 | 4.7 | 70 | 61 | 158 |
| DG Star | 5 | 58.9 | 93 | 38.7 | 32 | 7 | 439 | 60 | 15.7 | 14.0 | 68.9 | 62.9 | 0.66 | 23 | 8 | 8.9 | 29.0 | 6.8 | 5.2 | 84 | 83 | 133 |
| Dilse | 5 | 59.1 | 98 | 35.9 | 28 | 7 | 437 | 52 | 16.6 | 14.9 | 70.2 | 65.0 | 0.77 | 23 | 6 | 9.1 | 29.8 | 6.1 | 5.2 | 55 | 35 | 198 |
| Divide | 7 | 59.9 | 91 | 39.3 | 40 | 4 | 490 | 53 | 15.1 | 13.6 | 71.2 | 65.3 | 0.72 | 23 | 7 | 8.9 | 29.7 | 6.7 | 4.9 | 78 | 58 | 163 |
| Grenora | 7 | 59.2 | 94 | 39.1 | 40 | 5 | 491 | 49 | 14.8 | 13.4 | 70.6 | 64.7 | 0.72 | 24 | 7 | 9.0 | 30.1 | 6.8 | 4.9 | 67 | 38 | 193 |
| Joppa | 5 | 58.7 | 92 | 37.3 | 29 | 8 | 492 | 60 | 15.6 | 14.0 | 69.4 | 64.0 | 0.72 | 23 | 7 | 9.1 | 30.6 | 6.9 | 4.8 | 87 | 103 | 120 |
| Lebsock | 7 | 60.3 | 93 | 37.0 | 35 | 5 | 462 | 41 | 15.0 | 13.4 | 71.2 | 65.8 | 0.74 | 20 | 5 | 9.1 | 30.7 | 6.6 | 4.6 | 45 | 10 | 235 |
| Maier | 7 | 59.9 | 96 | 38.0 | 34 | 6 | 444 | 53 | 15.6 | 14.0 | 71.2 | 65.3 | 0.73 | 24 | 7 | 9.1 | 29.6 | 6.4 | 5.2 | 60 | 31 | 174 |
| Mountrail | 7 | 58.5 | 96 | 36.1 | 29 | 7 | 465 | 47 | 15.5 | 14.0 | 69.9 | 64.5 | 0.76 | 21 | 4 | 8.8 | 30.4 | 6.5 | 4.3 | 31 | 4 | 243 |
| Navigator | 7 | 59.5 | 97 | 38.4 | 39 | 5 | 531 | 55 | 15.2 | 13.6 | 71.8 | 65.5 | 0.73 | 26 | 7 | 9.1 | 29.9 | 6.6 | 5.4 | 76 | 69 | 153 |
| Pierce | 7 | 59.9 | 95 | 35.0 | 32 | 7 | 444 | 55 | 15.3 | 13.8 | 69.3 | 64.3 | 0.71 | 23 | 7 | 9.1 | 29.5 | 6.6 | 5.1 | 69 | 41 | 185 |
| Rugby | 5 | 60.0 | 98 | 37.8 | 31 | 5 | 410 | 21 | 16.0 | 14.2 | 70.5 | 65.4 | 0.76 | 25 | 3 | 9.0 | 31.3 | 6.4 | 4.0 | 11 | 0 | 133 |
| Strongfield | 7 | 59.5 | 91 | 37.1 | 39 | 4 | 499 | 56 | 15.6 | 14.1 | 70.7 | 64.3 | 0.69 | 26 | 8 | 9.0 | 30.1 | 6.9 | 5.1 | 80 | 94 | 111 |
| Tioga | 7 | 59.7 | 92 | 40.0 | 42 | 5 | 459 | 61 | 15.1 | 13.6 | 71.0 | 64.7 | 0.72 | 25 | 7 | 8.9 | 29.8 | 6.9 | 5.2 | 81 | 69 | 151 |
| Verona | 5 | 59.6 | 96 | 37.9 | 40 | 4 | 518 | 51 | 16.3 | 14.6 | 70.4 | 65.1 | 0.73 | 25 | 7 | 9.0 | 30.2 | 6.6 | 5.3 | 66 | 42 | 199 |
| Wales | 5 | 60.6 | 91 | 39.3 | 45 | 3 | 438 | 53 | 15.4 | 13.8 | 70.7 | 65.1 | 0.73 | 23 | 7 | 9.1 | 25.7 | 6.8 | 5.0 | 70 | 52 | 165 |
| Westhope | 5 | 60.2 | 94 | 38.8 | 45 | 3 | 432 | 55 | 15.4 | 13.8 | 70.0 | 64.6 | 0.65 | 22 | 7 | 8.8 | 29.9 | 6.8 | 4.3 | 75 | 64 | 107 |
| Average | | 59.6 | 94 | 38.3 | 37 | 5 | 480 | 53 | 15.5 | 13.9 | 70.5 | 64.8 | 0.72 | 24 | 7 | 9.1 | 29.7 | 6.6 | 4.9 | 69 | 59 | 158 |

Varieties grown at fewer than three locations are not included in this table.

Table 2. Quality traits of durum varieties grown in the Advanced Yield Trails at **Casselton ND 2012.**

| Variety | Test Weight | Vit kern | 1000 kwt | Lg | Sm | Fall no | Sed mm | Wheat prot % | Semo prot % | Total ext % | Semo ext % | Semo ash % | Specks #/10 sq in | Mixo | Pasta color | Cook wt g | Cook loss % | Firm g cm | Mean GI | Glutograph s | Relax BU |
|-------------|-------------|----------|----------|----|----|---------|--------|--------------|-------------|-------------|------------|------------|-------------------|------|-------------|-----------|-------------|-----------|---------|--------------|----------|
| Alkabo | 62.1 | 67 | 40.7 | 55 | 3 | 393 | 44 | 11.6 | 10.4 | 72.3 | 66.0 | 0.70 | 27 | 5 | 10.0 | 30.9 | 7.5 | 4.5 | 37 | 6 | 241 |
| Ben | 61.0 | 96 | 42.9 | 64 | 3 | 389 | 46 | 13.9 | 12.6 | 72.4 | 68.1 | 0.80 | 23 | 5 | 9.0 | 31.2 | 7.0 | 4.8 | 43 | 8 | 261 |
| Carpio | 61.6 | 70 | 42.0 | 63 | 3 | 396 | 63 | 12.3 | 11.3 | 70.7 | 64.2 | 0.76 | 21.5 | 7.5 | 9.8 | 31.1 | 7.4 | 4.5 | 88 | 77 | 142 |
| Commander | 60.5 | 96 | 39.8 | 54 | 3 | 419 | 62 | 12.3 | 11.0 | 72.0 | 66.2 | 0.70 | 27 | 8 | 10.0 | 30.9 | 7.8 | 4.8 | 96 | 125 | 99 |
| DG Max | 61.8 | 95 | 41.3 | 56 | 4 | 415 | 46 | 12.4 | 11.3 | 73.3 | 68.1 | 0.73 | 23 | 6 | 9.5 | 20.1 | 7.6 | 4.7 | 61 | 21 | 214 |
| DG Star | 60.0 | 93 | 40.5 | 52 | 6 | 428 | 60 | 13.2 | 11.9 | 71.3 | 65.5 | 0.71 | 30 | 8 | 9.0 | 29.9 | 7.3 | 5.3 | 77 | 32 | 182 |
| Dilse | 61.4 | 93 | 38.0 | 38 | 4 | 407 | 47 | 13.2 | 12.0 | 72.1 | 68.5 | 0.79 | 23 | 6 | 9.5 | 30.9 | 6.7 | 4.8 | 43 | 11 | 215 |
| Divide | 61.1 | 85 | 41.8 | 61 | 2 | 411 | 48 | 12.4 | 11.0 | 72.4 | 66.7 | 0.77 | 27 | 6 | 9.5 | 30.5 | 7.2 | 4.6 | 72 | 16 | 228 |
| Grenora | 61.6 | 89 | 40.0 | 58 | 2 | 442 | 47 | 12.1 | 10.7 | 71.9 | 66.7 | 0.73 | 27 | 5 | 9.5 | 30.3 | 7.9 | 4.8 | 52 | 17 | 201 |
| Lebsock | 62.3 | 95 | 38.2 | 48 | 3 | 408 | 40 | 12.6 | 11.2 | 73.1 | 68.5 | 0.74 | 17 | 4 | 9.5 | 31.2 | 7.2 | 4.6 | 14 | 4 | 278 |
| Maier | 62.3 | 96 | 41.3 | 49 | 2 | 413 | 46 | 12.9 | 11.6 | 73.5 | 68.5 | 0.80 | 20 | 5 | 9.5 | 30.3 | 7.0 | 5.1 | 41 | 10 | 220 |
| Mountrail | 61.4 | 91 | 40.0 | 42 | 4 | 402 | 39 | 12.0 | 10.8 | 72.6 | 67.6 | 0.76 | 20 | 3 | 9.5 | 31.4 | 7.5 | 4.4 | 3 | 2 | 229 |
| Navigator | 59.8 | 96 | 38.0 | 54 | 3 | 413 | 59 | 12.7 | 11.5 | 72.5 | 67.2 | 0.76 | 27 | 7 | 9.5 | 31.0 | 6.8 | 5.1 | 71 | 37 | 148 |
| Pierce | 62.0 | 91 | 37.7 | 42 | 5 | 394 | 53 | 12.8 | 11.4 | 70.5 | 66.3 | 0.74 | 27 | 5 | 9.5 | 29.8 | 7.6 | 4.8 | 59 | 19 | 192 |
| Rugby | 62.4 | 98 | 41.2 | 49 | 3 | 380 | 20 | 13.0 | 11.7 | 72.8 | 68.3 | 0.78 | 23 | 2 | 9.5 | 32.9 | 6.9 | 3.9 | 4 | 1 | 124 |
| Strongfield | 61.2 | 78 | 36.2 | 51 | 3 | 386 | 53 | 12.0 | 11.0 | 71.6 | 64.8 | 0.67 | 23 | 8 | 9.5 | 31.6 | 7.6 | 4.7 | 85 | 72 | 166 |
| Tioga | 61.6 | 89 | 41.2 | 67 | 3 | 416 | 58 | 11.8 | 10.8 | 73.4 | 67.0 | 0.68 | 27 | 6 | 9.5 | 30.3 | 7.9 | 4.7 | 72 | 22 | 222 |
| Verona | 60.8 | 91 | 38.6 | 60 | 1 | 398 | 55 | 13.4 | 12.0 | 71.1 | 65.9 | 0.75 | 23 | 7 | 9.5 | 31.5 | 7.1 | 5.2 | 70 | 25 | 179 |
| Wales | 62.9 | 82 | 42.7 | 69 | 1 | 402 | 56 | 12.7 | 11.3 | 73.1 | 66.5 | 0.64 | 27 | 6 | 9.5 | 9.9 | 7.7 | 4.8 | 56 | 10 | 191 |
| Westhope | 61.2 | 94 | 41.2 | 66 | 3 | 361 | 55 | 12.1 | 11.2 | 72.4 | 67.2 | 0.66 | 23 | 7 | 9.5 | 30.6 | 7.2 | 4.3 | 71 | 84 | 104 |
| Average | 61.5 | 89 | 40.2 | 55 | 3 | 404 | 50 | 12.6 | 11.3 | 72.3 | 66.9 | 0.73 | 24 | 6 | 9.5 | 29.3 | 7.4 | 4.7 | 56 | 30 | 192 |

Table 3. Quality traits of durum varieties grown in the Advanced Yield Trails at **Carrington ND 2012.**

| Variety | Test Weight | Vit kern % | 1000 kwt g | Lg % | Sm % | Fall no sec | Sed mm | Wheat prot % | Semo prot % | Total ext % | Sem ext % | Semo ash % | Specks #/10 sq in | Mixo | Pasta color | Cook wt g | Cook loss % | Firm g cm | Mean GI | Glutograph Seconds | Relax BU |
|-------------|-------------|------------|------------|------|------|-------------|--------|--------------|-------------|-------------|-----------|------------|-------------------|------|-------------|-----------|-------------|-----------|---------|--------------------|----------|
| Alkabo | 59.0 | 96 | 38.8 | 16 | 7 | 505 | 42 | 16.4 | 14.7 | 69.6 | 63.2 | 0.75 | 30 | 7 | 9.0 | 29.3 | 6.3 | 6.0 | 55 | 8 | 231 |
| Alzada | 55.1 | 93 | 40.8 | 27 | 7 | 712 | 52 | 17.2 | 15.7 | 70.4 | 63.7 | 0.84 | 20 | 8 | 8.5 | 29.5 | 6.4 | 6.3 | 94 | 125 | 131 |
| Ben | 58.3 | 97 | 39.7 | 21 | 5 | 526 | 40 | 17.2 | 15.5 | 70.5 | 64.9 | 0.75 | 30 | 6 | 8.0 | 30.0 | 6.7 | 5.6 | 47 | 10 | 253 |
| Carpio | 58.7 | 96 | 41.0 | 19 | 6 | 603 | 45 | 16.9 | 15.4 | 70.7 | 64.2 | 0.80 | 27 | 8 | 8.5 | 29.5 | 6.8 | 5.9 | 84 | 62 | 183 |
| Commander | 57.2 | 98 | 40.3 | 17 | 7 | 796 | 56 | 17.2 | 15.5 | 71.6 | 64.4 | 0.77 | 20 | 8 | 9.0 | 29.0 | 6.7 | 6.4 | 92 | 125 | 125 |
| DG Max | 59.9 | 99 | 43.1 | 30 | 4 | 532 | 49 | 16.7 | 15.1 | 71.3 | 64.8 | 0.69 | 27 | 7 | 8.5 | 30.0 | 6.6 | 5.3 | 68 | 12 | 191 |
| DG Star | 57.7 | 90 | 41.5 | 17 | 4 | 478 | 51 | 16.9 | 15.2 | 69.6 | 62.0 | 0.68 | 20 | 8 | 8.5 | 28.3 | 6.3 | 5.8 | 74 | 46 | 185 |
| Dilse | 57.0 | 99 | 37.5 | 16 | 7 | 461 | 37 | 17.7 | 16.0 | 70.7 | 64.6 | 0.87 | 27 | 5 | 8.5 | 29.4 | 6.3 | 6.0 | 47 | 4 | 277 |
| Divide | 58.9 | 98 | 40.8 | 17 | 7 | 590 | 36 | 17.3 | 15.5 | 71.3 | 64.9 | 0.76 | 20 | 7 | 8.5 | 29.6 | 6.8 | 5.7 | 59 | 7 | 287 |
| Grenora | 57.7 | 99 | 41.8 | 23 | 5 | 606 | 35 | 16.6 | 15.0 | 70.8 | 64.4 | 0.76 | 27 | 7 | 8.5 | 29.9 | 6.5 | 5.5 | 55 | 7 | 260 |
| Joppa | 58.3 | 96 | 37.6 | 9 | 10 | 610 | 52 | 16.4 | 14.9 | 71.4 | 65.3 | 0.71 | 23 | 8 | 9.0 | 29.8 | 6.6 | 5.4 | 92 | 125 | 106 |
| Lebsock | 59.0 | 95 | 38.9 | 15 | 5 | 501 | 35 | 16.7 | 15.0 | 71.0 | 65.5 | 0.75 | 23 | 5 | 8.5 | 31.4 | 6.8 | 5.3 | 37 | 7 | 255 |
| Maier | 58.4 | 97 | 37.9 | 14 | 9 | 458 | 46 | 16.8 | 14.9 | 68.9 | 62.6 | 0.70 | 27 | 6 | 9.0 | 30.3 | 6.8 | 5.5 | 54 | 18 | 228 |
| Mountrail | 56.7 | 99 | 37.2 | 8 | 11 | 507 | 43 | 17.4 | 15.7 | 69.1 | 62.8 | 0.78 | 27 | 4 | 8.5 | 30.2 | 6.5 | 5.0 | 40 | 4 | 285 |
| Navigator | 57.7 | 95 | 39.8 | 19 | 9 | 590 | 45 | 16.3 | 15.0 | 72.1 | 65.4 | 0.80 | 27 | 8 | 9.0 | 29.6 | 6.8 | 5.7 | 74 | 23 | 221 |
| Pierce | 58.7 | 98 | 36.5 | 15 | 7 | 442 | 42 | 16.4 | 14.8 | 69.4 | 63.8 | 0.75 | 23 | 7 | 8.5 | 29.2 | 6.7 | 6.0 | 64 | 4 | 229 |
| Rugby | 58.1 | 97 | 36.6 | 13 | 10 | 486 | 20 | 16.9 | 15.3 | 70.2 | 64.5 | 0.79 | 23 | 2 | 8.0 | 31.8 | 6.6 | 4.0 | 19 | 0 | 48 |
| Strongfield | 57.5 | 98 | 38.9 | 20 | 5 | 575 | 50 | 18.1 | 16.2 | 71.0 | 63.5 | 0.75 | 27 | 8 | 8.5 | 28.5 | 6.6 | 6.2 | 76 | 125 | 40 |
| Tioga | 57.4 | 98 | 41.3 | 24 | 7 | 498 | 46 | 16.6 | 15.1 | 71.4 | 64.8 | 0.71 | 23 | 7 | 8.5 | 29.4 | 6.8 | 6.0 | 66 | 10 | 215 |
| Verona | 59.0 | 97 | 40.3 | 26 | 5 | 609 | 46 | 17.0 | 15.3 | 71.0 | 64.5 | 0.71 | 27 | 8 | 8.5 | 29.6 | 6.2 | 5.4 | 65 | 26 | 226 |
| Wales | 59.4 | 96 | 41.3 | 31 | 3 | 500 | 44 | 16.5 | 15.0 | 72.0 | 65.7 | 0.83 | 30 | 8 | 8.0 | 29.9 | 6.9 | 5.6 | 74 | 27 | 158 |
| Westhope | 59.2 | 97 | 41.7 | 30 | 3 | 456 | 43 | 16.9 | 15.2 | 70.7 | 64.3 | 0.71 | 23 | 8 | 8.5 | 28.9 | 6.9 | 5.5 | 78 | 35 | 133 |
| Average | 58.1 | 97 | 39.7 | 19 | 7 | 547 | 43 | 16.9 | 15.3 | 70.7 | 64.3 | 0.76 | 25 | 7 | 8.5 | 29.7 | 6.6 | 5.6 | 64 | 37 | 194 |

Table 4. Quality traits of durum varieties grown in the Advanced Trials at **Dickinson 2012**

| Variety | Test | Vit | 1000 | | Fall | | Wheat | | Semo | Total | Sem | Semo | | | Pasta | Cook | Cook | Mean | | Glutograph | |
|---------------|--------|------|------|----|------|-----|-------|------|------|-------|------|------|------------|------|-------|------|------|------|----|------------|-------|
| | Weight | kern | kwt | Lg | Sm | no | Sed | prot | prot | ext | ext | ash | Specks | Mixo | color | wt | loss | Firm | GI | Seconds | Relax |
| | lb/bu | % | g | % | % | sec | mm | % | % | % | % | % | #/10 sq in | | | g | % | g cm | | | BU |
| Alkabo | 60.5 | 99 | 37.5 | 23 | 4 | 415 | 54 | 16.1 | 14.5 | 69.5 | 64.4 | 0.68 | 17 | 7 | 9.5 | 29.1 | 6.2 | 5.8 | 69 | 125 | 134 |
| Alzada | 59.3 | 99 | 38.2 | 43 | 4 | 494 | 69 | 16.1 | 14.7 | 70.9 | 66.0 | 0.75 | 13 | 8 | 10.0 | 28.9 | 6.5 | 5.6 | 97 | 125 | 72 |
| Belfield | 59.9 | 98 | 37.0 | 24 | 7 | 511 | 73 | 16.1 | 14.4 | 72.2 | 66.0 | 0.67 | 17 | 8 | 10.0 | 29.3 | 6.2 | 5.9 | 99 | 125 | 75 |
| Ben | 60.1 | 99 | 38.9 | 30 | 4 | 452 | 51 | 16.5 | 14.9 | 69.4 | 64.7 | 0.70 | 17 | 8 | 9.5 | 29.3 | 6.1 | 5.1 | 62 | 43 | 185 |
| Carpio | 59.6 | 98 | 36.2 | 27 | 4 | 439 | 66 | 16.2 | 14.6 | 68.7 | 64.0 | 0.72 | 17 | 8 | 9.5 | 30.9 | 6.6 | 5.7 | 97 | 125 | 68 |
| Commander | 59.3 | 100 | 34.7 | 19 | 5 | 485 | 61 | 16.4 | 14.8 | 70.5 | 65.2 | 0.71 | 17 | 8 | 10.0 | 29.7 | 6.0 | 6.5 | 91 | 125 | 82 |
| DG Max | 60.6 | 99 | 37.2 | 28 | 4 | 401 | 57 | 16.5 | 14.8 | 70.1 | 65.4 | 0.68 | 17 | 7 | 9.5 | 28.3 | 5.1 | 5.2 | 83 | 125 | 103 |
| DG Star | 59.5 | 100 | 36.4 | 17 | 6 | 415 | 56 | 16.3 | 14.6 | 68.3 | 63.4 | 0.68 | 17 | 8 | 9.0 | 28.2 | 7.5 | 5.2 | 93 | 125 | 31 |
| Dilse | 60.3 | 100 | 35.1 | 15 | 5 | 401 | 58 | 17.0 | 15.2 | 70.4 | 64.9 | 0.68 | 17 | 7 | 10.0 | 29.5 | 6.0 | 5.9 | 65 | 84 | 122 |
| Divide | 60.4 | 99 | 36.8 | 25 | 4 | 437 | 51 | 15.8 | 14.3 | 70.5 | 65.6 | 0.69 | 17 | 8 | 9.5 | 29.1 | 6.3 | 5.4 | 81 | 115 | 113 |
| Grande D' Oro | 60.4 | 99 | 37.0 | 18 | 4 | 439 | 45 | 16.3 | 14.7 | 69.5 | 66.0 | 0.64 | 23 | 6 | 9.5 | 29.6 | 5.8 | 5.8 | 62 | 50 | 145 |
| Grenora | 59.4 | 99 | 36.4 | 21 | 5 | 445 | 50 | 15.6 | 14.2 | 69.3 | 64.3 | 0.64 | 20 | 7 | 9.5 | 29.3 | 6.2 | 5.5 | 71 | 95 | 153 |
| Joppa | 59.2 | 99 | 34.1 | 6 | 9 | 446 | 72 | 16.3 | 14.7 | 67.1 | 63.9 | 0.70 | 17 | 8 | 10.0 | 30.4 | 6.7 | 5.3 | 98 | 125 | 62 |
| Lebsock | 61.0 | 99 | 34.2 | 11 | 6 | 437 | 38 | 15.8 | 14.2 | 70.0 | 65.3 | 0.72 | 13 | 6 | 9.5 | 29.9 | 6.2 | 5.1 | 51 | 28 | 185 |
| Maier | 60.2 | 99 | 34.8 | 12 | 7 | 400 | 52 | 16.0 | 14.5 | 71.0 | 65.8 | 0.71 | 17 | 8 | 10.0 | 28.5 | 6.2 | 5.9 | 70 | 82 | 110 |
| Mountrail | 58.5 | 100 | 33.3 | 5 | 8 | 422 | 50 | 16.7 | 15.3 | 68.0 | 63.6 | 0.78 | 13 | 5 | 9.5 | 29.9 | 6.1 | 4.9 | 52 | 9 | 260 |
| Navigator | 60.2 | 100 | 35.2 | 12 | 5 | 470 | 61 | 16.8 | 15.0 | 70.6 | 66.2 | 0.72 | 23 | 8 | 10.0 | 31.3 | 6.5 | 5.6 | 89 | 125 | 127 |
| Pierce | 59.9 | 99 | 31.9 | 11 | 9 | 408 | 61 | 16.5 | 14.8 | 67.8 | 63.9 | 0.68 | 17 | 8 | 9.5 | 29.0 | 6.2 | 5.9 | 77 | 125 | 133 |
| Rugby | 60.2 | 100 | 36.0 | 19 | 5 | 390 | 22 | 16.9 | 14.9 | 70.2 | 65.2 | 0.67 | 20 | 3 | 9.5 | 30.1 | 5.9 | 4.8 | 19 | 1 | 126 |
| Strongfield | 59.2 | 99 | 35.1 | 17 | 4 | 511 | 60 | 17.1 | 15.5 | 69.1 | 64.3 | 0.68 | 20 | 8 | 9.5 | 29.4 | 6.0 | 6.0 | 84 | 125 | 48 |
| Tioga | 60.4 | 100 | 37.2 | 26 | 4 | 444 | 65 | 16.5 | 14.8 | 70.3 | 65.2 | 0.68 | 13 | 8 | 9.5 | 29.0 | 6.6 | 5.6 | 88 | 125 | 93 |
| Verona | 59.3 | 99 | 36.0 | 25 | 4 | 464 | 54 | 17.5 | 15.8 | 70.7 | 65.8 | 0.77 | 20 | 7 | 9.0 | 30.8 | 6.6 | 5.7 | 65 | 111 | 136 |
| Wales | 60.1 | 100 | 36.4 | 34 | 2 | 391 | 52 | 16.9 | 15.1 | 69.7 | 65.0 | 0.72 | 13 | 8 | 9.5 | 28.9 | 6.3 | 5.8 | 84 | 125 | 95 |
| Westhope | 60.0 | 99 | 36.8 | 35 | 3 | 423 | 53 | 17.1 | 15.1 | 69.1 | 64.5 | 0.68 | 13 | 8 | 9.0 | 29.3 | 6.3 | 4.1 | 78 | 125 | 80 |
| Average | 59.9 | 99 | 35.9 | 21 | 5 | 439 | 55 | 16.5 | 14.8 | 69.7 | 64.9 | 0.70 | 17 | 7 | 9.6 | 29.5 | 6.3 | 5.5 | 76 | 99 | 114 |

Table 5. Quality traits of durum varieties grown in the Advanced Yield Trails at **Hettinger ND 2012.**

| Variety | Test Weight | Vit kern % | 1000 kwt g | Lg % | Sm % | Fall no sec | Sed mm | Wheat prot % | Semo prot % | Total ext % | Semo ext % | Semo ash % | Specks #/10 sq in | Mixo | Pasta color | Cook wt g | Cook loss % | Firm g cm | Mean GI | Glutograph Seconds | Relax BU |
|----------------|-------------|------------|-------------|-----------|----------|-------------|-----------|--------------|-------------|-------------|-------------|-------------|-------------------|----------|-------------|-------------|-------------|------------|-----------|--------------------|------------|
| Alkabo | 61.7 | 99 | 38.0 | 24 | 8 | 522 | 62 | 14.7 | 13.3 | 71.8 | 66.0 | 0.75 | 30 | 8 | 9.0 | 29.7 | 6.4 | 5.1 | 81 | 42 | 20 |
| Alzada | 60.6 | 99 | 42.0 | 57 | 5 | 596 | 65 | 14.7 | 13.5 | 76.9 | 71.1 | 0.72 | 33 | 8 | 8.5 | 29.2 | 6.7 | 5.3 | 98 | 125 | 79 |
| Commander | 61.2 | 99 | 37.6 | 32 | 4 | 555 | 76 | 14.6 | 13.0 | 72.9 | 66.5 | 0.68 | 27 | 8 | 9.0 | 29.3 | 6.5 | 5.5 | 97 | 125 | 97 |
| Divide | 61.1 | 99 | 35.8 | 23 | 7 | 548 | 70 | 14.5 | 13.3 | 72.7 | 67.2 | 0.76 | 20 | 8 | 8.5 | 29.4 | 6.7 | 4.8 | 92 | 93 | 154 |
| Grenora | 60.8 | 99 | 38.6 | 29 | 8 | 603 | 63 | 14.0 | 12.8 | 72.6 | 66.7 | 0.79 | 23 | 8 | 9.5 | 30.1 | 6.5 | 4.9 | 85 | 64 | 169 |
| Lebsock | 61.4 | 99 | 35.5 | 19 | 8 | 525 | 52 | 14.7 | 13.1 | 73.1 | 67.3 | 0.73 | 23 | 6 | 9.0 | 29.4 | 6.4 | 4.9 | 72 | 18 | 204 |
| Maier | 61.2 | 100 | 38.0 | 28 | 9 | 548 | 65 | 15.0 | 13.8 | 72.8 | 66.5 | 0.77 | 27 | 8 | 8.5 | 29.5 | 6.1 | 5.3 | 83 | 42 | 178 |
| Mountrail | 59.4 | 100 | 34.4 | 15 | 10 | 554 | 60 | 15.1 | 13.8 | 71.2 | 65.8 | 0.82 | 20 | 5 | 8.5 | 29.0 | 6.2 | 5.0 | 36 | 4 | 222 |
| Navigator | 62.2 | 100 | 39.7 | 34 | 4 | 665 | 66 | 14.4 | 12.8 | 73.0 | 66.4 | 0.65 | 27 | 7 | 9.0 | 29.4 | 6.5 | 5.2 | 86 | 125 | 116 |
| Pierce | 60.3 | 100 | 32.1 | 12 | 11 | 532 | 64 | 15.1 | 14.0 | 71.5 | 66.5 | 0.82 | 20 | 8 | 9.0 | 29.2 | 6.1 | 5.1 | 90 | 61 | 121 |
| Strongfield | 60.6 | 99 | 36.1 | 32 | 6 | 577 | 66 | 15.8 | 14.2 | 73.1 | 67.1 | 0.70 | 30 | 8 | 8.5 | 29.6 | 6.6 | 5.4 | 94 | 125 | 96 |
| Tioga | 60.9 | 100 | 35.5 | 20 | 8 | 544 | 78 | 15.4 | 13.8 | 72.7 | 66.5 | 0.77 | 27 | 8 | 9.0 | 29.7 | 6.5 | 5.3 | 98 | 125 | 109 |
| Average | 60.9 | 99 | 36.9 | 27 | 7 | 564 | 66 | 14.8 | 13.5 | 72.9 | 67.0 | 0.75 | 26 | 8 | 8.8 | 29.5 | 6.4 | 5.2 | 84 | 79 | 130 |

Table 6. Quality traits of durum varieties grown in the Advanced Yield Trails at **Langdon ND 2012.**

| Variety | Test | Vit | 1000 | | Fall | | Wheat Semo | | | | | Total Semo | | Pasta | | Cook | Cook | Mean | | Glutograph | |
|----------------|-------------|-----------|-------------|-----------|----------|------------|------------|-------------|-------------|-------------|-------------|-------------|---------------|----------|------------|-------------|------------|------------|-----------|------------|------------|
| | Weight | kern | kwt | Lg | Sm | no | Sed | prot | prot | ext | ext | ash | Specks | Mixo | color | wt | loss | Firm | GI | s | Relax |
| | lb/bu | % | g | % | % | sec | mm | % | % | % | % | % | #/10 sq in | | | g | % | g cm | | | BU |
| Alkabo | 59.2 | 60 | 44.8 | 83 | 1 | 352 | 34 | 13.1 | 11.7 | 71.4 | 63.5 | 0.69 | 30 | 5 | 9.0 | 30.5 | 8.0 | 4.4 | 44 | 6 | 228 |
| Alzada | 55.3 | 84 | 43.7 | 66 | 2 | 459 | 56 | 13.5 | 13.0 | 70.6 | 63.3 | 0.81 | 23 | 8 | 8.5 | 30.2 | 7.7 | 5.4 | 96 | 125 | 131 |
| Carpio | 58.6 | 63 | 45.0 | 64 | 2 | 426 | 44 | 13.9 | 12.9 | 71.7 | 63.7 | 0.77 | 23 | 8 | 9.0 | 30.2 | 7.1 | 4.6 | 92 | 80 | 90 |
| Commander | 56.5 | 80 | 42.0 | 69 | 3 | 445 | 45 | 13.2 | 12.1 | 71.9 | 64.2 | 0.76 | 30 | 8 | 9.0 | 30.5 | 7.7 | 5.1 | 97 | 125 | 33 |
| Divide | 57.8 | 63 | 44.8 | 76 | 1 | 415 | 40 | 13.8 | 12.4 | 71.5 | 62.9 | 0.72 | 23 | 8 | 8.5 | 30.4 | 7.8 | 4.7 | 88 | 66 | 92 |
| Grenora | 57.7 | 78 | 44.2 | 71 | 2 | 402 | 35 | 13.2 | 12.2 | 71.2 | 63.9 | 0.74 | 27 | 7 | 8.5 | 30.4 | 8.2 | 4.8 | 73 | 37 | 181 |
| Joppa | 58.3 | 86 | 43.5 | 68 | 2 | 388 | 38 | 13.8 | 12.6 | 71.4 | 65.5 | 0.74 | 27 | 6 | 8.5 | 30.4 | 7.4 | 5.0 | 62 | 23 | 205 |
| Lebsock | 58.6 | 71 | 40.8 | 79 | 2 | 396 | 34 | 13.4 | 12.0 | 71.9 | 64.5 | 0.73 | 27 | 5 | 8.5 | 30.7 | 7.2 | 4.4 | 42 | 5 | 260 |
| Maier | 59.2 | 84 | 40.3 | 70 | 3 | 377 | 40 | 14.4 | 13.0 | 72.5 | 65.2 | 0.70 | 23 | 6 | 8.5 | 30.5 | 6.9 | 4.7 | 45 | 13 | 192 |
| Mountrail | 56.6 | 84 | 39.5 | 70 | 2 | 362 | 35 | 13.9 | 12.5 | 71.5 | 64.8 | 0.76 | 27 | 4 | 8.0 | 31.5 | 7.6 | 3.5 | 31 | 3 | 234 |
| Navigator | 56.9 | 92 | 41.8 | 82 | 2 | 459 | 42 | 13.9 | 12.7 | 71.1 | 64.0 | 0.79 | 27 | 7 | 9.0 | 29.4 | 7.3 | 5.4 | 70 | 30 | 126 |
| Pierce | 59.4 | 83 | 40.0 | 77 | 2 | 397 | 40 | 13.4 | 12.1 | 71.1 | 64.5 | 0.72 | 30 | 7 | 8.5 | 30.2 | 7.2 | 4.6 | 64 | 12 | 224 |
| Strongfield | 58.3 | 71 | 41.2 | 72 | 3 | 421 | 39 | 14.1 | 13.0 | 70.8 | 62.6 | 0.72 | 35 | 8 | 8.5 | 31.2 | 7.7 | 4.5 | 71 | 54 | 111 |
| Tioga | 58.5 | 67 | 46.1 | 66 | 3 | 358 | 46 | 13.4 | 12.2 | 71.4 | 62.6 | 0.74 | 30 | 8 | 8.5 | 30.4 | 7.8 | 4.8 | 82 | 50 | 100 |
| Average | 57.9 | 76 | 42.7 | 72 | 2 | 404 | 41 | 13.6 | 12.5 | 71.4 | 63.9 | 0.74 | 27 | 7 | 8.6 | 30.5 | 7.5 | 4.7 | 68 | 45 | 158 |

Table 7. Quality traits of durum varieties grown in the Advanced Yield Trails at **Minot ND 2012.**

| Variety | Test Weight | Vit kern | 1000 kwt | Lg | Sm | Fall no | Sed mm | Wheat prot | Semo prot | Total ext | Sem ext | Semo ash | Specks | Mixo | Pasta color | Cook wt | Cook loss | Firm | Mean GI | Glutograph Seconds | Relax BU |
|-------------|-------------|----------|----------|----|----|---------|--------|------------|-----------|-----------|---------|----------|--------|------|-------------|---------|-----------|------|---------|--------------------|----------|
| Alkabo | 63.7 | 96 | 45.8 | 74 | 1 | 386 | 48 | 14.3 | 12.6 | 72.1 | 66.4 | 0.57 | 27 | 5 | 9.5 | 30.5 | 6.4 | 4.5 | 47 | 4 | 242 |
| Alzada | 60.6 | 91 | 46.7 | 78 | 1 | 417 | 64 | 14.6 | 13.2 | 72.2 | 67.7 | 0.68 | 37 | 8 | 8.5 | 30.9 | 7.8 | 4.7 | 82 | 49 | 115 |
| Belfield | 60.2 | 82 | 41.2 | 52 | 1 | 617 | 61 | 14.9 | 13.3 | 73.7 | 67.1 | 0.74 | 27 | 8 | 9.0 | 30.2 | 7.3 | 5.1 | 89 | 87 | 153 |
| Ben | 63.3 | 98 | 48.3 | 77 | 0 | 394 | 50 | 15.8 | 13.8 | 72.4 | 67.9 | 0.66 | 33 | 5 | 9.0 | 30.1 | 6.6 | 4.5 | 45 | 4 | 186 |
| Carpio | 63.6 | 93 | 48.5 | 84 | 0 | 503 | 66 | 14.7 | 13.1 | 71.7 | 66.5 | 0.60 | 33 | 8 | 9.5 | 31.3 | 6.7 | 4.9 | 83 | 125 | 137 |
| Commander | 61.4 | 93 | 43.9 | 64 | 0 | 597 | 63 | 14.4 | 12.9 | 74.3 | 68.5 | 0.68 | 27 | 8 | 9.0 | 31.2 | 7.5 | 5.3 | 93 | 125 | 126 |
| DG Max | 63.5 | 92 | 46.9 | 76 | 0 | 370 | 49 | 14.4 | 12.8 | 72.7 | 67.6 | 0.62 | 30 | 6 | 8.5 | 30.7 | 6.6 | 4.5 | 56 | 22 | 163 |
| DG Star | 62.3 | 86 | 47.4 | 66 | 1 | 377 | 64 | 14.0 | 12.4 | 72.0 | 65.4 | 0.58 | 30 | 8 | 9.0 | 30.6 | 6.9 | 4.7 | 80 | 90 | 162 |
| Dilse | 62.4 | 97 | 42.7 | 66 | 1 | 400 | 57 | 16.2 | 14.4 | 72.2 | 67.4 | 0.63 | 30 | 5 | 8.5 | 30.5 | 6.3 | 5.0 | 39 | 4 | 240 |
| Divide | 63.3 | 93 | 45.5 | 72 | 0 | 503 | 62 | 14.9 | 13.2 | 71.9 | 66.7 | 0.58 | 30 | 7 | 9.0 | 29.9 | 6.6 | 4.8 | 68 | 40 | 125 |
| Grenora | 61.7 | 93 | 43.5 | 69 | 1 | 415 | 53 | 14.6 | 13.0 | 72.2 | 66.5 | 0.62 | 27 | 6 | 8.5 | 30.3 | 6.6 | 4.9 | 52 | 9 | 224 |
| Joppa | 63.1 | 81 | 45.5 | 56 | 1 | 435 | 62 | 13.3 | 11.9 | 73.1 | 66.5 | 0.58 | 27 | 7 | 9.0 | 31.7 | 8.0 | 4.2 | 83 | 117 | 130 |
| Lebsock | 62.9 | 92 | 44.2 | 68 | 1 | 459 | 40 | 14.6 | 12.8 | 72.2 | 67.7 | 0.59 | 27 | 5 | 9.0 | 31.4 | 6.7 | 3.9 | 33 | 3 | 245 |
| Maier | 62.4 | 96 | 44.2 | 62 | 1 | 410 | 61 | 15.9 | 14.0 | 72.1 | 67.0 | 0.61 | 37 | 6 | 9.0 | 29.9 | 6.7 | 4.9 | 46 | 7 | 150 |
| Mountrail | 61.7 | 96 | 41.5 | 58 | 1 | 440 | 46 | 14.8 | 13.2 | 71.6 | 66.5 | 0.64 | 27 | 4 | 9.0 | 30.5 | 6.4 | 4.3 | 5 | 1 | 243 |
| Navigator | 62.4 | 97 | 45.8 | 67 | 1 | 498 | 56 | 14.3 | 12.8 | 74.8 | 68.4 | 0.72 | 30 | 7 | 8.5 | 30.1 | 6.9 | 5.6 | 61 | 19 | 197 |
| Pierce | 63.3 | 95 | 40.7 | 66 | 1 | 423 | 56 | 14.9 | 13.1 | 70.6 | 66.2 | 0.59 | 30 | 6 | 9.0 | 30.8 | 6.9 | 4.6 | 49 | 10 | 231 |
| Rugby | 62.5 | 96 | 44.2 | 66 | 1 | 401 | 16 | 15.2 | 13.3 | 71.7 | 66.5 | 0.65 | 33 | 2 | 9.0 | 32.0 | 6.8 | 3.7 | 3 | 1 | 178 |
| Strongfield | 62.7 | 88 | 42.9 | 69 | 0 | 481 | 58 | 14.3 | 12.6 | 72.6 | 66.3 | 0.60 | 27 | 7 | 9.5 | 31.5 | 7.7 | 4.2 | 68 | 30 | 197 |
| Tioga | 63.3 | 93 | 49.3 | 78 | 0 | 420 | 68 | 14.0 | 12.4 | 71.9 | 66.2 | 0.60 | 30 | 6 | 8.5 | 30.7 | 7.0 | 5.0 | 69 | 23 | 200 |
| Verona | 62.8 | 96 | 45.7 | 78 | 0 | 559 | 52 | 14.8 | 13.2 | 72.9 | 67.6 | 0.65 | 33 | 5 | 9.0 | 30.4 | 7.4 | 4.9 | 54 | 27 | 204 |
| Wales | 63.6 | 86 | 45.7 | 74 | 1 | 403 | 52 | 13.5 | 12.2 | 72.9 | 67.7 | 0.65 | 27 | 6 | 9.5 | 31.2 | 7.3 | 4.3 | 58 | 22 | 210 |
| Westhope | 63.3 | 87 | 45.5 | 76 | 1 | 430 | 53 | 13.4 | 11.9 | 72.9 | 67.3 | 0.65 | 33 | 6 | 8.5 | 31.1 | 7.2 | 4.0 | 66 | 20 | 156 |
| Average | 62.6 | 92 | 45.0 | 69 | 1 | 449 | 55 | 14.6 | 13.0 | 72.5 | 67.0 | 0.63 | 30 | 6 | 8.9 | 30.7 | 7.0 | 4.6 | 58 | 36 | 183 |

Table 8. Quality traits of durum varieties grown in the Advanced Yield Trails at **Williston ND 2012.**

| Variety | Test | Vit | 1000 | | | Fall | | Wheat | Semo | Total | Sem | Semo | Pasta | | | Cook | Cook | Mean | Glutograph | | |
|-------------|--------|------|------|-----|------|-------|------|-------|------|-------|------|------|------------|------|-------|------|------|------|------------|------|-------|
| | Weight | kern | kwt | Lg | Sm | no | Sed | prot | prot | ext | ext | ash | Specks | Mixo | color | wt | loss | | Firm | GI | s |
| | lb/bu | % | g | % | % | sec | mm | % | % | % | % | % | #/10 sq in | | | g | % | g cm | | | BU |
| Alkabo | 56.6 | 100 | 30.6 | 10 | 10 | 502 | 60 | 17.6 | 15.7 | 66.6 | 60.8 | 0.87 | 23 | 6 | 9.0 | 29.1 | 5.4 | 4.0 | 76 | 37 | 196 |
| Alzada | 54.8 | 94 | 29.9 | 17 | 5 | 718 | 78 | 17.4 | 15.5 | 68.0 | 62.1 | 0.86 | 23 | 8 | 9.0 | 29.8 | 5.9 | 4.0 | 98 | 125 | 103 |
| Belfield | 55.6 | 98 | 28.1 | 6 | 13 | 822 | 80 | 17.6 | 15.4 | 65.7 | 60.0 | 0.61 | 17 | 8 | 10.0 | 29.0 | 5.8 | 4.4 | 100 | 125 | 66 |
| Ben | 56.0 | 100 | 31.9 | 12 | 6 | 536 | 51 | 18.6 | 16.5 | 66.3 | 60.8 | 0.84 | 17 | 6 | 9.0 | 30.0 | 5.6 | 4.1 | 67 | 19 | 163 |
| Carpio | 58.0 | 97 | 31.2 | 13 | 8 | 519 | 61 | 17.3 | 15.6 | 67.9 | 62.9 | 0.86 | 23 | 8 | 9.0 | 29.5 | 5.3 | 4.3 | 97 | 125 | 107 |
| Commander | 56.9 | 100 | 29.2 | 6 | 15 | 663 | 75 | 17.6 | 15.6 | 68.3 | 61.1 | 0.73 | 20 | 8 | 9.0 | 28.4 | 5.7 | 5.0 | 98 | 125 | 113 |
| DG Max | 57.6 | 99 | 32.3 | 13 | 6 | 475 | 56 | 17.7 | 15.8 | 67.3 | 61.5 | 0.66 | 20 | 6 | 9.0 | 29.4 | 6.3 | 3.9 | 83 | 125 | 121 |
| DG Star | 55.1 | 96 | 27.5 | 6 | 17 | 497 | 70 | 18.0 | 15.8 | 63.3 | 58.0 | 0.63 | 17 | 8 | 9.0 | 28.0 | 5.9 | 4.9 | 98 | 125 | 104 |
| Dilse | 54.6 | 100 | 26.3 | 3 | 20 | 518 | 61 | 18.9 | 16.7 | 65.8 | 59.8 | 0.86 | 17 | 7 | 9.0 | 28.9 | 5.3 | 4.4 | 80 | 73 | 137 |
| Divide | 57.0 | 99 | 29.9 | 9 | 9 | 529 | 62 | 17.0 | 15.4 | 67.9 | 62.9 | 0.80 | 23 | 8 | 9.0 | 29.2 | 5.8 | 4.3 | 87 | 70 | 141 |
| Grenora | 55.1 | 100 | 29.2 | 5 | 12 | 522 | 60 | 17.5 | 15.6 | 66.4 | 60.5 | 0.77 | 20 | 7 | 9.0 | 30.1 | 6.0 | 3.8 | 79 | 36 | 164 |
| Joppa | 54.5 | 100 | 25.8 | 3 | 20 | 580 | 74 | 18.1 | 16.1 | 64.1 | 58.9 | 0.87 | 20 | 8 | 9.0 | 30.5 | 5.9 | 4.0 | 98 | 125 | 96 |
| Lebsock | 57.0 | 100 | 27.5 | 4 | 12 | 511 | 46 | 17.3 | 15.4 | 67.1 | 61.9 | 0.90 | 13 | 5 | 9.5 | 30.8 | 5.7 | 3.7 | 67 | 7 | 220 |
| Maier | 55.8 | 100 | 29.8 | 6 | 10 | 500 | 63 | 18.5 | 16.5 | 67.4 | 61.4 | 0.80 | 17 | 7 | 9.0 | 28.3 | 5.4 | 4.9 | 77 | 47 | 143 |
| Mountrail | 55.0 | 100 | 26.8 | 2 | 15 | 570 | 55 | 18.5 | 16.4 | 65.2 | 60.3 | 0.76 | 13 | 5 | 8.5 | 30.3 | 5.5 | 3.4 | 54 | 5 | 227 |
| Navigator | 57.5 | 100 | 28.2 | 5 | 11 | 622 | 58 | 17.7 | 15.7 | 68.2 | 61.2 | 0.67 | 20 | 8 | 9.0 | 28.3 | 5.6 | 5.0 | 84 | 125 | 135 |
| Pierce | 55.8 | 100 | 26.3 | 4 | 13 | 511 | 67 | 18.1 | 16.1 | 64.2 | 58.5 | 0.66 | 17 | 7 | 9.5 | 28.2 | 5.4 | 5.0 | 83 | 58 | 169 |
| Rugby | 57.0 | 100 | 31.2 | 9 | 9 | 395 | 25 | 18.0 | 15.7 | 67.5 | 62.3 | 0.91 | 27 | 4 | 9.0 | 29.7 | 5.7 | 3.5 | 9 | 0 | 190 |
| Silver | 53.4 | 100 | 24.0 | 3 | 20 | 670 | 66 | 18.8 | 16.7 | 63.1 | 58.1 | 0.60 | 17 | 8 | 8.5 | 29.5 | 5.9 | 4.2 | 96 | 125 | 105 |
| Strongfield | 56.8 | 100 | 29.1 | 11 | 7 | 541 | 63 | 18.0 | 16.1 | 66.7 | 61.3 | 0.69 | 23 | 8 | 9.0 | 29.2 | 5.8 | 4.5 | 85 | 125 | 121 |
| Tioga | 55.7 | 99 | 29.4 | 10 | 12 | 530 | 67 | 18.2 | 16.2 | 65.8 | 60.6 | 0.87 | 23 | 8 | 9.0 | 28.7 | 5.5 | 4.7 | 90 | 125 | 118 |
| Verona | 56.1 | 100 | 28.9 | 12 | 8 | 560 | 50 | 18.9 | 16.7 | 66.3 | 61.5 | 0.79 | 20 | 7 | 9.0 | 28.7 | 5.5 | 5.1 | 74 | 20 | 250 |
| Wales | 57.2 | 90 | 30.4 | 19 | 6 | 495 | 60 | 17.4 | 15.3 | 65.5 | 60.5 | 0.80 | 17 | 7 | 9.0 | 28.9 | 6.0 | 4.4 | 79 | 79 | 173 |
| Westhope | 57.4 | 91 | 29.0 | 19 | 5 | 489 | 70 | 17.6 | 15.5 | 64.9 | 59.8 | 0.56 | 20 | 8 | 8.5 | 29.5 | 6.3 | 3.8 | 80 | 56 | 61 |
| Average | 56.1 | 98.4 | 28.9 | 8.5 | 11.3 | 553.1 | 61.6 | 17.9 | 15.9 | 66.2 | 60.7 | 0.8 | 19.5 | 7.1 | 9.0 | 29.2 | 5.7 | 4.3 | 80.7 | 78.2 | 142.6 |

Table 9. Mean of quality traits of the durum varieties grown in the Advanced Yield Trials, **average of locations (2008-2012).**

| Variety | Test | Vit | 1000 | | | | Fall | | Wheat Semo | | | | Total Semo | | Semo | | Pasta | | Cook | Cook | Mean | |
|-------------|-------|--------|------|------|----|----|------|-----|------------|------|------|------|------------|------------|------|-------|-------|------|------|------|------|--|
| | OBS | Weight | kern | kw | Lg | Sm | no | Sed | prot | prot | ext | ext | ash | Specks | Mixo | color | wt | loss | Firm | GI | | |
| | lb/bu | % | g | % | % | % | sec | mm | % | % | % | % | % | #/10 sq in | | | g | % | g cm | | | |
| Alkabo | 33 | 60.3 | 89 | 39.5 | 46 | 5 | 411 | 49 | 14.3 | 12.8 | 71.5 | 64.3 | 0.70 | 28 | 6 | 9.0 | 31.0 | 6.9 | 5.1 | 58 | | |
| Alzada | 30 | 58.2 | 95 | 40.2 | 55 | 4 | 466 | 65 | 14.9 | 13.5 | 72.4 | 65.7 | 0.74 | 27 | 8 | 8.8 | 30.6 | 7.0 | 5.7 | 94 | | |
| Ben | 29 | 59.3 | 96 | 41.0 | 50 | 4 | 401 | 47 | 15.2 | 13.6 | 72.0 | 65.7 | 0.71 | 31 | 6 | 8.5 | 30.8 | 6.6 | 5.1 | 59 | | |
| Carpio | 33 | 60.4 | 88 | 40.2 | 53 | 3 | 450 | 62 | 14.4 | 13.0 | 71.5 | 64.6 | 0.71 | 30 | 8 | 9.0 | 30.7 | 6.8 | 5.6 | 93 | | |
| Commander | 33 | 58.7 | 96 | 38.9 | 46 | 4 | 503 | 61 | 14.9 | 13.3 | 72.1 | 65.0 | 0.71 | 29 | 8 | 9.1 | 30.3 | 6.9 | 5.8 | 93 | | |
| DG Max | 25 | 60.4 | 96 | 40.4 | 52 | 4 | 382 | 49 | 14.9 | 13.5 | 72.5 | 66.2 | 0.71 | 30 | 7 | 8.7 | 30.3 | 6.7 | 5.0 | 70 | | |
| DG Star | 29 | 58.9 | 94 | 38.9 | 42 | 6 | 372 | 64 | 15.2 | 13.5 | 70.5 | 63.3 | 0.69 | 28 | 8 | 8.7 | 30.3 | 6.9 | 5.5 | 88 | | |
| Dilse | 29 | 59.7 | 96 | 37.9 | 39 | 6 | 398 | 50 | 15.8 | 14.1 | 72.1 | 65.5 | 0.72 | 30 | 6 | 8.9 | 30.7 | 6.4 | 5.9 | 59 | | |
| Divide | 33 | 59.8 | 91 | 39.6 | 47 | 4 | 454 | 54 | 14.8 | 13.2 | 71.6 | 64.9 | 0.69 | 27 | 7 | 8.8 | 30.8 | 6.8 | 5.3 | 79 | | |
| Grenora | 33 | 59.5 | 94 | 39.7 | 47 | 4 | 435 | 50 | 14.4 | 12.9 | 71.6 | 64.6 | 0.69 | 30 | 7 | 9.0 | 31.0 | 6.8 | 5.3 | 70 | | |
| Lebsock | 33 | 60.4 | 93 | 37.8 | 43 | 5 | 419 | 43 | 14.6 | 13.1 | 72.2 | 65.9 | 0.71 | 28 | 5 | 8.6 | 31.3 | 6.8 | 5.1 | 49 | | |
| Maier | 33 | 59.4 | 95 | 37.5 | 40 | 6 | 407 | 52 | 15.4 | 13.7 | 72.3 | 65.8 | 0.74 | 30 | 6 | 8.7 | 30.5 | 6.6 | 5.7 | 62 | | |
| Mountrail | 33 | 58.9 | 93 | 37.2 | 37 | 7 | 420 | 45 | 14.7 | 13.3 | 71.5 | 65.2 | 0.73 | 27 | 4 | 8.4 | 31.3 | 6.7 | 4.9 | 30 | | |
| Navigator | 33 | 59.2 | 97 | 38.6 | 43 | 4 | 486 | 53 | 14.9 | 13.3 | 72.2 | 65.2 | 0.74 | 31 | 7 | 8.9 | 30.3 | 6.7 | 5.7 | 77 | | |
| Pierce | 33 | 60.1 | 96 | 35.7 | 37 | 7 | 427 | 53 | 14.9 | 13.3 | 70.5 | 64.6 | 0.70 | 31 | 7 | 8.9 | 30.6 | 6.6 | 5.5 | 70 | | |
| Rugby | 26 | 59.7 | 94 | 37.4 | 40 | 6 | 381 | 25 | 14.8 | 13.2 | 72.4 | 66.2 | 0.74 | 32 | 3 | 8.7 | 31.9 | 6.9 | 4.4 | 11 | | |
| Strongfield | 33 | 59.5 | 93 | 37.6 | 46 | 4 | 421 | 54 | 15.6 | 13.8 | 71.7 | 64.5 | 0.69 | 29 | 8 | 8.7 | 30.7 | 6.8 | 5.6 | 74 | | |
| Tioga | 33 | 60.0 | 92 | 39.6 | 46 | 4 | 417 | 63 | 14.5 | 13.0 | 71.9 | 64.8 | 0.69 | 27 | 8 | 9.0 | 30.7 | 7.1 | 5.2 | 85 | | |
| Verona | 17 | 59.2 | 95 | 37.4 | 46 | 3 | 450 | 50 | 15.6 | 14.1 | 71.4 | 65.0 | 0.76 | 32 | 7 | 8.8 | 30.5 | 6.8 | 5.5 | 66 | | |
| Wales | 28 | 60.1 | 92 | 39.4 | 51 | 3 | 399 | 53 | 14.7 | 13.2 | 72.2 | 65.4 | 0.73 | 28 | 7 | 8.7 | 29.9 | 7.0 | 5.4 | 73 | | |
| Westhope | 21 | 60.1 | 95 | 39.0 | 51 | 3 | 380 | 52 | 14.7 | 13.3 | 71.5 | 65.1 | 0.70 | 29 | 7 | 8.6 | 30.8 | 7.1 | 4.8 | 71 | | |
| Average | | 59.6 | 94 | 38.7 | 46 | 5 | 423 | 52 | 14.9 | 13.4 | 71.8 | 65.1 | 0.71 | 29 | 7 | 8.8 | 30.7 | 6.8 | 5.3 | 68.2 | | |

Table 10. Quality traits of durum varieties grown in the Advanced Trials at **Casselton (2008-2012).**

| Variety | Test Weight | Vit kern % | 1000 kwt g | Lg % | Sm % | Fall no sec | Sed mm | Wheat prot % | Semo prot % | Total ext % | Sem ext % | Semo ash % | Specks #/10 sq in | Mixo | Pasta color | Cook wt g | Cook loss % | Firm g cm | Mean GI |
|-------------|-------------|------------|------------|------|------|-------------|--------|--------------|-------------|-------------|-----------|------------|-------------------|------|-------------|-----------|-------------|-----------|---------|
| Alkabo | 59.4 | 61 | 39.2 | 57 | 4 | 368 | 44 | 11.8 | 10.5 | 71.7 | 63.5 | 0.77 | 27 | 6 | 9.2 | 32.4 | 7.9 | 4.0 | 56 |
| Ben | 58.8 | 86 | 40.3 | 60 | 4 | 377 | 46 | 13.0 | 11.5 | 72.8 | 66.4 | 0.80 | 37 | 7 | 8.6 | 32.2 | 7.4 | 4.1 | 61 |
| Carpio | 60.5 | 67 | 40.7 | 66 | 2 | 425 | 59 | 12.3 | 11.2 | 70.4 | 62.9 | 0.77 | 28 | 8 | 9.3 | 31.4 | 7.4 | 4.4 | 89 |
| Commander | 57.3 | 91 | 38.0 | 56 | 4 | 409 | 54 | 12.9 | 11.6 | 71.9 | 65.1 | 0.80 | 31 | 8 | 9.2 | 31.5 | 7.7 | 4.8 | 93 |
| DG Max* | 58.3 | 93 | 37.7 | 52 | 6 | 370 | 45 | 13.3 | 11.9 | 71.8 | 66.4 | 0.79 | 34 | 7 | 8.8 | 28.3 | 7.4 | 4.5 | 74 |
| DG Star | 57.0 | 87 | 37.1 | 48 | 7 | 316 | 61 | 13.4 | 11.9 | 70.1 | 63.3 | 0.80 | 27 | 8 | 8.7 | 31.6 | 8.2 | 4.1 | 88 |
| Dilse | 59.6 | 88 | 38.3 | 46 | 4 | 390 | 44 | 13.1 | 11.8 | 72.8 | 66.7 | 0.82 | 36 | 7 | 8.9 | 32.2 | 7.3 | 4.4 | 56 |
| Divide | 59.5 | 71 | 39.5 | 60 | 3 | 410 | 50 | 12.2 | 11.0 | 72.3 | 64.3 | 0.79 | 32 | 7 | 8.9 | 32.2 | 7.6 | 4.1 | 82 |
| Grenora | 59.5 | 80 | 40.2 | 61 | 2 | 396 | 46 | 12.0 | 10.7 | 70.7 | 62.7 | 0.76 | 30 | 7 | 9.2 | 32.2 | 7.7 | 4.2 | 72 |
| Lebsock | 59.3 | 78 | 37.9 | 52 | 5 | 393 | 40 | 12.3 | 11.1 | 73.0 | 65.8 | 0.80 | 33 | 5 | 8.7 | 32.3 | 7.7 | 4.2 | 51 |
| Maier | 58.1 | 87 | 36.8 | 46 | 4 | 373 | 44 | 13.3 | 11.8 | 73.0 | 66.8 | 0.88 | 35 | 6 | 8.8 | 31.4 | 7.4 | 4.5 | 60 |
| Mountrail | 57.8 | 76 | 37.9 | 48 | 7 | 375 | 42 | 12.0 | 10.9 | 72.3 | 65.3 | 0.81 | 33 | 4 | 8.6 | 32.6 | 7.8 | 3.7 | 20 |
| Navigator | 56.6 | 95 | 36.4 | 48 | 5 | 424 | 51 | 13.4 | 11.9 | 69.7 | 63.8 | 0.83 | 29 | 7 | 8.8 | 31.8 | 7.7 | 4.7 | 75 |
| Pierce | 59.2 | 89 | 35.7 | 45 | 7 | 389 | 45 | 12.6 | 11.3 | 71.1 | 65.2 | 0.80 | 38 | 7 | 8.9 | 32.0 | 7.5 | 4.4 | 70 |
| Rugby | 59.0 | 85 | 38.3 | 48 | 6 | 362 | 21 | 12.5 | 11.3 | 73.1 | 66.8 | 0.81 | 34 | 3 | 8.9 | 34.5 | 8.0 | 3.5 | 2 |
| Strongfield | 58.0 | 77 | 34.8 | 51 | 4 | 355 | 48 | 13.0 | 11.5 | 73.2 | 65.1 | 0.76 | 28 | 7 | 8.8 | 32.4 | 7.9 | 4.3 | 70 |
| Tioga | 59.3 | 79 | 38.7 | 59 | 3 | 374 | 55 | 12.3 | 11.0 | 72.3 | 64.4 | 0.73 | 34 | 7 | 8.8 | 31.4 | 7.8 | 4.2 | 82 |
| Verona* | 58.3 | 85 | 37.2 | 61 | 2 | 385 | 48 | 13.1 | 11.7 | 70.8 | 64.4 | 0.80 | 28 | 7 | 9.1 | 31.4 | 7.5 | 4.6 | 77 |
| Wales | 60.5 | 79 | 39.9 | 63 | 3 | 397 | 46 | 12.4 | 11.1 | 72.7 | 64.8 | 0.73 | 28 | 7 | 8.9 | 27.2 | 7.9 | 4.2 | 63 |
| Westhope* | 58.9 | 87 | 39.2 | 61 | 3 | 340 | 49 | 12.4 | 11.1 | 71.4 | 64.8 | 0.77 | 28 | 7 | 8.8 | 31.7 | 7.8 | 4.0 | 79 |
| Average | 58.8 | 82.1 | 38.2 | 54.5 | 4.1 | 381.4 | 47.0 | 12.7 | 11.3 | 71.9 | 64.9 | 0.8 | 31.6 | 6.6 | 8.9 | 31.6 | 7.7 | 4.2 | 66.0 |

* 4-year Avg.

Table 11. Quality traits of durum varieties grown in the Advanced Trials at **Carrington (2008-2012).**

| Variety | Test | Vit | 1000 | | Fall | | Wheat | | Semo | Total | Sem | Semo | Specks | Mixo | Pasta | Cook | Cook | Mean | |
|----------------|-------------|-----------|-------------|-----------|----------|------------|-----------|-------------|-------------|-------------|-------------|-------------|------------|----------|------------|-------------|------------|------------|-----------|
| | Weight | kern | kwt | Lg | Sm | no | Sed | prot | prot | ext | ext | ash | | | color | wt | loss | Firm | GI |
| | lb/bu | % | g | % | % | sec | mm | % | % | % | % | % | #/10 sq in | | g | % | g cm | | |
| Alkabo* | 60.6 | 97 | 39.9 | 39 | 4 | 458 | 47 | 15.0 | 13.4 | 71.2 | 64.7 | 0.70 | 32 | 7 | 9.3 | 30.4 | 6.6 | 5.4 | 52 |
| Alzada* | 58.2 | 96 | 40.6 | 50 | 3 | 537 | 57 | 14.8 | 12.9 | 72.0 | 65.7 | 0.77 | 28 | 8 | 8.9 | 30.4 | 6.9 | 5.6 | 95 |
| Ben* | 60.4 | 98 | 41.8 | 44 | 4 | 394 | 42 | 15.4 | 13.5 | 71.3 | 65.5 | 0.71 | 30 | 6 | 8.8 | 30.0 | 6.5 | 5.3 | 55 |
| Carpio* | 60.1 | 94 | 38.5 | 37 | 4 | 509 | 59 | 14.7 | 13.4 | 71.7 | 64.8 | 0.75 | 30 | 8 | 9.3 | 30.0 | 6.8 | 5.5 | 93 |
| Commander* | 58.3 | 98 | 38.4 | 32 | 5 | 644 | 54 | 14.9 | 14.1 | 71.7 | 64.9 | 0.76 | 26 | 8 | 9.6 | 29.4 | 6.8 | 5.8 | 92 |
| DG Star* | 59.3 | 97 | 40.3 | 33 | 4 | 377 | 60 | 15.4 | 13.7 | 70.8 | 63.8 | 0.68 | 28 | 8 | 8.8 | 29.8 | 6.7 | 5.3 | 88 |
| Dilse* | 59.7 | 99 | 38.4 | 33 | 5 | 416 | 44 | 16.0 | 14.0 | 71.6 | 65.7 | 0.75 | 30 | 6 | 9.1 | 30.0 | 6.4 | 5.5 | 52 |
| Divide* | 60.0 | 99 | 39.2 | 30 | 4 | 498 | 52 | 15.6 | 13.7 | 71.7 | 65.4 | 0.70 | 28 | 8 | 9.1 | 30.4 | 6.7 | 5.3 | 76 |
| Grenora* | 59.6 | 99 | 40.3 | 40 | 4 | 478 | 45 | 15.1 | 13.6 | 71.7 | 65.2 | 0.70 | 29 | 8 | 9.1 | 30.4 | 6.6 | 5.3 | 70 |
| Lebsock* | 60.4 | 98 | 37.4 | 35 | 5 | 435 | 39 | 15.3 | 13.8 | 72.0 | 66.4 | 0.71 | 28 | 5 | 8.8 | 31.5 | 6.6 | 5.2 | 46 |
| Maier* | 60.2 | 98 | 38.2 | 34 | 5 | 404 | 47 | 14.8 | 13.3 | 70.7 | 64.4 | 0.68 | 31 | 6 | 9.4 | 30.7 | 7.0 | 5.0 | 61 |
| Mountrail* | 58.4 | 97 | 36.8 | 23 | 9 | 440 | 41 | 15.4 | 14.1 | 70.4 | 64.6 | 0.74 | 27 | 4 | 8.6 | 30.4 | 6.3 | 4.9 | 46 |
| Navigator* | 58.9 | 98 | 37.5 | 27 | 7 | 599 | 47 | 15.0 | 13.7 | 72.3 | 65.5 | 0.78 | 33 | 8 | 9.1 | 29.3 | 6.6 | 5.7 | 79 |
| Pierce* | 60.2 | 98 | 35.2 | 28 | 7 | 470 | 48 | 15.3 | 13.6 | 70.0 | 64.7 | 0.73 | 33 | 7 | 9.1 | 30.0 | 6.6 | 5.6 | 64 |
| Rugby* | 59.5 | 95 | 36.1 | 32 | 7 | 402 | 20 | 15.8 | 14.2 | 71.7 | 65.9 | 0.74 | 28 | 3 | 8.5 | 31.1 | 6.6 | 4.2 | 10 |
| Strongfield* | 59.2 | 99 | 37.5 | 36 | 5 | 486 | 50 | 16.4 | 14.1 | 70.5 | 63.7 | 0.72 | 33 | 8 | 9.0 | 29.9 | 6.5 | 6.0 | 72 |
| Tioga* | 59.7 | 94 | 38.6 | 35 | 6 | 469 | 57 | 14.1 | 12.7 | 71.8 | 64.5 | 0.70 | 26 | 8 | 9.3 | 30.3 | 7.1 | 5.0 | 83 |
| Wales* | 59.9 | 98 | 38.5 | 41 | 3 | 442 | 52 | 15.4 | 13.6 | 72.4 | 66.5 | 0.80 | 32 | 8 | 8.8 | 30.3 | 6.7 | 5.6 | 78 |
| Average | 59.6 | 97 | 38.5 | 35 | 5 | 470 | 48 | 15.2 | 13.6 | 71.4 | 65.1 | 0.73 | 29 | 7 | 9.0 | 30.2 | 6.7 | 5.4 | 67 |

* 4-year Avg.

Table 12. Quality traits of durum varieties grown in the Advanced Trials at **Dickinson (2008-2012).**

| Variety | Test | Vit | 1000 | | | Fall | | Wheat | Semo | Total | Sem | Semo | Specks | Mixo | Pasta | Cook | Cook | Mean | |
|----------------|--------|------|------|----|----|-------|-----|-------|------|-------|------|------|------------|------|-------|------|------|------|----|
| | Weight | kern | kwt | Lg | Sm | no | Sed | prot | prot | ext | ext | ash | | | color | wt | loss | Firm | Gl |
| | lb/bu | % | g | % | % | sec | mm | % | % | % | % | % | #/10 sq in | | g | % | g cm | | |
| Alkabo | 60.8 | 99 | 38.8 | 37 | 5 | 396 | 50 | 15.4 | 13.8 | 71.1 | 64.7 | 0.67 | 25 | 6 | 9.0 | 30.3 | 6.6 | 5.9 | 62 |
| Alzada | 60.1 | 98 | 41.9 | 56 | 3 | 427 | 68 | 15.3 | 13.9 | 72.4 | 66.0 | 0.72 | 25 | 8 | 9.1 | 30.7 | 6.5 | 6.1 | 96 |
| Ben | 60.4 | 98 | 41.0 | 45 | 4 | 407 | 48 | 16.1 | 14.3 | 71.2 | 65.1 | 0.68 | 29 | 6 | 8.6 | 30.8 | 6.3 | 5.7 | 59 |
| Carpio | 60.4 | 97 | 40.5 | 48 | 3 | 431 | 63 | 15.4 | 13.6 | 70.4 | 64.1 | 0.68 | 30 | 8 | 9.1 | 30.9 | 6.5 | 6.2 | 94 |
| Commander | 60.5 | 99 | 40.1 | 42 | 3 | 480 | 63 | 15.7 | 13.8 | 72.0 | 65.4 | 0.68 | 26 | 8 | 9.3 | 29.9 | 6.2 | 6.7 | 92 |
| DG Max* | 61.6 | 99 | 41.9 | 48 | 4 | 395 | 49 | 15.2 | 13.6 | 72.0 | 65.7 | 0.69 | 27 | 7 | 9.1 | 30.8 | 6.1 | 5.4 | 72 |
| DG Star | 59.8 | 98 | 38.9 | 40 | 4 | 381 | 63 | 16.0 | 14.1 | 70.4 | 63.6 | 0.66 | 26 | 8 | 8.7 | 29.9 | 6.7 | 6.1 | 89 |
| Dilse | 60.3 | 99 | 38.6 | 36 | 4 | 394 | 52 | 16.7 | 14.8 | 71.7 | 65.3 | 0.70 | 29 | 6 | 9.0 | 30.2 | 6.0 | 6.4 | 59 |
| Divide | 60.5 | 98 | 39.8 | 41 | 4 | 426 | 52 | 15.5 | 13.6 | 71.1 | 65.1 | 0.65 | 23 | 7 | 9.0 | 30.6 | 6.5 | 5.9 | 73 |
| Grande D' Oro* | 60.8 | 99 | 37.7 | 31 | 4 | 376 | 46 | 16.0 | 13.5 | 71.1 | 65.8 | 0.71 | 29 | 5 | 8.6 | 30.0 | 6.1 | 6.0 | 46 |
| Grenora | 60.3 | 99 | 39.0 | 38 | 5 | 417 | 52 | 15.1 | 13.3 | 71.3 | 64.9 | 0.68 | 25 | 6 | 9.0 | 30.9 | 6.3 | 5.8 | 70 |
| Lebsock | 61.4 | 99 | 37.2 | 34 | 5 | 409 | 44 | 15.6 | 13.8 | 71.6 | 65.5 | 0.71 | 21 | 5 | 8.9 | 31.3 | 6.4 | 5.7 | 49 |
| Maier | 60.6 | 98 | 38.1 | 34 | 4 | 401.8 | 56 | 16.2 | 14.1 | 72.1 | 65.6 | 0.72 | 24.6 | 6 | 9.0 | 30.1 | 6.4 | 6.3 | 68 |
| Mountrail | 59.9 | 99 | 37.9 | 31 | 5 | 406 | 47 | 15.8 | 14.2 | 70.7 | 64.9 | 0.72 | 22 | 4 | 8.6 | 31.0 | 6.1 | 5.3 | 33 |
| Navigator | 61.3 | 99 | 40.9 | 40 | 3 | 458 | 54 | 15.7 | 13.7 | 72.8 | 66.4 | 0.70 | 31 | 7 | 9.0 | 30.7 | 6.2 | 6.1 | 82 |
| Pierce | 60.7 | 99 | 35.7 | 30 | 6 | 400 | 57 | 15.8 | 14.0 | 69.9 | 64.4 | 0.67 | 32 | 7 | 8.9 | 30.1 | 6.1 | 6.2 | 75 |
| Rugby | 60.6 | 99 | 35.7 | 33 | 5 | 395 | 27 | 15.7 | 14.0 | 72.3 | 66.4 | 0.71 | 29 | 4 | 8.9 | 31.3 | 6.4 | 5.0 | 22 |
| Strongfield | 60.6 | 99 | 38.8 | 41 | 4 | 435 | 55 | 16.8 | 14.8 | 71.3 | 64.6 | 0.69 | 26 | 7 | 9.0 | 30.2 | 6.1 | 6.5 | 73 |
| Tioga | 60.8 | 98 | 40.3 | 43 | 3 | 414 | 66 | 15.6 | 13.8 | 71.6 | 65.1 | 0.66 | 21 | 8 | 9.2 | 30.4 | 6.6 | 6.0 | 85 |
| Wales | 60.9 | 99 | 39.4 | 48 | 3 | 398 | 52 | 15.5 | 13.6 | 71.3 | 65.2 | 0.71 | 23 | 7 | 9.0 | 30.0 | 6.5 | 6.1 | 78 |
| Average | 60.6 | 99 | 39.1 | 40 | 4 | 412 | 53 | 15.7 | 13.9 | 71.4 | 65.2 | 0.69 | 26 | 7 | 9.0 | 30.5 | 6.3 | 6.0 | 69 |

* 4-year Avg.

Table 13. Quality traits of durum varieties grown in the Advanced Trials at **Hettinger (2008-2012).**

| Variety | Test Weight | Vit kern % | 1000 kwt g | Lg % | Sm % | Fall no sec | Sed mm | Wheat prot % | Semo prot % | Total ext % | Sem ext % | Semo ash % | Specks #/10 sq in | Mixo | Pasta color | Cook wt g | Cook loss % | Firm g cm | Mean GI |
|----------------|-------------|------------|-------------|-----------|----------|-------------|-----------|--------------|-------------|-------------|-------------|-------------|-------------------|----------|-------------|-------------|-------------|------------|-----------|
| Alkabo | 60.5 | 99 | 36.5 | 29 | 9 | 511 | 55 | 14.9 | 13.3 | 71.4 | 64.7 | 0.71 | 27.8 | 6.6 | 9.2 | 31.2 | 6.5 | 5.5 | 70 |
| Alzada | 58.3 | 97 | 37.6 | 46 | 7 | 511 | 64 | 15.5 | 14.0 | 72.5 | 66.0 | 0.72 | 26 | 7 | 8.8 | 30.5 | 6.6 | 5.8 | 94 |
| Carpio* | 60.9 | 96 | 37.3 | 45 | 4 | 531 | 67 | 15.3 | 13.7 | 72.6 | 66.6 | 0.74 | 32 | 8 | 8.9 | 31.1 | 6.3 | 6.0 | 97 |
| Commander | 59.5 | 98 | 37.4 | 40 | 6 | 593 | 68 | 15.3 | 13.6 | 72.1 | 64.8 | 0.68 | 27 | 8 | 9.1 | 30.2 | 6.5 | 5.9 | 97 |
| Divide | 59.5 | 99 | 36.3 | 32 | 8 | 544 | 59 | 15.4 | 13.9 | 71.4 | 65.5 | 0.73 | 23 | 8 | 8.9 | 30.6 | 6.3 | 5.9 | 87 |
| Grenora | 59.4 | 99 | 36.5 | 31 | 8 | 555 | 55 | 15.0 | 13.5 | 71.3 | 65.0 | 0.69 | 28 | 7 | 9.2 | 30.8 | 6.3 | 5.8 | 78 |
| Lebsock | 60.9 | 99 | 35.3 | 30 | 9 | 498 | 50 | 15.2 | 13.5 | 72.2 | 66.2 | 0.69 | 26 | 5 | 8.8 | 31.1 | 6.4 | 5.6 | 62 |
| Maier | 59.5 | 99 | 35.2 | 28 | 12 | 534 | 58 | 16.0 | 14.5 | 72.3 | 65.9 | 0.75 | 27 | 7 | 8.7 | 30.2 | 5.9 | 6.5 | 71 |
| Mountrail | 58.8 | 99 | 32.9 | 19 | 12 | 522 | 50 | 15.2 | 13.8 | 71.4 | 65.6 | 0.75 | 27 | 4 | 8.7 | 31.0 | 6.0 | 5.5 | 38 |
| Navigator | 60.5 | 99 | 37.5 | 39 | 5 | 554 | 58 | 14.9 | 13.2 | 72.7 | 65.6 | 0.73 | 31 | 7 | 9.1 | 30.1 | 6.5 | 5.9 | 85 |
| Pierce | 60.1 | 99 | 32.4 | 22 | 14 | 525 | 59 | 15.5 | 13.8 | 70.4 | 64.7 | 0.74 | 25 | 8 | 9.3 | 30.5 | 6.2 | 6.0 | 83 |
| Strongfield | 60.0 | 99 | 36.7 | 39 | 5 | 479 | 56 | 15.9 | 14.1 | 71.8 | 65.4 | 0.69 | 30 | 8 | 8.6 | 30.7 | 6.4 | 5.9 | 83 |
| Tioga | 60.4 | 99 | 37.7 | 36 | 7 | 478 | 68 | 15.0 | 13.6 | 72.3 | 65.5 | 0.70 | 27 | 8 | 9.1 | 31.0 | 6.5 | 5.5 | 94 |
| Average | 59.9 | 98 | 36.1 | 34 | 8 | 526 | 59 | 15.3 | 13.7 | 71.9 | 65.5 | 0.72 | 27 | 7 | 9.0 | 30.7 | 6.3 | 5.8 | 80 |

* 4-year Avg.

Table 14. Quality traits of durum varieties grown in the Advanced Trials at **Langdon (2008-2012)**.

| Variety | Test | Vit | 1000 | | Fall | | | Wheat | Semo | Total | Sem | Semo | Specks | Mixo | Pasta | Cook | Cook | Mean | |
|----------------|-------------|-----------|-------------|-----------|----------|------------|-----------|-------------|-------------|-------------|-------------|-------------|------------|----------|------------|-------------|------------|------------|-----------|
| | Weight | kern | kwt | Lg | Sm | no | Sed | prot | prot | ext | ext | ash | | | color | wt | loss | Firm | GI |
| | lb/bu | % | g | % | % | sec | mm | % | % | % | % | % | #/10 sq in | | g | % | g cm | | |
| Alkabo | 60.6 | 79 | 42.6 | 68 | 2 | 333 | 40 | 12.5 | 11.2 | 72.3 | 64.3 | 0.70 | 29 | 5 | 8.6 | 30.9 | 8.1 | 4.1 | 40 |
| Alzada | 56.7 | 91 | 40.3 | 67 | 2 | 384 | 65 | 13.9 | 12.9 | 72.7 | 65.2 | 0.78 | 26 | 8 | 8.0 | 30.5 | 7.7 | 5.1 | 92 |
| Carpio | 61.0 | 80 | 44.4 | 74 | 1 | 409 | 56 | 13.2 | 12.1 | 73.6 | 65.5 | 0.71 | 33 | 8 | 8.6 | 30.3 | 7.7 | 4.7 | 92 |
| Commander | 57.9 | 92 | 41.1 | 65 | 2 | 387 | 58 | 13.7 | 12.3 | 73.2 | 65.4 | 0.74 | 28 | 8 | 8.7 | 30.2 | 8.1 | 5.0 | 90 |
| DG Max* | 61.0 | 91 | 42.2 | 66 | 2 | 317 | 47 | 13.9 | 12.6 | 73.9 | 66.9 | 0.71 | 31 | 7 | 8.4 | 30.9 | 7.7 | 4.3 | 61 |
| Divide | 59.8 | 82 | 43.0 | 70 | 2 | 399 | 50 | 13.3 | 12.0 | 72.0 | 64.2 | 0.70 | 27 | 7 | 8.5 | 30.8 | 7.7 | 4.4 | 75 |
| Grenora | 59.6 | 90 | 43.7 | 69 | 2 | 356 | 45 | 13.0 | 11.6 | 72.6 | 65.0 | 0.71 | 32 | 6 | 8.5 | 30.9 | 7.9 | 4.3 | 63 |
| Lebsock | 60.6 | 85 | 41.0 | 68 | 2 | 355 | 37 | 13.2 | 11.8 | 72.8 | 65.8 | 0.70 | 33 | 5 | 8.0 | 30.6 | 7.7 | 4.1 | 30 |
| Maier | 59.7 | 90 | 39.9 | 61 | 3 | 328 | 46 | 13.9 | 12.3 | 73.0 | 65.9 | 0.75 | 31 | 6 | 8.4 | 30.8 | 7.7 | 4.3 | 47 |
| Mountrail | 59.5 | 85 | 41.2 | 64 | 2 | 330 | 36 | 13.0 | 11.7 | 72.6 | 65.5 | 0.72 | 28 | 4 | 7.9 | 31.7 | 7.7 | 4.0 | 11 |
| Navigator | 58.6 | 95 | 40.4 | 63 | 2 | 405 | 49 | 13.8 | 12.5 | 73.3 | 65.3 | 0.75 | 35 | 7 | 8.6 | 30.2 | 7.4 | 4.8 | 66 |
| Pierce | 61.0 | 92 | 39.3 | 64 | 2 | 363 | 44 | 13.2 | 11.8 | 71.6 | 65.3 | 0.72 | 32 | 7 | 8.7 | 30.6 | 7.4 | 4.5 | 56 |
| Strongfield | 59.7 | 87 | 40.4 | 65 | 2 | 339 | 48 | 14.2 | 12.8 | 72.7 | 64.6 | 0.69 | 32 | 8 | 8.3 | 30.8 | 7.7 | 4.6 | 65 |
| Tioga | 60.1 | 83 | 43.1 | 68 | 2 | 340 | 54 | 13.1 | 11.7 | 73.1 | 64.8 | 0.71 | 25 | 8 | 8.5 | 30.7 | 8.7 | 4.2 | 82 |
| Average | 59.7 | 87 | 41.6 | 67 | 2 | 360 | 48 | 13.4 | 12.1 | 72.8 | 65.3 | 0.72 | 30 | 7 | 8.4 | 30.7 | 7.8 | 4.5 | 62 |

* 4-year Avg.

Table 15. Quality traits of durum varieties grown in the Advanced Trials at **Minot (2008-2012).**

| Variety | Test | Vit | 1000 | | Fall | | Wheat | Semo | Total | Sem | Semo | Specks | Mixo | Pasta | Cook | Cook | Mean | | |
|----------------|-------------|-----------|-------------|-----------|----------|------------|-----------|-------------|-------------|-------------|-------------|-------------|------------|----------|------------|-------------|------------|------------|-----------|
| | Weight | kern | kwt | Lg | Sm | no | Sed | prot | prot | ext | ext | | | ash | color | wt | loss | Firm | Gl |
| | lb/bu | % | g | % | % | sec | mm | % | % | % | % | % | #/10 sq in | | g | % | g cm | | |
| Alkabo | 61.0 | 95 | 43.0 | 58 | 2 | 366 | 51 | 14.5 | 12.9 | 72.0 | 64.3 | 0.62 | 29 | 5 | 8.9 | 31.2 | 6.6 | 5.5 | 49 |
| Alzada | 58.3 | 94 | 42.5 | 60 | 3 | 425 | 65 | 15.0 | 13.6 | 72.5 | 65.7 | 0.67 | 31 | 7 | 8.8 | 31.1 | 7.2 | 6.0 | 88 |
| Ben | 56.4 | 97 | 43.3 | 61 | 2 | 355 | 51 | 15.8 | 14.0 | 72.6 | 66.5 | 0.68 | 37 | 6 | 7.8 | 30.5 | 6.7 | 4.6 | 59 |
| Carpio | 60.6 | 92 | 43.4 | 62 | 1 | 413 | 67 | 14.6 | 13.3 | 71.7 | 64.7 | 0.63 | 30 | 8 | 9.0 | 31.3 | 6.4 | 6.1 | 93 |
| Commander | 58.2 | 96 | 40.9 | 51 | 2 | 464 | 63 | 15.0 | 13.4 | 72.7 | 65.3 | 0.66 | 29 | 8 | 9.0 | 31.0 | 6.9 | 6.3 | 92 |
| DG Max* | 60.0 | 95 | 40.2 | 55 | 3 | 348 | 51 | 15.4 | 14.1 | 72.9 | 66.5 | 0.67 | 33 | 7 | 8.5 | 30.6 | 6.4 | 5.4 | 67 |
| DG Star | 59.4 | 94 | 42.4 | 53 | 3 | 350 | 68 | 15.4 | 13.8 | 71.3 | 63.9 | 0.65 | 33 | 8 | 8.5 | 30.8 | 6.6 | 5.8 | 88 |
| Dilse | 60.2 | 98 | 40.3 | 50 | 2 | 364 | 54 | 16.3 | 14.6 | 72.5 | 65.7 | 0.64 | 30 | 6 | 8.5 | 31.5 | 6.2 | 6.3 | 57 |
| Divide | 60.6 | 94 | 43.6 | 63 | 1 | 424 | 59 | 15.4 | 13.7 | 71.8 | 64.9 | 0.61 | 31 | 7 | 8.7 | 31.2 | 6.6 | 5.9 | 78 |
| Grande D' Oro* | 59.9 | 92 | 40.8 | 53 | 4 | 320 | 45 | 14.7 | 13.6 | 72.6 | 66.4 | 0.65 | 34 | 5 | 8.3 | 31.6 | 6.4 | 5.7 | 43 |
| Grenora | 60.0 | 94 | 43.2 | 62 | 1 | 391 | 53 | 14.6 | 13.0 | 72.7 | 65.3 | 0.62 | 33 | 6 | 8.7 | 31.2 | 6.7 | 5.9 | 63 |
| Lebsock | 60.8 | 94 | 40.8 | 53 | 2 | 393 | 45 | 15.0 | 13.4 | 72.2 | 65.9 | 0.65 | 30 | 5 | 8.2 | 31.6 | 6.6 | 5.5 | 46 |
| Maier | 58.7 | 97 | 38.4 | 45 | 4 | 358 | 55 | 16.2 | 14.5 | 72.5 | 65.8 | 0.68 | 34 | 6 | 8.1 | 30.7 | 6.2 | 6.3 | 58 |
| Mountrail | 59.7 | 97 | 39.8 | 48 | 3 | 412 | 46 | 15.0 | 13.5 | 72.4 | 65.8 | 0.67 | 31 | 4 | 7.9 | 31.6 | 6.6 | 5.4 | 22 |
| Navigator | 59.1 | 96 | 40.8 | 52 | 3 | 433 | 53 | 15.0 | 13.3 | 72.8 | 65.3 | 0.70 | 32 | 7 | 8.7 | 30.7 | 6.6 | 6.4 | 73 |
| Pierce | 60.6 | 97 | 39.3 | 49 | 2 | 391 | 57 | 15.1 | 13.5 | 71.0 | 64.5 | 0.64 | 34 | 6 | 8.3 | 31.1 | 6.6 | 6.0 | 62 |
| Rugby* | 59.4 | 95 | 39.5 | 49 | 3 | 332 | 29 | 15.3 | 13.6 | 72.7 | 66.1 | 0.67 | 35 | 4 | 8.4 | 31.6 | 6.8 | 4.7 | 23 |
| Strongfield | 60.2 | 92 | 41.5 | 61 | 1 | 387 | 57 | 15.5 | 13.7 | 72.0 | 64.3 | 0.61 | 27 | 8 | 8.7 | 31.3 | 6.9 | 5.8 | 72 |
| Tioga | 60.3 | 96 | 43.2 | 58 | 2 | 377 | 72 | 15.0 | 13.5 | 72.0 | 65.0 | 0.64 | 31 | 8 | 8.8 | 30.9 | 6.9 | 5.8 | 82 |
| Wales | 59.9 | 93 | 41.0 | 56 | 3 | 350 | 56 | 14.9 | 13.5 | 72.8 | 65.4 | 0.68 | 31 | 7 | 8.8 | 31.2 | 6.8 | 5.6 | 71 |
| Westhope* | 59.5 | 95 | 39.3 | 55 | 3 | 329 | 52 | 15.2 | 13.7 | 71.8 | 65.4 | 0.69 | 34 | 7 | 8.4 | 30.8 | 6.9 | 5.3 | 69 |
| Average | 59.7 | 95 | 41.3 | 55 | 2 | 380 | 55 | 15.2 | 13.6 | 72.3 | 65.4 | 0.66 | 32 | 6 | 8.5 | 31.1 | 6.6 | 5.7 | 65 |

* 4-year Avg.

Table 16. Quality traits of durum varieties grown in the Advanced Trials at **Williston (2008-2012)**.

| Variety | Test Weight | Vit kern % | 1000 kwt g | Lg % | Sm % | Fall no sec | Sed mm | Wheat prot % | Semo prot % | Total ext % | Sem ext % | Semo ash % | Specks #/10 sq in | Mixo | Pasta color | Cook wt g | Cook loss % | Firm g cm | Mean GI |
|--------------|-------------|------------|------------|------|------|-------------|--------|--------------|-------------|-------------|-----------|------------|-------------------|------|-------------|-----------|-------------|-----------|---------|
| Alkabo* | 59.2 | 99 | 35.8 | 27 | 8 | 466 | 57 | 16.6 | 15.0 | 70.8 | 64.1 | 0.71 | 25 | 6 | 9.1 | 30.2 | 6.0 | 5.8 | 79 |
| Alzada* | 58.5 | 97 | 38.1 | 43 | 3 | 567 | 72 | 16.1 | 14.8 | 71.6 | 65.0 | 0.73 | 24 | 8 | 9.3 | 30.5 | 6.3 | 5.6 | 97 |
| Ben* | 59.2 | 99 | 38.2 | 33 | 5 | 453 | 47 | 17.3 | 15.7 | 71.4 | 65.3 | 0.69 | 26 | 6 | 8.8 | 30.2 | 6.0 | 5.9 | 65 |
| Carpio* | 58.9 | 97 | 34.3 | 27 | 7 | 470 | 69 | 16.6 | 15.0 | 70.2 | 64.2 | 0.71 | 27 | 8 | 9.0 | 29.6 | 5.8 | 6.5 | 96 |
| Commander* | 59.1 | 99 | 35.4 | 26 | 7 | 584 | 70 | 16.9 | 15.0 | 71.3 | 63.9 | 0.66 | 34 | 8 | 9.1 | 29.5 | 6.0 | 6.3 | 95 |
| DG Star* | 57.8 | 96 | 34.3 | 24 | 10 | 413 | 71 | 16.9 | 15.0 | 69.1 | 61.6 | 0.62 | 26 | 8 | 8.9 | 29.3 | 6.2 | 6.3 | 90 |
| Dilse* | 58.1 | 100 | 33.2 | 19 | 11 | 455 | 58 | 18.0 | 16.1 | 70.7 | 64.0 | 0.67 | 27 | 6 | 9.1 | 29.7 | 5.7 | 6.7 | 74 |
| Divide* | 58.8 | 99 | 34.8 | 24 | 7 | 494 | 60 | 16.7 | 15.0 | 71.2 | 65.4 | 0.67 | 28 | 7 | 8.8 | 29.8 | 6.1 | 6.0 | 82 |
| Grenora* | 57.9 | 99 | 34.0 | 24 | 9 | 468 | 57 | 16.8 | 15.0 | 70.7 | 64.2 | 0.67 | 31 | 6 | 9.1 | 30.4 | 5.9 | 6.0 | 78 |
| Lebsock* | 59.4 | 99 | 34.1 | 23 | 7 | 462 | 48 | 16.6 | 14.9 | 71.8 | 65.7 | 0.70 | 27 | 5 | 9.0 | 30.9 | 5.9 | 5.5 | 61 |
| Maier* | 58.7 | 99 | 36.0 | 27 | 6 | 465 | 57 | 17.7 | 15.8 | 72.3 | 65.8 | 0.69 | 25 | 6 | 9.0 | 29.5 | 5.7 | 7.0 | 68 |
| Moutrail* | 57.9 | 99 | 33.4 | 20 | 11 | 465 | 50 | 17.3 | 15.6 | 70.5 | 64.6 | 0.69 | 21 | 4 | 8.6 | 30.6 | 6.1 | 5.6 | 44 |
| Navigator* | 59.6 | 100 | 35.6 | 25 | 6 | 568 | 57 | 16.8 | 15.1 | 71.5 | 64.1 | 0.66 | 28 | 6 | 9.3 | 29.1 | 5.9 | 6.6 | 82 |
| Pierce* | 58.7 | 99 | 31.4 | 19 | 11 | 465 | 65 | 17.0 | 15.3 | 69.1 | 62.9 | 0.63 | 23 | 7 | 9.0 | 29.6 | 5.9 | 6.2 | 83 |
| Strongfield* | 58.2 | 99 | 32.7 | 22 | 7 | 490 | 60 | 17.7 | 15.8 | 70.0 | 63.6 | 0.65 | 27 | 8 | 8.9 | 29.3 | 5.9 | 6.5 | 85 |
| Tioga* | 59.1 | 98 | 34.0 | 20 | 9 | 490 | 69 | 16.7 | 15.0 | 69.9 | 63.8 | 0.67 | 26 | 8 | 9.3 | 30.0 | 6.0 | 6.0 | 87 |
| Average | 58.7 | 99 | 34.7 | 25 | 8 | 486 | 60 | 17.0 | 15.2 | 70.8 | 64.3 | 0.68 | 26 | 7 | 9.0 | 29.9 | 6.0 | 6.2 | 79 |

* 4-year Avg.

Table 17. Climatic Data for the seven experiment stations.

| Month | Day | Dickinson | | | | Hettinger | | | | Langdon | | | | Minot | | | | Carrington | | | | Prosper | | | | Williston | | | |
|-------|-----|-------------|-------------|-----------|------------|-------------|-------------|-----------|------------|-------------|-------------|-----------|------------|-------------|-------------|-----------|------------|-------------|-------------|-----------|------------|-------------|-------------|-----------|------------|-------------|-------------|-----------|------------|
| | | Avg Max Tem | Avg Min Tem | Rain-fall | Avg Dew Pt | Avg Max Tem | Avg Min Tem | Rain-fall | Avg Dew Pt | Avg Max Tem | Avg Min Tem | Rain-fall | Avg Dew Pt | Avg Max Tem | Avg Min Tem | Rain-fall | Avg Dew Pt | Avg Max Tem | Avg Min Tem | Rain-fall | Avg Dew Pt | Avg Max Tem | Avg Min Tem | Rain-fall | Avg Dew Pt | Avg Max Tem | Avg Min Tem | Rain-fall | Avg Dew Pt |
| | | (F) | (F) | (inch) | (F) | (F) | (F) | (inch) | (F) | (F) | (F) | (inch) | (F) | (F) | (F) | (inch) | (F) | (F) | (F) | (inch) | (F) | (F) | (F) | (inch) | (F) | (F) | (F) | (inch) | (F) |
| 5 | 1 | 69 | 42 | 0.1 | 41 | 69 | 40 | 0 | 42 | 68 | 47 | 0.1 | 49 | 67 | 46 | 0 | 44 | 75 | 46 | 0 | 48 | 75 | 51 | 0 | 53 | 68 | 44 | 0 | 39 |
| 5 | 2 | 66 | 35 | 0 | 34 | 71 | 33 | 0.3 | 40 | 69 | 38 | 0 | 39 | 65 | 39 | 0 | 35 | 69 | 42 | 0.1 | 40 | 79 | 45 | 0 | 43 | 60 | 39 | 0 | 34 |
| 5 | 3 | 67 | 34 | 0 | 37 | 66 | 37 | 0 | 43 | 54 | 37 | 0 | 39 | 62 | 41 | 0 | 42 | 66 | 43 | 0 | 44 | 71 | 47 | 0 | 44 | 65 | 41 | 0 | 39 |
| 5 | 4 | 72 | 50 | 0.3 | 50 | 71 | 49 | 0.2 | 50 | 51 | 37 | 0 | 39 | 54 | 44.7E | 0.25E | 47E | 58 | 46 | 0.1 | 48 | 67 | 47 | 0.3 | 49 | 69 | 48 | 0.3 | 49 |
| 5 | 5 | 68 | 46 | 0.1 | 50 | 63 | 43 | 0.3 | 51 | 66 | 45 | 0 | 46 | 61 | 48 | 0.2 | 51 | 66 | 45 | 0 | 52 | 73 | 48 | 0 | 50 | 57 | 45 | 0.2 | 50 |
| 5 | 6 | 59 | 38 | 0 | 36 | 61 | 35 | 0.2 | 35 | 65 | 47 | 0.1 | 42 | 58 | 43 | 0 | 41 | 65 | 48 | 0.1 | 43 | 75 | 50 | 0 | 43 | 52 | 38 | 0 | 40 |
| 5 | 7 | 58 | 39 | 0 | 36 | 59 | 34 | 0 | 32 | 56 | 43 | 0.1 | 43 | 54 | 45 | 0 | 41 | 59 | 46 | 0 | 42 | 66 | 48 | 0 | 42 | 56 | 41 | 0 | 39 |
| 5 | 8 | 61 | 36 | 0 | 35 | 59 | 37 | 0 | 36 | 56 | 38 | 0 | 41 | 60 | 42 | 0 | 38 | 55 | 36 | 0 | 41 | 58 | 48 | 0 | 44 | 64 | 38 | 0 | 33 |
| 5 | 9 | 78 | 40 | 0 | 38 | 73 | 38 | 0 | 41 | 67 | 36 | 0 | 37 | 71 | 42 | 0 | 40 | 67 | 35 | 0 | 39 | 68 | 38 | 0 | 39 | 79 | 42 | 0 | 38 |
| 5 | 10 | 75 | 38 | 0 | 42 | 79 | 42 | 0 | 43 | 82 | 46 | 0.2 | 42 | 76 | 42 | 0 | 44 | 82 | 47 | 0.1 | 44 | 83 | 46 | 0 | 44 | 64 | 39 | 0 | 40 |
| 5 | 11 | 59 | 29 | 0 | 21 | 59 | 30 | 0 | 23 | 60 | 39 | 0 | 31 | 61 | 37 | 0 | 26 | 62 | 40 | 0 | 31 | 66 | 40 | 0.1 | 32 | 60 | 34 | 0 | 23 |
| 5 | 12 | 70 | 40 | 0 | 22 | 69 | 29 | 0 | 29 | 71 | 38 | 0 | 25 | 70 | 40 | 0 | 27 | 72 | 38 | 0 | 27 | 76 | 33 | 0 | 23 | 73 | 37 | 0 | 22 |
| 5 | 13 | 80 | 42 | 0 | 26 | 78 | 38 | 0 | 30 | 79 | 45 | 0 | 31 | 79 | 45 | 0 | 34 | 81 | 49 | 0 | 31 | 84 | 48 | 0 | 30 | 81 | 46 | 0 | 26 |
| 5 | 14 | 84 | 42 | 0 | 27 | 83 | 43 | 0 | 31 | 82 | 42 | 0 | 30 | 83 | 49 | 0 | 32 | 84 | 45 | 0 | 32 | 89 | 46 | 0 | 31 | 84 | 48 | 0 | 29 |
| 5 | 15 | 73 | 38 | 0 | 28 | 72 | 35 | 0 | 30 | 63 | 43 | 0 | 33 | 70 | 42 | 0 | 34 | 68 | 45 | 0 | 35 | 70 | 46 | 0 | 32 | 72 | 44 | 0 | 31 |
| 5 | 16 | 84 | 49 | 0 | 38 | 82 | 47 | 0 | 40 | 73 | 40 | 0 | 27 | 77 | 43 | 0 | 40 | 76 | 44 | 0 | 34 | 78 | 39 | 0 | 30 | 89 | 53 | 0 | 37 |
| 5 | 17 | 86 | 49 | 0 | 43 | 86 | 45 | 0 | 46 | 86 | 55 | 0 | 39 | 87 | 53 | 0 | 46 | 90 | 54 | 0 | 42 | 89 | 62 | 0 | 42 | 79 | 53 | 0 | 43 |
| 5 | 18 | 74 | 53 | 0.1 | 50 | 75 | 53 | 0 | 51 | 71 | 48 | 0 | 47 | 62 | 52 | 0 | 48 | 81 | 53 | 0 | 50 | 94 | 58 | 0 | 50 | 73 | 54 | 0.3 | 48 |
| 5 | 19 | 65 | 44 | 0.1 | 41 | 62 | 40 | 0.4 | 44 | 58 | 43 | 0.4 | 45 | 63 | 45 | 0.3 | 44 | 59 | 44 | 0.3 | 49 | 64 | 49 | 0 | 49 | 65 | 46 | 0 | 38 |
| 5 | 20 | 71 | 38 | 0 | 34 | 69 | 35 | 0 | 38 | 67 | 39 | 0 | 33 | 69 | 41 | 0 | 38 | 70 | 40 | 0 | 41 | 75 | 46 | 0 | 39 | 72 | 44 | 0 | 38 |
| 5 | 21 | 85 | 54 | 0 | 44 | 86 | 50 | 0 | 46 | 69 | 44 | 0 | 40 | 76 | 49 | 0 | 48 | 75 | 47 | 0.6 | 49 | 78 | 42 | 0 | 39 | 80 | 53 | 0 | 43 |
| 5 | 22 | 81 | 52 | 0 | 50 | 83 | 49 | 0 | 52 | 70 | 50 | 0 | 53 | 77 | 52 | 0 | 54 | 78 | 53 | 0 | 57 | 90 | 57 | 0.8 | 54 | 82 | 56 | 0 | 51 |
| 5 | 23 | 71 | 43 | 0 | 37 | 69 | 44 | 0 | 40 | 72 | 50 | 0 | 46 | 69 | 48 | 0 | 43 | 70 | 49 | 0 | 48 | 70 | 53 | 0 | 58 | 67 | 49 | 0 | 39 |
| 5 | 24 | 59 | 35 | 0 | 36 | 62 | 35 | 0 | 38 | 58 | 41 | 0 | 40 | 51 | 42 | 0 | 36 | 61 | 40 | 0 | 40 | 68 | 45 | 0 | 48 | 52 | 38 | 0 | 36 |
| 5 | 25 | 54 | 30 | 0.2 | 32 | 52 | 33 | 0 | 36 | 50 | 37 | 0 | 34 | 48 | 38 | 0 | 33 | 55 | 37 | 0 | 35 | 64 | 39 | 0 | 39 | 51 | 36 | 0 | 33 |
| 5 | 26 | 45 | 40 | 0.2 | 40 | 47 | 42 | 0.1 | 41 | 54 | 38 | 0 | 38 | 47 | 40 | 0.2 | 39 | 55 | 41 | 0.2 | 43 | 65 | 46 | 0 | 44 | 44 | 40 | 0.3 | 40 |
| 5 | 27 | 63 | 44 | 0.6 | 45 | 66 | 42 | 0.3 | 47 | 52 | 46 | 0.5 | 48 | 56 | 44 | 0.8 | 48 | 63 | 49 | 0.6 | 53 | 77 | 55 | 0.5 | 61 | 57 | 41 | 1 | 43 |
| 5 | 28 | 53 | 39 | 0 | 38 | 54 | 37 | 0 | 38 | 55 | 46 | 0 | 46 | 53 | 40 | 0.1 | 41 | 54 | 42 | 0 | 44 | 63 | 50 | 0.1 | 49 | 51 | 39 | 0.1 | 41 |
| 5 | 29 | 54 | 40 | 0 | 37 | 55 | 39 | 0 | 38 | 49 | 37 | 0 | 39 | 54 | 40 | 0 | 38 | 51 | 39 | 0 | 41 | 53 | 42 | 0 | 42 | 56 | 40 | 0 | 37 |
| 5 | 30 | 53 | 41 | 0.3 | 39 | 49 | 40 | 0.3 | 40 | 63 | 35 | 0 | 35 | 59 | 38 | 0 | 39 | 58 | 35 | 0 | 39 | 61 | 37 | 0 | 38 | 60 | 43 | 0 | 41 |
| 5 | 31 | 68 | 36 | 0 | 42 | 66 | 36 | 0 | 44 | 71 | 38 | 0 | 35 | 66 | 42 | 0 | 39 | 68 | 37 | 0 | 39 | 73 | 44 | 0 | 40 | 69 | 40 | 0 | 43 |
| Avg | | 68 | 41 | | 38 | 68 | 40 | | 40 | 65 | 42 | | 39 | 65 | 44 | | 40 | 67 | 44 | | 42 | 73 | 47 | | 43 | 66 | 44 | | 38 |
| Total | | | | 1.9 | | | | 2.2 | | | | 1.5 | | | | 1.5 | | | 2 | | | 1.8 | | | | | | 2.1 | |

Data collected from NDAWN (<http://ndawn.ndsu.nodak.edu/index.html>)

| Month | Day | Dickinson | | | | Hettinger | | | | Langdon | | | | Minot | | | | Carrington | | | | Prosper | | | | Williston | | | |
|-------|-----|-------------|-------------|------------------|----------------|-------------|-------------|------------------|----------------|-------------|-------------|------------------|----------------|-------------|-------------|------------------|----------------|-------------|-------------|------------------|----------------|-------------|-------------|------------------|----------------|-------------|-------------|------------------|----------------|
| | | Avg Max Tem | Avg Min Tem | Rain-fall (inch) | Avg Dew Pt (F) | Avg Max Tem | Avg Min Tem | Rain-fall (inch) | Avg Dew Pt (F) | Avg Max Tem | Avg Min Tem | Rain-fall (inch) | Avg Dew Pt (F) | Avg Max Tem | Avg Min Tem | Rain-fall (inch) | Avg Dew Pt (F) | Avg Max Tem | Avg Min Tem | Rain-fall (inch) | Avg Dew Pt (F) | Avg Max Tem | Avg Min Tem | Rain-fall (inch) | Avg Dew Pt (F) | Avg Max Tem | Avg Min Tem | Rain-fall (inch) | Avg Dew Pt (F) |
| 6 | 1 | 74 | 52 | 0 | 45 | 72 | 47 | 0 | 46 | 66 | 47 | 0.4 | 47 | 71 | 49 | 0 | 47 | 65 | 48 | 0.1 | 49 | 69 | 45 | 0 | 46 | 75 | 53 | 0 | 45 |
| 6 | 2 | 83 | 47 | 0.2 | 48 | 83 | 43 | 0 | 48 | 77 | 42 | 0 | 45 | 81 | 52 | 0 | 46 | 80 | 45 | 0 | 47 | 82 | 43 | 0 | 46 | 82 | 52 | 0.1 | 49 |
| 6 | 3 | 78 | 54 | 0 | 52 | 79 | 51 | 0 | 51 | 79 | 56 | 0.1 | 52 | 77 | 56 | 0 | 50 | 81 | 56 | 0.1 | 54 | 83 | 55 | 0 | 56 | 76 | 58 | 0.1 | 51 |
| 6 | 4 | 86 | 48 | 0 | 51 | 86 | 49 | 0 | 50 | 83 | 47 | 0 | 45 | 83 | 55 | 0 | 47 | 84 | 49 | 0 | 48 | 86 | 56 | 0 | 46 | 85 | 52 | 0 | 49 |
| 6 | 5 | 85 | 64 | 0 | 52 | 88 | 63 | 0 | 51 | 83 | 56 | 0 | 51 | 76 | 57 | 0 | 53 | 83 | 58 | 0 | 52 | 89 | 56 | 0 | 50 | 87 | 65 | 0.1 | 54 |
| 6 | 6 | 84 | 59 | 0.1 | 53 | 86 | 62 | 0 | 53 | 83 | 57.5E | 0 | 54E | 85 | 62 | 0 | 57 | 85 | 62 | 0 | 57 | 85 | 60 | 0 | 54 | 83 | 63 | 0 | 52 |
| 6 | 7 | 66 | 53 | 1 | 52 | 73 | 51 | 0.1 | 51 | 79 | 61 | 1.5 | 62 | 72 | 57 | 1.3 | 61 | 84 | 63 | 1.2 | 63 | 91 | 66 | 0.7 | 63 | 67 | 52 | 0.1 | 47 |
| 6 | 8 | 78 | 47 | 0 | 55 | 79 | 43 | 0 | 56 | 73 | 57 | 0.1 | 59 | 76 | 53 | 0 | 54 | 78 | 59 | 0 | 59 | 86 | 63 | 0 | 62 | 76 | 46 | 0 | 52 |
| 6 | 9 | 79 | 52 | 0.1 | 56 | 79 | 54 | 0 | 55 | 79 | 54 | 0.4 | 62 | 73 | 58 | 0.7 | 59 | 87 | 62 | 0 | 62 | 92 | 63 | 0 | 63 | 72 | 55 | 0.7 | 54 |
| 6 | 10 | 68 | 50 | 0.1 | 45 | 70 | 49 | 0.2 | 44 | 66 | 53 | 0.3 | 56 | 68 | 51 | 0.1 | 49 | 69 | 53 | 0.2 | 53 | 74 | 57 | 0.5 | 60 | 66 | 51 | 0.1 | 47 |
| 6 | 11 | 64 | 46 | 0 | 42 | 67 | 43 | 0 | 42 | 54 | 43 | 0.2 | 44 | 55 | 43 | 0 | 41 | 55 | 43 | 0 | 43 | 64 | 47 | 0 | 48 | 63 | 47 | 0 | 41 |
| 6 | 12 | 79 | 42 | 0 | 45 | 79 | 37 | 0.00E | 43 | 71 | 37 | 0 | 46 | 77 | 43 | 0 | 47 | 74 | 37 | 0 | 45 | 72 | 44 | 0 | 46 | 80 | 47 | 0 | 47 |
| 6 | 13 | 82 | 51 | 0.1 | 53 | 85 | 50 | 0.32E | 53 | 77 | 52 | 0 | 55 | 79 | 56 | 0 | 54 | 78 | 54 | 0 | 55 | 75 | 56 | 0 | 54 | 79 | 54 | 0 | 51 |
| 6 | 14 | 75 | 53 | 0 | 49 | 74 | 51 | 0.11E | 50 | 74 | 59 | 0 | 55 | 72 | 57 | 0 | 54 | 76 | 57 | 0.2 | 56 | 81 | 61 | 0.4 | 60 | 73 | 55 | 0 | 50 |
| 6 | 15 | 75 | 48 | 0.6 | 52 | 81 | 45 | 1.15E | 53 | 76 | 55 | 0 | 53 | 79 | 53 | 0.3 | 54 | 78 | 55 | 0.1 | 56 | 85 | 58 | 0 | 57 | 83 | 50 | 0.5 | 52 |
| 6 | 16 | 73 | 46 | 0 | 47 | 75 | 46 | 0.00E | 47 | 65 | 55 | 0.9 | 55 | 69 | 52 | 0 | 50 | 68 | 53 | 0.5 | 54 | 74 | 56 | 0 | 56 | 73 | 47 | 0 | 46 |
| 6 | 17 | 82 | 56 | 0 | 49 | 84 | 56 | 0.00E | 52 | 68 | 50 | 0.1 | 55 | 75 | 56 | 0 | 54 | 76 | 53 | 0 | 57 | 84 | 53 | 0 | 59 | 80 | 58 | 0 | 51 |
| 6 | 18 | 80 | 50 | 0.1 | 49 | 80 | 54 | 0.26E | 50 | 64 | 48 | 0 | 53 | 69 | 54 | 0 | 51 | 75 | 54 | 0 | 54 | 83 | 61 | 0 | 57 | 72 | 52 | 0 | 53 |
| 6 | 19 | 70 | 55 | 0.1 | 56 | 69 | 56 | 0.23E | 54 | 63 | 48 | 0.2 | 50 | 60 | 50 | 0.2 | 52 | 64 | 53 | 0.2 | 56 | 69 | 56 | 0.1 | 59 | 67 | 56 | 0.3 | 55 |
| 6 | 20 | 70 | 47 | 0 | 49 | 68 | 49 | 0.00E | 51 | 66 | 51 | 0.2 | 54 | 66 | 51 | 0.1 | 53 | 74 | 54 | 0 | 54 | 74 | 58 | 0.9 | 59 | 69 | 50 | 0 | 50 |
| 6 | 21 | 75 | 46 | 0 | 47 | 77 | 45 | 0 | 49 | 71 | 51 | 0 | 53 | 72 | 53 | 0 | 51 | 75 | 52 | 0 | 51 | 78 | 55 | 0 | 56 | 74 | 51 | 0 | 49 |
| 6 | 22 | 79 | 51 | 0 | 51 | 82 | 50 | 0 | 52 | 74 | 51 | 0 | 51 | 76 | 51 | 0 | 51 | 78 | 48 | 0 | 50 | 80 | 52 | 0 | 54 | 78 | 52 | 0 | 51 |
| 6 | 23 | 79 | 58 | 0 | 60 | 85 | 57 | 0 | 61 | 77 | 55 | 0 | 55 | 76 | 56 | 0 | 55 | 78 | 61 | 0 | 61 | 84 | 62 | 0 | 63 | 79 | 59 | 0 | 51 |
| 6 | 24 | 82 | 61 | 0 | 56 | 82 | 63 | 0 | 62 | 70 | 48 | 0 | 47 | 68 | 54 | 0 | 50 | 73 | 54 | 0 | 48 | 78 | 58 | 0 | 52 | 70 | 57 | 0 | 52 |
| 6 | 25 | 87 | 61 | 0 | 61 | 85 | 62 | 0 | 64 | 79 | 50 | 0 | 53 | 82 | 52 | 0 | 60 | 82 | 54 | 0 | 55 | 81 | 54 | 0 | 55 | 85 | 61 | 0 | 61 |
| 6 | 26 | 99 | 65 | 0 | 67 | 99 | 66 | 0 | 65 | 85 | 60 | 0 | 63 | 89 | 60 | 0.1 | 68 | 86 | 64 | 0 | 65 | 84 | 66 | 0 | 60 | 98 | 66 | 0 | 66 |
| 6 | 27 | 84 | 56 | 0 | 39 | 83 | 60 | 0 | 42 | 80 | 59 | 0 | 54 | 78 | 59 | 0 | 49 | 81 | 57 | 0 | 55 | 88 | 57 | 0 | 62 | 78 | 53 | 0 | 42 |
| 6 | 28 | 88 | 47 | 0 | 42 | 92 | 48 | 0 | 44 | 80 | 57 | 0 | 50 | 80 | 54 | 0 | 50 | 84 | 55 | 0 | 49 | 87 | 55 | 0 | 53 | 83 | 53 | 0 | 43 |
| 6 | 29 | 90 | 54 | 0 | 51 | 92 | 59 | 0 | 54 | 80 | 52 | 0 | 52 | 82 | 54 | 0 | 53 | 84 | 52 | 0 | 54 | 89 | 56 | 0 | 57 | 86 | 52 | 0 | 50 |
| 6 | 30 | 91 | 63 | 0 | 56 | 91 | 62 | 0 | 57 | 84 | 55 | 0 | 58 | 83 | 61 | 0.2 | 62 | 80 | 57 | 0.3 | 62 | 87 | 56 | 0 | 61 | 87 | 61 | 0 | 55 |
| Avg | | 79 | 53 | | 51 | 81 | 52 | | 52 | 74 | 52 | | 53 | 75 | 54 | | 53 | 77 | 54 | | 54 | 81 | 56 | | 56 | 78 | 54 | | 51 |
| Total | | | | 2.2 | | | | 0.3 | | | | 4.3 | | | | | 3.1 | | | 2.9 | | | 2.7 | | | | | 2.1 | |

| | | Dickinson | | | | Hettinger | | | | Langdon | | | | Minot | | | | Carrington | | | | Prosper | | | | Williston | | | |
|-------|-----|-------------|-------------|-----------|------------|-------------|-------------|-----------|------------|-------------|-------------|-----------|------------|-------------|-------------|-----------|------------|-------------|-------------|-----------|------------|-------------|-------------|-----------|------------|-------------|-------------|-----------|------------|
| Month | Day | Avg Max Tem | Avg Min Tem | Rain-fall | Avg Dew Pt | Avg Max Tem | Avg Min Tem | Rain-fall | Avg Dew Pt | Avg Max Tem | Avg Min Tem | Rain-fall | Avg Dew Pt | Avg Max Tem | Avg Min Tem | Rain-fall | Avg Dew Pt | Avg Max Tem | Avg Min Tem | Rain-fall | Avg Dew Pt | Avg Max Tem | Avg Min Tem | Rain-fall | Avg Dew Pt | Avg Max Tem | Avg Min Tem | Rain-fall | Avg Dew Pt |
| | | (F) | (F) | (inch) | (F) | (F) | (F) | (inch) | (F) | (F) | (F) | (inch) | (F) | (F) | (F) | (inch) | (F) | (F) | (F) | (inch) | (F) | (F) | (F) | (inch) | (F) | (F) | (F) | (inch) | (F) |
| 7 | 1 | 93 | 56 | 0 | 57 | 96 | 54 | 0.2 | 55 | 87 | 59 | 0 | 64 | 85 | 63 | 0 | 64 | 86 | 60 | 0 | 65 | 94 | 65 | 0 | 69 | 89 | 62 | 0 | 60 |
| 7 | 2 | 93 | 66 | 0 | 61 | 91 | 69 | 0 | 63 | 86 | 65 | 0 | 68 | 85 | 64 | 0 | 66 | 88 | 67 | 0 | 71 | 95 | 71 | 0 | 74 | 88 | 68 | 0 | 59 |
| 7 | 3 | 94 | 67 | 0 | 65 | 96 | 65 | 0.2 | 65 | 84 | 61 | 0 | 64 | 84 | 60 | 0 | 64 | 87 | 60 | 0 | 65 | 92 | 68 | 0 | 70 | 95 | 62 | 0 | 62 |
| 7 | 4 | 85 | 63 | 0 | 41 | 84 | 60 | 0 | 45 | 81 | 60 | 1.5 | 65 | 78 | 57 | 0 | 55 | 83 | 55 | 0 | 67 | 92 | 71 | 0 | 75 | 82 | 60 | 0 | 41 |
| 7 | 5 | 85 | 58 | 0.8 | 45 | 89 | 54 | 0.2 | 44 | 76 | 54 | 0 | 58 | 77 | 55 | 0 | 54 | 83 | 49 | 0 | 54 | 87 | 55 | 0 | 58 | 78 | 55 | 0 | 50 |
| 7 | 6 | 74 | 54 | 0.3 | 56 | 65 | 55 | 2 | 58 | 76 | 59 | 0.5 | 60 | 77 | 59 | 0.3 | 59 | 74 | 59 | 1 | 61 | 75 | 63 | 0.3 | 64 | 80 | 59 | 0 | 56 |
| 7 | 7 | 84 | 55 | 0 | 57 | 81 | 62 | 0 | 58 | 80 | 57 | 0 | 62 | 81 | 58 | 0 | 62 | 83 | 55 | 0 | 61 | 87 | 59 | 0 | 63 | 89 | 56 | 0 | 56 |
| 7 | 8 | 88 | 56 | 0 | 56 | 86 | 53 | 0 | 55 | 80 | 60 | 0 | 60 | 82 | 61 | 0 | 58 | 82 | 61 | 0 | 63 | 85 | 61 | 0 | 65 | 89 | 65 | 0 | 60 |
| 7 | 9 | 91 | 60 | 0 | 57 | 89 | 56 | 0 | 53 | 82 | 58 | 0 | 59 | 85 | 61 | 0.1 | 62 | 84 | 58 | 0 | 61 | 87 | 56 | 0 | 61 | 95 | 65 | 0 | 56 |
| 7 | 10 | 93 | 63 | 0 | 50 | 93 | 64 | 0 | 54 | 84 | 58 | 0 | 62 | 88 | 62 | 0 | 64 | 86 | 60 | 0 | 64 | 90 | 58 | 0 | 62 | 99 | 66 | 0 | 51 |
| 7 | 11 | 95 | 69 | 0 | 57 | 95 | 62 | 0.1 | 58 | 88 | 66 | 0 | 66 | 89 | 69 | 0 | 65 | 87 | 68 | 0 | 65 | 92 | 63 | 0 | 64 | 95 | 64 | 0.6 | 55 |
| 7 | 12 | 91 | 60 | 0 | 55 | 90 | 62 | 0 | 57 | 82 | 64 | 0.8 | 66 | 87 | 64 | 0 | 63 | 83 | 63 | 0 | 66 | 89 | 67 | 0 | 68 | 90 | 60 | 0 | 59 |
| 7 | 13 | 92 | 59 | 0 | 55 | 92 | 55 | 0 | 57 | 85 | 62 | 0 | 65 | 89 | 62 | 0 | 64 | 87 | 62 | 0 | 66 | 89 | 64 | 0 | 67 | 92 | 62 | 0 | 58 |
| 7 | 14 | 87 | 62 | 0 | 61 | 93 | 62 | 0 | 59 | 85 | 66 | 0 | 65 | 84 | 65 | 0 | 66 | 87 | 62 | 0 | 66 | 92 | 66 | 0 | 69 | 81 | 69 | 0 | 64 |
| 7 | 15 | 99 | 70 | 0 | 61 | 97 | 71 | 0 | 61 | 70 | 61 | 0.4 | 61 | 89 | 69 | 0 | 69 | 86 | 69 | 0.1 | 70 | 90 | 70 | 0.1 | 70 | 95 | 71 | 0 | 63 |
| 7 | 16 | 89 | 67 | 0 | 64 | 93 | 64 | 0.2 | 63 | 71 | 62 | 0 | 63 | 83 | 62 | 0 | 66 | 84 | 65 | 0 | 68 | 90 | 67 | 0 | 71 | 91 | 65 | 0 | 62 |
| 7 | 17 | 80 | 65 | 0.1 | 65 | 82 | 61 | 0.9 | 66 | 79 | 62 | 0 | 63 | 76 | 64 | 0 | 64 | 77 | 63 | 0 | 64 | 82 | 67 | 0 | 67 | 78 | 68 | 0.1 | 68 |
| 7 | 18 | 100 | 62.3E | 0.1 | 60E | 92 | 61 | 0.1 | 62E | 81 | 60 | 0 | 63 | 87 | 66 | 0 | 67 | 84 | 61 | 0 | 64 | 87 | 66 | 0 | 67 | 95 | 63 | 0.5 | 62 |
| 7 | 19 | 101 | 73 | 0 | 59 | 98 | 71 | 0 | 61 | 86 | 63 | 0.1 | 67 | 97 | 68 | 0.2 | 67 | 95 | 68 | 0 | 72 | 93 | 63 | 0 | 72 | 98 | 70 | 0 | 62 |
| 7 | 20 | 92 | 65 | 0 | 62 | 92 | 65 | 0 | 63 | 82 | 61 | 0 | 65 | 86 | 66 | 0 | 62 | 89 | 68 | 0 | 67 | 100 | 70 | 0 | 70 | 83 | 68 | 0 | 60 |
| 7 | 21 | 90 | 64 | 0 | 60 | 89 | 65 | 0 | 64 | 81 | 57 | 0 | 58 | 85 | 62 | 0 | 61 | 83 | 62 | 0 | 60 | 89 | 64 | 0 | 60 | 94 | 65 | 0.6 | 61 |
| 7 | 22 | 96 | 68 | 0 | 58 | 96 | 64 | 0.1 | 64 | 86 | 60 | 0 | 61 | 88 | 62 | 0 | 60 | 90 | 64 | 0 | 65 | 99 | 65 | 0 | 69 | 91 | 64 | 0.1 | 59 |
| 7 | 23 | 88 | 65 | 0 | 60 | 87 | 64 | 0.1 | 60 | 79 | 59 | 0 | 58 | 79 | 59 | 0 | 61 | 78 | 59 | 0 | 62 | 80 | 63 | 0 | 65 | 87 | 62 | 0 | 61 |
| 7 | 24 | 82 | 63 | 0.2 | 64 | 84 | 63 | 0 | 64 | 80 | 57 | 0.1 | 59 | 78 | 60 | 0 | 64 | 83 | 59 | 0.1 | 66 | 89 | 63 | 0.2 | 68 | 83 | 66 | 0.3 | 65 |
| 7 | 25 | 82 | 61 | 0 | 53 | 84 | 57 | 0 | 53 | 81 | 60 | 0 | 61 | 80 | 61 | 0 | 55 | 82 | 59 | 0 | 62 | 91 | 60 | 0.1 | 67 | 80 | 58 | 0.1 | 52 |
| 7 | 26 | 77 | 56 | 0 | 53 | 79 | 52 | 0 | 51 | 71 | 56 | 0 | 56 | 72 | 55 | 0 | 56 | 70 | 52 | 0.1 | 58 | 79 | 58 | 0 | 60 | 75 | 59 | 0 | 55 |
| 7 | 27 | 86 | 55 | 0 | 53 | 83 | 52 | 0 | 54 | 78 | 46 | 0 | 53 | 81 | 51 | 0 | 56 | 81 | 46 | 0 | 53 | 83 | 55 | 0 | 57 | 86 | 56 | 0 | 56 |
| 7 | 28 | 95 | 63 | 0 | 57 | 88 | 61 | 0 | 58 | 85 | 56 | 0 | 60 | 84 | 61 | 0.1 | 60 | 85 | 59 | 0 | 62 | 88 | 55 | 0 | 64 | 95 | 67 | 0 | 59 |
| 7 | 29 | 97 | 69 | 0 | 53 | 100 | 65 | 0 | 53 | 91 | 61 | 0 | 63 | 92 | 64 | 0 | 59 | 93 | 59 | 0 | 63 | 90 | 62 | 0 | 69 | 92 | 67 | 0 | 53 |
| 7 | 30 | 92 | 56 | 0 | 52 | 90 | 59 | 0 | 53 | 83 | 58 | 0 | 60 | 86 | 58 | 0 | 57 | 85 | 57 | 0 | 60 | 88 | 62 | 0 | 64 | 90 | 58 | 0 | 55 |
| 7 | 31 | 98 | 66 | 0 | 53 | 97 | 66 | 0 | 54 | 88 | 60 | 0 | 63 | 95 | 61 | 0 | 59 | 89 | 62 | 0 | 63 | 90 | 57 | 0 | 65 | 97 | 68 | 0 | 52 |
| Avg | | 90 | 62 | | 57 | 89 | 61 | | 57 | 82 | 60 | | 62 | 84 | 62 | | 62 | 84 | 60 | | 64 | 89 | 63 | | 66 | 89 | 64 | | 58 |
| Total | | | | 1.5 | | | | 4 | | | | 3.4 | | | | 0.7 | | | | 1.2 | | | 0.6 | | | | | 2.2 | |

Data collected from NDAWN (<http://ndawn.ndsu.nodak.edu/index.html>)

| | | Dickinson | | | | Hettinger | | | | Langdon | | | | Minot | | | | Carrington | | | | Prosper | | | | Williston | | | |
|-------|-----|-------------|-------------|-----------|------------|-------------|-------------|-----------|------------|-------------|-------------|-----------|------------|-------------|-------------|-----------|------------|-------------|-------------|-----------|------------|-------------|-------------|-----------|------------|-------------|-------------|-----------|------------|
| Month | Day | Avg Max Tem | Avg Min Tem | Rain-fall | Avg Dew Pt | Avg Max Tem | Avg Min Tem | Rain-fall | Avg Dew Pt | Avg Max Tem | Avg Min Tem | Rain-fall | Avg Dew Pt | Avg Max Tem | Avg Min Tem | Rain-fall | Avg Dew Pt | Avg Max Tem | Avg Min Tem | Rain-fall | Avg Dew Pt | Avg Max Tem | Avg Min Tem | Rain-fall | Avg Dew Pt | Avg Max Tem | Avg Min Tem | Rain-fall | Avg Dew Pt |
| | | (F) | (F) | (inch) | (F) | (F) | (F) | (inch) | (F) | (F) | (F) | (inch) | (F) | (F) | (F) | (inch) | (F) | (F) | (F) | (inch) | (F) | (F) | (F) | (inch) | (F) | (F) | (F) | (inch) | (F) |
| 8 | 1 | 80 | 63 | 0.2 | 57 | 84 | 60 | 0 | 55 | 79 | 57 | 0 | 60 | 81 | 58 | 0 | 60 | 76 | 59 | 0 | 62 | 86 | 62 | 0 | 65 | 84 | 60 | 0 | 57 |
| 8 | 2 | 88 | 55 | 0.1 | 54 | 86 | 57 | 0.3 | 51 | 82 | 55 | 0 | 56 | 84 | 57 | 0 | 56 | 83 | 55 | 0 | 59 | 86 | 55 | 0 | 61 | 85 | 58 | 0 | 54 |
| 8 | 3 | 67 | 51 | 0 | 54 | 68 | 51 | 0 | 53 | 80 | 57 | 0.8 | 61 | 67 | 57 | 0.2 | 57 | 79 | 54 | 1.1 | 62 | 89 | 65 | 0 | 66 | 68 | 56 | 0.3 | 54 |
| 8 | 4 | 69 | 49 | 0 | 50 | 70 | 47 | 0 | 48 | 66 | 46 | 0 | 53 | 70 | 49 | 0.1 | 51 | 69 | 49 | 0 | 54 | 78 | 51 | 0 | 56 | 70 | 56 | 0.1 | 51 |
| 8 | 5 | 89 | 44 | 0 | 44 | 88 | 41 | 0 | 45 | 79 | 44 | 0 | 51 | 83 | 48 | 0 | 51 | 81 | 45 | 0 | 53 | 83 | 43 | 0 | 51 | 86 | 51 | 0 | 48 |
| 8 | 6 | 94 | 52 | 0 | 46 | 97 | 48 | 0 | 46 | 83 | 56 | 0 | 55 | 90 | 60 | 0 | 53 | 87 | 55 | 0 | 59 | 95 | 53 | 0 | 60 | 94 | 59 | 0 | 52 |
| 8 | 7 | 88 | 65 | 0 | 52 | 93 | 65 | 0 | 50 | 77 | 50 | 0.2 | 55 | 86 | 58 | 0.2 | 57 | 79 | 55 | 0 | 57 | 84 | 55 | 0 | 57 | 87 | 65 | 0 | 58 |
| 8 | 8 | 85 | 58 | 0 | 55 | 85 | 56 | 0 | 53 | 80 | 56 | 0.2 | 59 | 84 | 59 | 0 | 58 | 79 | 61 | 0.8 | 61 | 80 | 63 | 0.6 | 64 | 87 | 56 | 0 | 55 |
| 8 | 9 | 87 | 60 | 0 | 54 | 88 | 55 | 0 | 52 | 72 | 52 | 0 | 54 | 76 | 55 | 0 | 55 | 74 | 53 | 0 | 57 | 74 | 57 | 0 | 59 | 82 | 64 | 0 | 58 |
| 8 | 10 | 85 | 58 | 0 | 51 | 85 | 59 | 0 | 51 | 77 | 53 | 0 | 54 | 80 | 53 | 0 | 53 | 76 | 51 | 0 | 56 | 78 | 50 | 0 | 55 | 88 | 61 | 0 | 56 |
| 8 | 11 | 69 | 61 | 0.6 | 58 | 66 | 61 | 1.8 | 58 | 74 | 55 | 0 | 56 | 71 | 59 | 0.2 | 59 | 73 | 55 | 0 | 58 | 76 | 50 | 0 | 56 | 74 | 59 | 0 | 53 |
| 8 | 12 | 80 | 58 | 0 | 54 | 78 | 59 | 0 | 56 | 74 | 57 | 0 | 60 | 79 | 54 | 0.1 | 54 | 74 | 55 | 0 | 59 | 80 | 60 | 0 | 59 | 79 | 58 | 0 | 49 |
| 8 | 13 | 82 | 49 | 0.4 | 49 | 81 | 48 | 0.1 | 51 | 74 | 49 | 0 | 51 | 78 | 49 | 0 | 48 | 74 | 48 | 0 | 52 | 80 | 53 | 0 | 55 | 81 | 51 | 0 | 49 |
| 8 | 14 | 84 | 55 | 0 | 54 | 83 | 53 | 0 | 54 | 78 | 50 | 0 | 50 | 82 | 54 | 0 | 53 | 75 | 51 | 0 | 55 | 79 | 49 | 0 | 54 | 87 | 56 | 0 | 54 |
| 8 | 15 | 68 | 51 | 0 | 51 | 69 | 45 | 0 | 52 | 67 | 53 | 0.1 | 56 | 68 | 54 | 0 | 53 | 67 | 51 | 0 | 56 | 83 | 58 | 0 | 60 | 74 | 50 | 0 | 49 |
| 8 | 16 | 71 | 47 | 0 | 40 | 71 | 41 | 0 | 41 | 66 | 45 | 0 | 44 | 72 | 47 | 0 | 40 | 68 | 44 | 0 | 44 | 72 | 47 | 0 | 47 | 74 | 51 | 0 | 40 |
| 8 | 17 | 80 | 48 | 0 | 38 | 81 | 43 | 0 | 42 | 77 | 43 | 0 | 43 | 79 | 48 | 0 | 41 | 76 | 40 | 0 | 45 | 80 | 41 | 0 | 45 | 81 | 48 | 0 | 37 |
| 8 | 18 | 78 | 47 | 0 | 42 | 76 | 43 | 0 | 43 | 75 | 47 | 0.1 | 50 | 78 | 48 | 0 | 46 | 77 | 47 | 0 | 50 | 83 | 45 | 0 | 51 | 82 | 49 | 0 | 43 |
| 8 | 19 | 81 | 48 | 0 | 45 | 80 | 45 | 0 | 45 | 73 | 45 | 0 | 42 | 78 | 46 | 0 | 49 | 72 | 43 | 0 | 47 | 77 | 49 | 0 | 51 | 84 | 53 | 0 | 46 |
| 8 | 20 | 85 | 55 | 0 | 44 | 83 | 53 | 0 | 45 | 80 | 45 | 0 | 47 | 86 | 53 | 0 | 49 | 79 | 42 | 0 | 48 | 81 | 43 | 0 | 46 | 90 | 56 | 0 | 40 |
| 8 | 21 | 91 | 57 | 0 | 40 | 88 | 50 | 0 | 45 | 88 | 57 | 0 | 51 | 93 | 62 | 0 | 46 | 87 | 54 | 0 | 52 | 87 | 46 | 0 | 51 | 95 | 59 | 0 | 40 |
| 8 | 22 | 88 | 61 | 0 | 44 | 88 | 51 | 0 | 47 | 88 | 54 | 0 | 54 | 92 | 63 | 0 | 50 | 85 | 52 | 0 | 55 | 92 | 54 | 0 | 58 | 91 | 64 | 0 | 43 |
| 8 | 23 | 92 | 55 | 0 | 42 | 92 | 49 | 0 | 46 | 89 | 56 | 0 | 56 | 89 | 57 | 0 | 51 | 89 | 51 | 0 | 56 | 92 | 55 | 0 | 62 | 90 | 56 | 0 | 47 |
| 8 | 24 | 94 | 62 | 0 | 46 | 97 | 63 | 0 | 44 | 85 | 58 | 0.2 | 56 | 91 | 62 | 0.1 | 56 | 85 | 57 | 1.2 | 60 | 96 | 58 | 0 | 61 | 85 | 55 | 0.2 | 49 |
| 8 | 25 | 78 | 44 | 0 | 33 | 78 | 45 | 0 | 34 | 74 | 52 | 0 | 47 | 76 | 52 | 0 | 38 | 73 | 51 | 0 | 48 | 80 | 51 | 0.3 | 54 | 77 | 46 | 0 | 34 |
| 8 | 26 | 81 | 45 | 0 | 35 | 83 | 43 | 0 | 36 | 74 | 52 | 0 | 51 | 79 | 52 | 0 | 45 | 77 | 48 | 0 | 51 | 84 | 49 | 0 | 50 | 81 | 49 | 0 | 40 |
| 8 | 27 | 86 | 54 | 0 | 46 | 92 | 52 | 0 | 50 | 80 | 47 | 0 | 53 | 83 | 47 | 0 | 50 | 78 | 48 | 0 | 56 | 86 | 51 | 0 | 55 | 86 | 53 | 0 | 47 |
| 8 | 28 | 98 | 56 | 0 | 56 | 96 | 53 | 0 | 57 | 86 | 56 | 0 | 56 | 92 | 56 | 0 | 58 | 86 | 59 | 0 | 61 | 92 | 60 | 0 | 61 | 99 | 61 | 0 | 56 |
| 8 | 29 | 104 | 67 | 0 | 49 | 103 | 65 | 0 | 50 | 93 | 63 | 0 | 62 | 101 | 67 | 0 | 55 | 92 | 60 | 0 | 65 | 96 | 59 | 0 | 65 | 97 | 68 | 0 | 50 |
| 8 | 30 | 80 | 55 | 0 | 38 | 82 | 57 | 0 | 40 | 79 | 54 | 0 | 44 | 80 | 55 | 0 | 42 | 77 | 52 | 0 | 51 | 83 | 55 | 0 | 53 | 81 | 54 | 0 | 40 |
| 8 | 31 | 80 | 57 | 0 | 41 | 82 | 60 | 0 | 42 | 83 | 46 | 0 | 41 | 80 | 54 | 0 | 41 | 79 | 48 | 0 | 47 | 85 | 49 | 0 | 47 | 85 | 56 | 0 | 39 |
| Avg | | 83 | 54 | | 47 | 84 | 52 | | 48 | 79 | 52 | | 53 | 81 | 55 | | 51 | 78 | 51 | | 55 | 84 | 53 | | 56 | 84 | 56 | | 48 |
| Total | | | | 1.3 | | | | 2.2 | | | | 1.7 | | | | 1 | | | | 3.2 | | | 0.9 | | | | | 0.6 | |

Data collected from NDAWN (<http://ndawn.ndsu.nodak.edu/index.html>)

| | | <u>Dickinson</u> | | | | <u>Hettinger</u> | | | | <u>Langdon</u> | | | | <u>Minot</u> | | | | <u>Carrington</u> | | | | <u>Prosper</u> | | | | <u>Williston</u> | | | |
|---------------|------------|--------------------|--------------------|------------------|-------------------|--------------------|--------------------|------------------|-------------------|--------------------|--------------------|------------------|-------------------|--------------------|--------------------|------------------|-------------------|--------------------|--------------------|------------------|-------------------|--------------------|--------------------|------------------|-------------------|--------------------|--------------------|------------------|-------------------|
| <u>Month</u> | <u>Day</u> | <u>Avg Max Tem</u> | <u>Avg Min Tem</u> | <u>Rain-fall</u> | <u>Avg Dew Pt</u> | <u>Avg Max Tem</u> | <u>Avg Min Tem</u> | <u>Rain-fall</u> | <u>Avg Dew Pt</u> | <u>Avg Max Tem</u> | <u>Avg Min Tem</u> | <u>Rain-fall</u> | <u>Avg Dew Pt</u> | <u>Avg Max Tem</u> | <u>Avg Min Tem</u> | <u>Rain-fall</u> | <u>Avg Dew Pt</u> | <u>Avg Max Tem</u> | <u>Avg Min Tem</u> | <u>Rain-fall</u> | <u>Avg Dew Pt</u> | <u>Avg Max Tem</u> | <u>Avg Min Tem</u> | <u>Rain-fall</u> | <u>Avg Dew Pt</u> | <u>Avg Max Tem</u> | <u>Avg Min Tem</u> | <u>Rain-fall</u> | <u>Avg Dew Pt</u> |
| | | (F) | (F) | (inch) | (F) | (F) | (F) | (inch) | (F) | (F) | (F) | (inch) | (F) | (F) | (F) | (inch) | (F) | (F) | (F) | (inch) | (F) | (F) | (F) | (inch) | (F) | (F) | (F) | (inch) | (F) |
| 9 | 1 | 99 | 65 | 0 | 48 | 100 | 65 | 0 | 47 | 84 | 63 | 0 | 48 | 96 | 62 | 0 | 51 | 89 | 63 | 0 | 57 | 90 | 60 | 0 | 54 | 93 | 64 | 0 | 50 |
| 9 | 2 | 85 | 56 | 0 | 40 | 85 | 55 | 0 | 42 | 77 | 55 | 0 | 58 | 83 | 55 | 0 | 45 | 82 | 52 | 0 | 59 | 90 | 54 | 0 | 58 | 82 | 59 | 0 | 35 |
| 9 | 3 | 85 | 50 | 0 | 29 | 86 | 50 | 0 | 35 | 76 | 47 | 0 | 48 | 83 | 52 | 0 | 38 | 72 | 47 | 0.2 | 53 | 88 | 46 | 0.3 | 53 | 82 | 51 | 0 | 28 |
| 9 | 4 | 81 | 44 | 0 | 33 | 87 | 41 | 0 | 31 | 81 | 45 | 0 | 46 | 77 | 47 | 0 | 40 | 78 | 46 | 0 | 51 | 87 | 53 | 0.3 | 54 | 74 | 49 | 0 | 38 |
| 9 | 5 | 77 | 42 | 0 | 35 | 78 | 41 | 0 | 34 | 72 | 49 | 0 | 44 | 75 | 47 | 0 | 42 | 73 | 46 | 0 | 47 | 77 | 51 | 0 | 49 | 77 | 48 | 0 | 38 |
| 9 | 6 | 74 | 46 | 0 | 40 | 70 | 40 | 0 | 37 | 66 | 44 | 0.1 | 47 | 70 | 44 | 0 | 46 | 68 | 47 | 0 | 51 | 69 | 46 | 0 | 51 | 69 | 47 | 0 | 42 |
| 9 | 7 | 72 | 36 | 0 | 35 | 72 | 34 | 0 | 34 | 68 | 49 | 0 | 43 | 71 | 43 | 0 | 40 | 65 | 40 | 0 | 45 | 71 | 48 | 0 | 46 | 75 | 41 | 0 | 37 |
| 9 | 8 | 72 | 46 | 0 | 31 | 74 | 44 | 0 | 33 | 68 | 41 | 0 | 41 | 70 | 42 | 0 | 36 | 69 | 39 | 0 | 40 | 72 | 46 | 0 | 44 | 71 | 52 | 0 | 32 |
| 9 | 9 | 88 | 46 | 0 | 29 | 86 | 41 | 0 | 30 | 73 | 32 | 0 | 38 | 81 | 37 | 0 | 34 | 75 | 35 | 0 | 38 | 76 | 38 | 0 | 41 | 92 | 46 | 0 | 29 |
| 9 | 10 | 93 | 50 | 0 | 32 | 96 | 54 | 0 | 33 | 84 | 51 | 0 | 43 | 90 | 60 | 0 | 37 | 88 | 50 | 0 | 47 | 90 | 55 | 0 | 47 | 89 | 54 | 0 | 31 |
| 9 | 11 | 72 | 48 | 0 | 27 | 75 | 41 | 0 | 29 | 68 | 47 | 0 | 33 | 77 | 48 | 0 | 29 | 71 | 49 | 0 | 39 | 81 | 49 | 0 | 41 | 69 | 44 | 0 | 24 |
| 9 | 12 | 69 | 33 | 0 | 17 | 69 | 33 | 0 | 19 | 67 | 40 | 0 | 22 | 66 | 40 | 0 | 20 | 68 | 37 | 0 | 27 | 75 | 42 | 0 | 27 | 68 | 41 | 0 | 15 |
| 9 | 13 | 76 | 31 | 0 | 21 | 77 | 29 | 0 | 22 | 63 | 37 | 0 | 29 | 74 | 39 | 0 | 26 | 69 | 33 | 0 | 31 | 75 | 36 | 0 | 27 | 74 | 38 | 0 | 24 |
| 9 | 14 | 79 | 36 | 0 | 29 | 79 | 32 | 0 | 29 | 72 | 31 | 0 | 30 | 75 | 35 | 0 | 30 | 74 | 30 | 0 | 33 | 77 | 33 | 0 | 32 | 80 | 39 | 0 | 32 |
| 9 | 15 | 88 | 48 | 0 | 27 | 91 | 45 | 0 | 27 | 83 | 51 | 0 | 35 | 82 | 56 | 0 | 32 | 84 | 44 | 0 | 39 | 90 | 39 | 0 | 39 | 83 | 52 | 0 | 30 |
| 9 | 16 | 64 | 46 | 0.1 | 40 | 61 | 43 | 0 | 38 | 57 | 39 | 0 | 38 | 58 | 45 | 0 | 41 | 59 | 40 | 0 | 43 | 65 | 47 | 0 | 43 | 61 | 44 | 0 | 36 |
| 9 | 17 | 61 | 37 | 0 | 30 | 61 | 33 | 0 | 29 | 52 | 32 | 0 | 35 | 56 | 37 | 0 | 34 | 59 | 33 | 0 | 36 | 62 | 32 | 0 | 37 | 63 | 33 | 0 | 23 |
| 9 | 18 | 80 | 46 | 0 | 29 | 80 | 38 | 0 | 26 | 65 | 33 | 0 | 33 | 78 | 43 | 0 | 34 | 73 | 34 | 0 | 37 | 62 | 32 | 0 | 35 | 83 | 47 | 0 | 28 |
| 9 | 19 | 66 | 49 | 0 | 28 | 67 | 46 | 0 | 30 | 61 | 42 | 0 | 35 | 65 | 50 | 0 | 30 | 65 | 44 | 0 | 33 | 67 | 42 | 0 | 37 | 65 | 49 | 0 | 28 |
| 9 | 20 | 72 | 43 | 0 | 30 | 73 | 40 | 0 | 30 | 61 | 38 | 0 | 32 | 65 | 43 | 0 | 29 | 62 | 36 | 0 | 33 | 68 | 40 | 0 | 33 | 71 | 48 | 0 | 30 |
| 9 | 21 | 67 | 37 | 0 | 30 | 70 | 36 | 0 | 30 | 60 | 30 | 0 | 31 | 65 | 31 | 0 | 27 | 64 | 31 | 0 | 31 | 66 | 40 | 0 | 36 | 68 | 41 | 0 | 30 |
| 9 | 22 | 62 | 31 | 0 | 21 | 62 | 33 | 0 | 25 | 54 | 24 | 0 | 24 | 55 | 25 | 0 | 19 | 55 | 24 | 0 | 25 | 57 | 29 | 0 | 27 | 62 | 31 | 0 | 19 |
| 9 | 23 | 70 | 35 | 0 | 22 | 68 | 33 | 0 | 23 | 61 | 21 | 0 | 22 | 67 | 31 | 0 | 23 | 63 | 25 | 0 | 24 | 64 | 22 | 0 | 22 | 75 | 37 | 0 | 25 |
| 9 | 24 | 82 | 39 | 0 | 28 | 81 | 32 | 0 | 27 | 69 | 35 | 0 | 31 | 78 | 47 | 0 | 33 | 79 | 40 | 0 | 32 | 83 | 34 | 0 | 30 | 81 | 45 | 0 | 32 |
| 9 | 25 | 77 | 39 | 0 | 37 | 77 | 35 | 0 | 34 | 60 | 28 | 0 | 30 | 68 | 33 | 0 | 33 | 63 | 27 | 0 | 33 | 62 | 33 | 0 | 31 | 76 | 45 | 0 | 41 |
| 9 | 26 | 82 | 43 | 0 | 35 | 81 | 39 | 0 | 34 | 66 | 24 | 0 | 26 | 77 | 34 | 0 | 36 | 70 | 26 | 0 | 34 | 66 | 27 | 0 | 28 | 83 | 47 | 0 | 37 |
| 9 | 27 | 76 | 57 | 0 | 40 | 80 | 42 | 0 | 39 | 75 | 45 | 0 | 35 | 73 | 45 | 0 | 40 | 78 | 41 | 0 | 38 | 76 | 36 | 0 | 30 | 78 | 54 | 0.1 | 45 |
| 9 | 28 | 81 | 46 | 0 | 37 | 79 | 47 | 0 | 38 | 79 | 43 | 0 | 35 | 82 | 42 | 0 | 40 | 83 | 41 | 0 | 41 | 86 | 42 | 0 | 36 | 83 | 47 | 0 | 42 |
| 9 | 29 | 86 | 52 | 0 | 35 | 84 | 50 | 0 | 39 | 83 | 48 | 0 | 30 | 85 | 52 | 0 | 36 | 83 | 43 | 0 | 36 | 85 | 44 | 0 | 31 | 85 | 56 | 0 | 35 |
| 9 | 30 | 73 | 47 | 0 | 41 | 79 | 46 | 0 | 41 | 73 | 52 | 0 | 39 | 72 | 49 | 0 | 43 | 77 | 52 | 0 | 41 | 87 | 41 | 0 | 38 | 71 | 46 | 0 | 44 |
| Avg | | 77 | 44 | | 32 | 78 | 41 | | 32 | 69 | 41 | | 36 | 74 | 44 | | 35 | 72 | 40 | | 39 | 75 | 41 | | 39 | 76 | 46 | | 33 |
| Total | | | | 0.1 | | | | 0 | | | | 0.1 | | | | 0.1 | | | | 0.2 | | | 0.6 | | | | | 0.1 | |
| <u>Avg</u> | | 79 | 51 | | 45 | 80 | 49 | | 46 | 74 | 49 | | 48 | 76 | 51 | | 48 | 76 | 50 | | 51 | 80 | 52 | | 52 | 78 | 53 | | 45 |
| <u>Totals</u> | | | | 7 | | | | 8.7 | | | | 11 | | | | 6.3 | | | | 9.5 | | | 6.6 | | | | 7 | | |

[A trailing 'E' or 'e' indicates an estimated value.](#)

[A trailing 'M' indicates a missing value.](#)