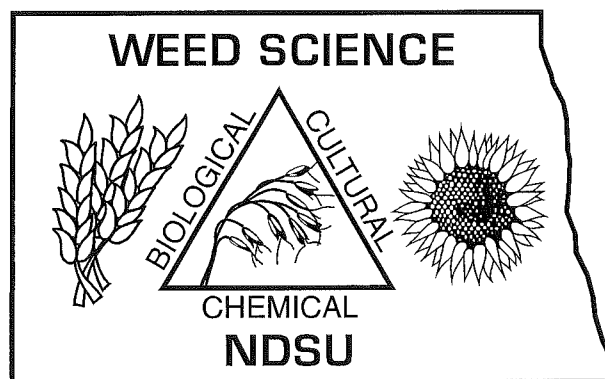


# 2011 NORTH DAKOTA WEED CONTROL GUIDE



[www.ndsu.edu/weeds/](http://www.ndsu.edu/weeds/)

Weed Research Projects, Department of Plant Sciences  
NORTH DAKOTA STATE UNIVERSITY  
FARGO, ND 58108

**NDSU** EXTENSION  
SERVICE

**NDSU** NORTH DAKOTA AGRICULTURAL  
EXPERIMENT STATION

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NOT FOR PUBLICATION  
SUMMARY OF 2011  
WEED CONTROL EXPERIMENTS

Department of Plant Sciences  
North Dakota State University  
Fargo, North Dakota

M. J. Christoffers  
K. A. Howatt  
J. M. Stachler

G. Gramig  
B. M. Jenks  
R. K. Zollinger

H. M. Hatterman-Valenti  
R. G. Lym

Research Specialists/Technicians

C. P. Auwarter  
P. A. Gregoire  
S. F. Mark

K. M. Christianson  
J. D. Harrington  
J. L. Ries

M. G. Ciernia  
A. J. Kazmierczak  
R. F. Roach

S. P. Dubuque  
J. L. Luecke

Graduate Research Assistants

A. Aipperspach  
A. Fillmore  
G. Mehring  
J. Stenger

N. K. Ardayfio  
A. E. Hall  
S. Mehta

D. J. Carruth  
J. R. Loken  
J. Peterson

K. Conklin  
J. Mack  
C. Setter

Contributors:

Greg Endres, Carrington Research Extension Center  
Eric Eriksmoen, Hettinger Research Extension Center  
John Lukach, Langdon Research Extension Center  
Mark Bredehoeft, Southern Minnesota Beet Sugar Cooperative

Reference to commercial products or trade names is made with no intended endorsement, and failure to mention products or trade names is done with no intended discrimination by North Dakota State University. Experiments with pesticides on non-labeled crops or target species does not imply endorsement for non-labeled uses of pesticides by North Dakota State University.

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## KEY TO ABBREVIATIONS AND EVALUATIONS

Crop injury, crop stand and weed control ratings are based on a visual estimate using a scale of 0 = no effect to 100 = complete kill.

|                                      |  |
|--------------------------------------|--|
| Alfa = Alfalfa                       | Nabe = Navy bean                         |
| Amar = Amaranth                      | Nfcf = Nightflowering catchfly           |
| Barl, Bar = Barley                   | Oats = Tame oats                         |
| Bdlf = Broadleaf                     | Pagf = Pale goosefoot                    |
| Biww = Biennial wormwood             | Pest = Perennial sowthistle              |
| Bubu = Buffalobur                    | Pesw = Pennsylvania smartweed            |
| Bygr = Barnyardgrass                 | Pibe = Pinto bean                        |
| Cath = Canada thistle                | Pigw = Pigweed                           |
| Cano = Canola                        | Poam = Powell amaranth                   |
| Cocb = Common cocklebur              | Pota = Potato                            |
| Colq = Common lambsquarters          | Powe = Pondweed                          |
| Coma = Common mallow                 | Prle = Prickley lettuce                  |
| Copu = Common purslane               | Prmi = Proso millet (tame)               |
| Corw = Common ragweed                | Prpw = Prostrate pigweed                 |
| Cram = Crambe                        | Prsp = Prostrate spurge                  |
| Cudo = Curly dock                    | Quin = Quinoa (chenopodium quinoa)       |
| Dali = Dandelion                     | Qugr = Quackgrass                        |
| Dobr = Downy brome                   | Rrpw = Redroot pigweed                   |
| Drbe = Dry bean                      | Ruth = Russian thistle                   |
| Duru = Durum wheat                   | Safl, Saff = Safflower                   |
| Ebns = Eastern black nightshade      | Shpu = Sheperdspurse                     |
| Fach = False chamomile               | Smwe = Annual smartweed                  |
| Fibw = Field bindweed                | Soyb, Sobe = Soybean                     |
| Fipc = Field pennycress              | Spsp = Spotted spurge (prostrate spurge) |
| Fisb = Field sandbur                 | Sugb, Sgbt = Sugarbeet                   |
| Flwe = Flixweed                      | Snfl, Sufl = Sunflower                   |
| Foba = Foxtail barley, Forage Barley | Swcl = Sweet clover                      |
| Fomi, Ftmi = Foxtail millet          | Tabw = Tame buckwheat                    |
| Fota, Fxtl = Foxtail species         | Tamu = Tansy mustard                     |
| Girw = Giant ragweed                 | Tumu = Tumble mustard                    |
| Grft = Green foxtail                 | Tymu = Tame yellow mustard               |
| Gsft = Goosefoot                     | Vowh = Volunteer wheat                   |
| HNS, Hans = Hairy nightshade         | Vele = Velvetleaf                        |
| Howe = Horseweed                     | Vema = Venice mallow                     |
| HRSW = Hard red spring wheat         | Wahe = Waterhemp                         |
| KOCZ = Kochia                        | Wht = Volunteer wheat                    |
| Lath = Ladysthumb                    | Wibw = Wild buckwheat                    |
| Lent = Lentils                       | Wigr = witchgrass                        |
| Llsa = Lanceleaf sage                | Wimu = Wild mustard                      |
| Mael = marshelder                    | Wioa = Wild oat                          |
| Mlgr = Mapleleaf goosefoot           | Wipm = Wild-proso millet                 |
| Nabe = Navy bean goosefoot           | Yeft = Yellow foxtail                    |

**LIST OF HERBICIDES TESTED IN 2011**

| <b>Common Name</b>                        | <b>Abbreviation</b> | <b>Company</b> | <b>Formulation</b> | <b>Trade Name</b>            |
|---|---------------------|----------------|--------------------|------------------------------|
| Acetochlor + Dichlormid                   | Acet + Dcmd         | Dow            | 6.4 EC             | Surpass, Volley              |
| Acetochlor + Clopyralid + Flumetsulam     |                     | Dow            | 4.25SE             | SureStart                    |
| Acetochlor + MON 4660                     | Acet + 4660         | Monsanto       | 7 EC               | Harness                      |
| Acetochlor                                |                     | Monsanto       | 3.0 SE             | Warrant                      |
| Acifluorfen                               | Acif                | BASF           | 2 E, S             | Ultra Blazer                 |
| Aminocyclopyrachlor                       | DPX KJM44           | Dupont         | 60 DF              |                              |
| Aminopyralid + 2, 4-D                     | GF-1004, GF-750     | Dow            | 0.33 + 2.67        | Forefront                    |
| Aminopyralid                              | Amino               | Dow            | 2SL                | Milestone                    |
| Atrazine                                  | Atra                | Various        | 90 DF              | Several                      |
| Bentazon                                  | Bent, Bsgn          | BASF           | 4 I S              | Basagran                     |
| Bentazon + Sethoxydim                     | Bent + Seth         | BASF           | 5 SL 1 EC          | Rezult                       |
| Bromoxynil                                | Brox                | Bayer          | 2 EC               | Buctril, Several             |
| Bromoxynil & 2, 4-D                       | Brox + 2, 4-D       | Wilbur Ellis   | 5 EC               | Weco Max                     |
| Bromoxynil & MCPA                         | Brox + MCPA (5lb)   | Bayer          | 5 EC               | Bronate Advanced             |
| Bromoxynil & fluroxypyr                   | Brox + Flox         | Dow            | 2.9 EC             | Starane NXT                  |
| Bromoxynil & Pyrasulfotole                | Brox + Pyst         | Bayer          | 2.8 EC             | Huskie                       |
| Carfentrazone                             | Carf                | FMC            | 40 WG              | Aim, Quick Silver            |
| Chlorsulfuron                             |                     | DuPont         | 75 WG              | Telar / Glean                |
| Clethodim                                 | Clet                | Valent, others | 2 /1 EC            | Select / Max, others         |
| Clodinafop                                | Clfp                | Syngenta       | 2 EC               | Discover                     |
| Clopyralid                                | Clpy                | Dow            | 3 S                | Stinger, ClopyrAg, Transline |
| Clopyralid + 2, 4-D                       | Clpy + 2,4-D        | Dow            | 0.38 + 2 S         | Curtail                      |
| Clopyralid & fluroxypyr                   | Clpy + Flox         | Dow/UAP        | 0.75 + 0.75        | Widematch/Colt               |
| Clopyralid + Triclopyr                    | Clpy + Tric         | Dow            | 0.75 + 2.25 EC     | Redeem                       |
| Cloransulam                               | Clor, FrstRt        | Dow            | 84 DF              | FirstRate                    |
| Cycloate                                  | Cycl                | Syngenta       | 6 EC               | Ro-Neet                      |
| Desmedipham + Phenmedipham + Ethofumesate | De & Ph & Et, DPE   | Various        | 0.6 + 0.6 + 0.6 E  | Several                      |
| Desmedipham                               | Desm                | Various        | 1.3 EC             | Several                      |
| Desmedipham + Phenmedipham                | Desm + Phen         | Various        | 0.65 + 0.65 E      | Several                      |
| Dicamba                                   | Dica                | Various        | 4 S                | Banvel, Clarity, others      |
| Dicamba + diflufenzopyr + isoxadifin      | BAS799              | BASF           | 40 + 16 WDG        | Status                       |
| Diflufenzopyr + Dicamba                   | Difl + Dica         | BASF           | 50+ 20 WDG         | Distinct, Overdrive          |
| Diflufenzopyr                             | Difl                | BASF           | 70 WG              | None                         |
| Dimethenamid-P                            | Dime                | BASF           | 6 EC               | Outlook                      |
| Diquat                                    | Diqu                | Syngenta       | 2 S                | Diquat                       |
| EPTC                                      |                     | Gowen          | 7 EC               | Eptam                        |
| Ethalfuralin                              | Etha                | Dow            | 3 EC, 10 G         | Sonalan                      |
| Ethofumesate                              | Etho                | Various        | 4 F                | Several                      |
| Fenoxaprop-P                              | Fenx                | Bayer, others  | 1 EC               | Puma, others                 |
| Fluazifop-P                               | Flfp-P              | Syngenta       | 2 EC               | Fusilade DX                  |
| Flucarbazone-NA                           | Flcz                | Bayer          | 70 WDG             | Everest / Pre-Pare           |
| Flumiclorac                               |                     | Valent         | 0.86SL             | Resource                     |
| Flumetsulam + Clopyralid                  | Flms + Clpy         | Dow            | 18.5 + 50 WDG      | Hornet WDG                   |
| Flumetsulam                               | Flms                | Dow            | 80 WG              | Python                       |
| Flumioxazin                               | Flum                | Valent, Tenkoz | 50 WP              | Valor / Encompass            |
| Flumioxazin + pyroxasulfone               |                     | Valent         | 33.5 + 42.5 WDG    | Fierce                       |
| Fluroxypyr                                | Flox                | Dow            | 1.5 EC             | Starane                      |
| Fluroxypyr + 2, 4-Dioe                    | Flox + 2,4D         | Dow            | 0.75 + 3 lb/gal EC | Starane + Salvo              |
| Fluroxypyr + MCPAioe                      | Flox + MCPA         | Dow            | 0.71 + 2.84 EC     | Starane + Sword              |
| Fluroxypyr + 2, 4-Ddma                    | Flox + 2,4Da        | Dow            | 0.5 + 2 EC         | Starane + Saber              |
| Fluroxypyr + 2, 4-De                      |                     | Dow            | 3.75 EC            | Starane + Esteron            |
| Fluroxypyr + MCPAe                        |                     | Dow            | 3.55 EC            | Starane + MCPA               |
| Florasulam                                | Flas                | Syngenta       |                    | not commercial               |
| Florasulam + MCPA                         | Flas + MCPA         | Syngenta       | 2.373L             | Orion                        |
| Fluthiacet-methyl                         |                     | FMC            | 0.91 EC            | Cadet                        |

|  |                    |                 |                    |                                  |
|--|--------------------|-----------------|--------------------|----------------------------------|
| Fomesafen                                  |                    | Syngenta        | 2 EC               | Reflex                           |
| Fomesafen + Adjuvant                       |                    | Syngenta        | 1.88 EC            | Flexstar                         |
| Fomesafen + glyphosate + adjuvants         |                    | Syngenta        | 0.66 + 2.63 SL     | Flexstar GT                      |
| Fomesafen + glyphosate + adjuvants         |                    | Syngenta        | 0.56 + 2.26 SL     | Flexstar GT 3.5                  |
| Foramsulfuron + Safener                    |                    | Bayer           | 70 WDG             | Option                           |
| Fosamine                                   |                    | DuPont          | 4 S                | Krenite                          |
| Glufosinate                                | Gluf, Lbrty        | Bayer           | 1.67 SL ,2.33 SL   | Liberty/Ignite 280               |
| Glyphosate-ipa                             | Glyt               | Various         | 3 ae/gal S         | Several                          |
| Glyphosate-K                               | RU, others         | Monsanto,others | 4.5 S, others      | Roundup, others                  |
| Glyphosate-(NH <sub>3</sub> ) <sub>2</sub> | Glyt               | Syngenta        | 3 ae/gal S         | Touchdown                        |
| Halosulfuron                               | Halo, Prmt         | Gowan           | 75 DF              | Permit / Sandea                  |
| Imazamethabenz                             | Immb               | BASF            | 2.5 EC             | Assert                           |
| Imazamox                                   | Imam, Immx         | BASF            | 1 S                | Raptor / Beyond                  |
| Imazapic                                   |                    | BASF            | 2 EC               | Plateau                          |
| Imazapyr                                   |                    | BASF            | 2 L                | Arsenal                          |
| Imazethapyr + Glyphosate                   |                    | BASF            | 0.17 + 2SL         | Extreme / Tackle                 |
| Imazethapyr                                | Imep, Prst         | BASF            | 2 S                | Pursuit                          |
| Isoxaflutole                               |                    | Bayer           | 4 SC, 2 SC         | BalancePro / Balance Flexx       |
| Isoxaflutole + thiencazone + Safener       |                    | Bayer           | 2.63 SC            | Corus                            |
| MCPA                                       | MCPA               | Various         | 4 EC, S            | Several                          |
| Mesosulfuron + safener                     | Mess               | Bayer           | 2 WG               | Silverado, Osprey                |
| Mesosulfuron + Propoxycarbazone            | Mess + Prcz        | Bayer           | 8.14 + 2.03 WDG    | Rimfire / Max                    |
| Mesotrione                                 | Mest               | Syngenta        | 4 SC               | Callisto                         |
| Mesotrione + s-metolachlor                 |                    | Syngenta        | 0.33 + 3.3 SC      | Camix                            |
| Mesotrione + s-metolachlor + Atrazine      |                    | Syngenta        | 0.27 + 2.68 + 1 SC | Lumax                            |
| S-metolachlor                              | Meto               | Syngenta        | 7.62 EC            | Dual Magnum, Cinch               |
| S-metolachlor + Benoxacor                  |                    | Syngenta        | 7.6 E              | Dual/II/Magnum                   |
| S-metolachlor + Atrazine                   |                    | Syngenta        | 2.4 + 3.1 L        | Bicep II Magnum, others          |
| S-meto + mesotrione + glyt                 |                    | Syngenta        | 4.38 SC            | Halex GT                         |
| Metribuzin                                 | Metr               | Bayer           | 4 F, 75 DF         | Sencor, others                   |
| Metsulfuron                                | Mets               | DuPont          | 60 DF              | Ally, Escort, Cimarron           |
| Nicosulfuron                               | Nico               | DuPont          | 75 DF              | Accent                           |
| Nicosulfuron + Rimsulfuron                 | Nico + Rims        | DuPont          | 50 + 25 DF         | Steadfast                        |
| Oxyfluorfen                                | Oxyf               | Dow             | 2 EC/4 WBF         | Goal/Goal Tender                 |
| Paraquat                                   | Para               | Syngenta        | 2.5 S              | Several                          |
| Pendimethalin                              | Pend               | BASF, others    | 3.8 ACS            | Prowl / H <sub>2</sub> O, others |
| Picloram                                   |                    | Dow             | 2 S                | Tordon 22K                       |
| Pinoxaden                                  | Pxdn               | Syngenta        | 0.83 EC            | Axial                            |
| Propoxycarbazone                           | Prcz               | Bayer           | 70 WDG             | Olympus                          |
| Pyrasulfotole + bromox + Fenoxaprop        | Pyst + Brox + Fenx | Bayer           | 1.32 EC            | Wolverine                        |
| Pyroxasulfone                              | KIH - 485, Pxsf    | Kumiai          | 85 WG              | Zidua                            |
| Pyraflufen                                 | Pyff               | Gowan           | 0.21 EC            | ET/Vida                          |
| Pyroxulam                                  | Pxlm               | Dow             | 7.5 WG             | PowerFlex                        |
| Pyroxulam + Florasulam + Fluoropyr         | Pxlm + Flas + Flox | Dow             | 0.838L             | Goldsky                          |
| Quinclorac                                 |                    | BASF            | 75 WP              | Paramount                        |
| Quizalofop-P                               | Qufp-P             | DuPont, Gowan   | 0.88 EC            | Assure II, Targa                 |
| Rimsulfuron + Thifensulfuron               | Rims + Thif, Bsis  | DuPont          | 75 DF              | Basis                            |
| Rimsulfuron                                | Rims               | DuPont          | 25 DF              | Matrix / Resolve                 |
| Saflufenacil                               | BAS 800 04, Saff   | BASF            | 2.85 SC            | Sharpen                          |
| Saflufenacil + dimethenamid                | BAS 78102 H        | BASF            | 5.57 EC            | Verdict                          |
| Sethoxydim                                 | Seth               | BASF            | 1.5 EC             | Poast                            |
| Sulfentrazone                              | Suen               | DuPont/FMC      | 75 DF              | Authority, Spartan, Payload      |
| Sulfentrazone + Cloransulam                |                    | FMC             | 70 WDG             | Authority First, Sonic           |
| Sulfometuron                               | Sume               | DuPont          | 75 DF              | Oust                             |
| Sulfosulfuron                              | Sulf               | Monsanto        | 75 WG              | Maverick, Outrider               |
| Tebuthiuron                                |                    | Dow             | 20 WG              | Spike                            |
| Tembotrione + isoxadifen safener           | AE172747, Temb     | Bayer           | (2:1) 3.5 SL       | Laudis                           |
| Thifensulfuron + Tribenuron                | Thif + Trib        | DuPont          | 50 + 25 DF         | Several                          |
| Thifensulfuron + Tribenuron                |                    | Dupont          | 25 + 25 SP         | Affinity Broad Spectrum          |
| Thifensulfuron + Tribenuron                |                    | Dupont          | 40 + 10 SP         | Affinity Tankmix                 |

|                |                  |          |               |                 |
|----------------|------------------|----------|---------------|-----------------|
| Thifensulfuron | Thif, Pinn ,Pncl | DuPont   | 75 DF         | Several         |
| Topramezone    |                  | AmVac    | 2.8 SC        | Impact          |
| Tralkoxydim    | Tral             | Syngenta | 40 DF         | Achieve         |
| Triallate      | GWN 3040, Tria   | Gowan    | 4EC           | Far-Go          |
| Tribenuron     | Trib             | DuPont   | 75 DF         | Several         |
| Triclopyr      | Trep             | Dow      | 4 EC          | Garlon / Remedy |
| Trifluralin    | Trif             | Dow      | 4 EC, 10 G    | Several         |
| Triflusulfuron | Tfsu             | DuPont   | 50 DF         | UpBeet          |
| 2,4-D          | 2,4-D            | Various  | Various EC, S | Several         |
| 2,4-DB         | 2,4-DB           | Various  |               | Several         |

<sup>a</sup>Abbreviations in the tables may consist of only the first one, two, or three listed letters when space was limited. Abbreviations of numbered compounds vary with available space, but usually use the first letters and numbers.

# Herbicide Spray Adjuvants

## Fertilizer

|              |         |                     |               |
|--------------|---------|---------------------|---------------|
| AMS (Dry)    | Various | \$0.35 lb           | 4 to 8.5 lb/A |
| AMS (liquid) | Various | \$6.00 gal          | 2 to 4 qt/A   |
| 28% UAN/Bulk | Various | \$3.00 to 10.00 gal | 2 to 4 qt/A   |

## Surfactant

|                   |                |             |                  |
|-------------------|----------------|-------------|------------------|
| Activator 90      | Loveland       | \$28.00 gal | 0.25 to 0.5% v/v |
| APSA-80           | Amway          | \$32.00 gal | 0.25 to 0.5% v/v |
| ChemSurf 90       | United Suppl.  | \$32.00 gal | 0.25 to 0.5% v/v |
| Wetcit            | Oro Agri       | \$75.00 gal | 0.25 to 0.8% v/v |
| Crnblt Premier 90 | West Central   | \$25.00 gal | 0.25 to 0.5% v/v |
| Induce            | Helena         | \$31.00 gal | 0.25 to 0.5% v/v |
| Liberate LeciTech | Loveland       | \$32.00 gal | 0.25 to 0.5% v/v |
| Pen-A-trate II    | Precision Labs | \$30.00 gal | 0.25 to 0.5% v/v |
| Prefer 90         | West Central   | \$28.00 gal | 0.25 to 0.5% v/v |
| Preference        | Winfield       | \$30.00 gal | 0.25 to 0.5% v/v |
| Protyx            | Precision Labs | \$100.00 g  | 0.125% v/v       |
| Purity 100        | Rosens         | \$21.00 gal | 0.25 to 0.5% v/v |
| R-11              | Wilbur-Ellis   | \$27.00 gal | 0.25 to 0.5% v/v |
| Translate         | United Suppl.  | \$38.00 gal | 0.25 to 0.5% v/v |
| Wet-Sol 99        | Schaeffers     | \$30.00 gal | 0.25 to 0.5% v/v |

## NIS Approved for use in Water

Surfactants approved for use in bodies of water are:

|               |         |                 |
|---------------|---------|-----------------|
| Activate Plus | AgriDex | BroncPlusDryEDT |
| Class Act NG  | Induce  | Level 7         |
| Preference    | R-11    | Top Surf        |
|               |         | Liberate L-Tech |
|               |         | X-77            |

## Surfactant & Silicone

|             |                |              |                      |
|-------------|----------------|--------------|----------------------|
| Freeway     | Loveland       | \$110.00 g   | 0.75 to 2 pt/100 gal |
| Kinetic     | Helena         | \$102.00 g   | 0.75 to 2 pt/100 gal |
| Silkin      | Winfield       | \$96.00 gal  | 0.75 to 2 pt/100 gal |
| Speed       | Precision Labs | \$111.00 g   | 0.25 to 2 pt/100 gal |
| Sur-Plus    | United Suppl.  | \$87.00 gal  | 0.5 to 2 pt/100 gal  |
| Sylgard 309 | Wilbur-Ellis   | \$120.00 gal | 0.75 to 2 pt/100 gal |

## Surfactant & AMS

|                  |                |             |                    |
|------------------|----------------|-------------|--------------------|
| Bronc PlusDryEDT | Wilbur-Ellis   | \$1.85 lb   | 10 lb/100 gal      |
| Class Act NG     | Winfield       | \$11.00 gal | 2.5% v/v           |
| Deliver          | Precision Labs | \$12.00 gal | 2.5% v/v           |
| Impressive DB    | Rosens         | \$0.90 lb   | 2.25 lb/A          |
| Powerhouse       | Rosens         | \$8.50 gal  | 5 to 10 qt/100 gal |
| Reduce           | Helena         | \$12.00 gal | 1% v/v             |
| Surfate          | Loveland       | \$18.00 gal | 1% v/v             |
| Ultra Surf AMS   | United Suppl.  | \$10.00 gal | 2.5% v/v           |

## AMS Replacement / Water Conditioning Agent (WCA)

|               |               |             |                |
|---------------|---------------|-------------|----------------|
| Citron        | Farm Direct   | \$3.50 lb   | 2.2 lb/100 gal |
| Cut-Rate      | Wilbur-Ellis  | \$1.95 lb   | 4 lb/100 gal   |
| Quest/Request | Helena        | \$20.00 gal | 0.5% v/v       |
| Speedway      | United Suppl. | \$38.00 gal | 0.5% v/v       |

## AMS & WCA (AMS Replacement)

|                 |              |             |                   |
|-----------------|--------------|-------------|-------------------|
| Alliance        | Winfield     | \$14.00 gal | 1.25% v/v         |
| Bronc Max       | Wilbur-Ellis | \$24.00 gal | 0.5% v/v          |
| Choice W-Master | Loveland     | \$24.00 gal | 0.5% v/v          |
| Enact           | Rosens       | \$18.00 gal | 0.5% v/v          |
| SeQuel          | Helena       | \$15.00 gal | 1 to 5 pt/100 gal |

## Surfactant & AMS Replacement (WCA)

|                 |                |             |                   |
|-----------------|----------------|-------------|-------------------|
| Fastrack        | United Suppl.  | \$28.00 gal | 0.75% v/v         |
| Flame           | Loveland       | \$35.00 gal | 0.5% v/v          |
| N-Tense         | West Central   | \$26.00 gal | 0.25 to 0.75% v/v |
| Transport Ultra | Precision Labs | \$34.00 gal | 0.25 to 0.75% v/v |

## Surfactant & AMS & AMS Replacement (WCA)

|             |                |             |                |
|-------------|----------------|-------------|----------------|
| Bronc Total | Wilbur-Ellis   | \$30.00 gal | 0.75 to 1% v/v |
| Transport   | Precision Labs | \$30.00 gal | 0.5% v/v       |

## Acidic AMS Replacement (WCA)

|  |                |             |                   |
|--|----------------|-------------|-------------------|
| AMADS - Monocarbamide dihydrogen sulfate or urea + sulfuric acid |                |             |                   |
| Brimstone  | Wilbur-Ellis   | \$34.00 gal | 3 pt/100 gal      |
| ET-4000  | MK Ag Service  | \$31.00 gal | 4 pt/100 gal      |
| Gun Smoke  | Loveland       | \$35.00 gal | 3 to 4 pt/100 gal |
| Hel-Fire   | Helena         | \$35.00 gal | 3 to 4 pt/100 gal |
| Import   | Precision Labs | \$31.00 gal | 3 to 4 pt/100 gal |
| N Go/N Tank  | Adjuvants Plus | \$34.00 gal | 3 to 4 pt/100 gal |

## Basic pH Blend

|               |              |             |        |
|---------------|--------------|-------------|--------|
| Linkage       | West Central | \$22.00 gal | 1% v/v |
| Mycrimix Plus | J.R. Simplot | \$19.00 gal | 1% v/v |
| Quad 7        | Loveland     | \$20.00 gal | 1% v/v |

## Petroleum Oil Concentrate

|                  |                |             |             |
|------------------|----------------|-------------|-------------|
| Agri-Dex         | Helena         | \$22.00 gal | 2 to 4 pt/A |
| Crop Oil Concen. | Helena         | \$15.00 gal | 2 to 4 pt/A |
| Herbimax         | Loveland       | \$14.00 gal | 2 to 4 pt/A |
| WCS Crop Oil     | United Suppl.  | \$10.00 gal | 2 to 4 pt/A |
| Premium COC      | West Central   | \$10.00 gal | 2 to 4 pt/A |
| Prime Oil        | Winfield       | \$10.00 gal | 2 to 4 pt/A |
| Protyx Aerial    | Precision Labs | \$18.00 gal | 0.5 pt/A    |
| ROC Crop Oil     | Wilbur-Ellis   | \$12.00 gal | 2 to 4 pt/A |

## Methylated Seed Oil (MSO)

|                 |                |             |             |
|-----------------|----------------|-------------|-------------|
| Fire-Zone       | Helena         | \$26.00 gal | 1 to 2 pt/A |
| MSO Leci-Tech   | Loveland       | \$21.00 gal | 1 to 2 pt/A |
| MSO Ultra       | Precision Labs | \$23.00 gal | 1 to 2 pt/A |
| Persist Ultra   | J.R. Simplot   | \$20.00 gal | 1 to 2 pt/A |
| Premium MSO     | Helena         | \$18.00 gal | 1 to 2 pt/A |
| Succeed         | United Suppl.  | \$19.00 gal | 1 to 2 pt/A |
| Sundance II     | Rosens         | \$16.00 gal | 1 to 2 pt/A |
| Superspread MSO | Wilbur-Ellis   | \$24.00 gal | 1 to 2 pt/A |
| Upland MSO      | West Central   | \$20.00 gal | 1 to 2 pt/A |

## High Surfactant Oil Concentrate

|                  |                |             |               |
|------------------|----------------|-------------|---------------|
| Between (PO)     | United Suppl.  | \$18.00 gal | 1 to 1.5 pt/A |
| Cide Winder(MSO) | Helena         | \$39.00 gal | 1 to 1.5 pt/A |
| Destiny HC (MSO) | Winfield       | \$34.00 gal | 1 to 1.5 pt/A |
| Diplomat (PO)    | Rosens         | \$15.00 gal | 1 to 1.5 pt/A |
| Exchange (PO)    | Precision Labs | \$23.00 gal | 1 to 1.5 pt/A |
| Hi-Load (PO)     | Simplot        | \$ - gal    | 1 to 1.5 pt/A |
| High Load (PO)   | Wilbur-Ellis   | \$26.00 gal | 1 to 1.5 pt/A |
| Kixyt (MSO)      | Precision Labs | \$38.00 gal | 1 to 1.5 pt/A |
| Savvy (MSO)      | West Central   | \$33.00 gal | 1 to 1.5 pt/A |
| Stake (PO)       | West Central   | \$23.00 gal | 1 to 1.5 pt/A |
| Superb HC (PO)   | Winfield       | \$20.00 gal | 1 to 1.5 pt/A |

## Oil Based Surfactant

|             |              |             |          |
|-------------|--------------|-------------|----------|
| Trophy Gold | West Central | \$32.00 gal | 0.5 pt/A |
|-------------|--------------|-------------|----------|

## Base Oil, Surfactant & WCA

|         |                |             |          |
|---------|----------------|-------------|----------|
| Simplyx | Precision Labs | \$34.00 gal | 0.5 pt/A |
|---------|----------------|-------------|----------|

| MSO & Basic pH Blend |              |             |             |
|----------------------|--------------|-------------|-------------|
| Base                 | West Central | \$20.00 gal | 1 to 2 pt/A |
| Entro                | Various      | \$26.00 gal | 1 to 2 pt/A |
| Renegade             | Wilbur-Ellis | \$27.00 gal | 1 to 2 pt/A |

| MSO & Organosilicone Surfactant |               |             |                |
|---------------------------------|---------------|-------------|----------------|
| Air Force                       | United Suppl. | \$47.00 gal | 4 to 6 fl oz/A |
| Dyne-Amic                       | Helena        | \$56.00 gal | 4 to 6 fl oz/A |
| Rivet                           | Winfield      | \$46.00 gal | 4 to 6 fl oz/A |
| Syl-tac                         | Wilbur-Ellis  | \$62.00 gal | 4 to 6 fl oz/A |

| AMS & Drift Retardant |               |           |                     |
|-----------------------|---------------|-----------|---------------------|
| AMS 20/10             | United Suppl. | \$1.60 lb | 10 lb/100 gal       |
| Corral AMS Dry        | Winfield      | \$1.60 lb | 10 to 17 lb/100 gal |

| AMS & Defoamer |                |            |               |
|----------------|----------------|------------|---------------|
| Omnix LDF      | Precision Labs | \$4.60 gal | 2.5 to 5% v/v |

| AMS & Deposition & Defoamer |               |             |                     |
|-----------------------------|---------------|-------------|---------------------|
| AMS 2000                    | United Suppl. | \$1.25 lb   | 10 to 17 lb/100 gal |
| AmSol Plus                  | United Suppl. | \$6.00 gal  | 2.5 gal/100 gal     |
| Arrow Four                  | Winfield      | \$22.00 gal | 2 to 4 qt/100 gal   |
| Cornbelt Dri-Gard           | West Central  | \$1.50 lb   | 9 lb/100 gal        |
| Cornbelt Gardian Pls        | West Central  | \$6.50 gal  | 2.5 gal/100 gal     |
| Double Down                 | United Suppl. | \$8.00 gal  | 2.5 gal/100 gal     |

| AMS & Deposition/Retention & Defoamer |                |             |                     |
|---------------------------------------|----------------|-------------|---------------------|
| Array                                 | Rosens         | \$1.60 lb   | 9 to 14 lbs/100 gal |
| Border Xtra DF                        | Precision Labs | \$1.60 lb   | 18 lb/100 gal       |
| Border Xtra 4L                        | Precision Labs | \$9.00 gal  | 5% v/v              |
| Border Xtra 8L                        | Precision Labs | \$11.00 gal | 2.5% v/v            |
| StrikeZone MXD                        | Helena         | \$2.50 lb   | 2 lb/100 gal        |
| Vector                                | Rosens         | \$5.20 lb   | 2 lb/100 gal        |

| AMS & Surfactant & Deposition/Retention & Defoamer |               |             |                     |
|--|---------------|-------------|---------------------|
| Blue Diamond                                       | NWC,Emerado   | \$12.00 gal | 1 to 2 qt/100 gal   |
| BroncPlus DryEDT                                   | Wilbur-Ellis  | \$1.85 lb   | 10 lb/100 gal       |
| Bronc Triple                                       | Wilbur-Ellis  | \$35.00 gal | 2 qt/100 gal        |
| One-Ap XL  | West Central  | \$1.85 lb   | 9 to 15 lb/100 gal  |
| Pay Off Plus                                       | United Suppl. | \$2.00 lb   | 10 to 13 lb/100 gal |
| Zenith   | Rosens        | \$1.25 lb   | 1.5 to 2.25 lb/A    |

| AMS & AMS Replacement (WCA) & Deposition |                |             |                   |
|--|----------------|-------------|-------------------|
| Bronc Max EDT                            | Wilbur-Ellis   | \$36.00 gal | 2 to 3 qt/100 gal |
| Cornbelt Gardian                         | West Central   | \$22.00 gal | 2 to 3 qt/100 gal |
| Transport Plus                           | Precision Labs | \$30.00 gal | 2 to 4 qt/100 gal |

| AMS & AMS Replacement (WCA) & Surfactant & Deposition/Retention & Defoamer |              |             |              |
|--|--------------|-------------|--------------|
| Veracity   | West Central | \$23.00 gal | 3 qt/100 gal |

| AMS Replacement (WCA) & Surfactant & Deposition/Retention & Defoamer |          |             |                   |
|--|----------|-------------|-------------------|
| Weather-Gard   | Loveland | \$55.00 gal | 1 to 2 qt/100 gal |
| Complete Leci-Tec  |          |             |                   |

| AMS Replacement (WCA) & Deposition/Retention & Defoamer |               |             |                   |
|---|---------------|-------------|-------------------|
| Accuquest   | Helena        | \$36.00 gal | 1 to 3 qt/100 gal |
| Formula 1   | United Suppl. | \$30.00 gal | 1 to 3 qt/100 gal |

| Deposition/Retention - Drift Retardants |                |             |                         |
|---|----------------|-------------|-------------------------|
| Affect GC                               | United Suppl.  | \$40.00 qt  | 1 to 2 fl oz/100 gal    |
| Border EG 250                           | Precision Labs | \$1.20 oz   | 10 oz/100 gal           |
| Corral Poly                             | Winfield       | \$25.00 qt  | 4 to 12 fl oz/100 gal   |
| Crosshair                               | Wilbur-Ellis   | \$32.00 gal | 2 to 4 fl oz/A          |
| Direct                                  | Precision Labs | \$29.00 qt  | 1 to 4 oz/100 gal       |
| Drift Down                              | Rosens         | \$15.00 qt  | 4 to 8 fl oz/100 gal    |
| In-Place                                | Wilbur-Ellis   | \$36.00 gal | 4 fl oz/pt-lb herbicide |
| InterLock                               | Winfield       | \$50.00 gal | 4 to 6 fl oz/A          |
| Placement                               | Winfield       | \$38.00 gal | 4 fl oz/pt-lb herbicide |
| Point Blank                             | Helena         | \$42.00 qt  | 1 to 3 oz/100 gal       |
| Shroud II                               | United Suppl.  | \$15.00 lb  | 10 to 12 oz/100 gal     |

| Deposition/Retention & Surfactant & Drift Retardant |          |             |              |
|---|----------|-------------|--------------|
| Powerlock   | Winfield | \$48.00 gal | 5 to 8 oz/Al |

| Drift Retardant & Defoamer |              |             |              |
|----------------------------|--------------|-------------|--------------|
| Compadre Leci-Tc           | Loveland     | \$55.00 gal | 1 pt/100 gal |
| Sedate                     | West Central | \$40.00 gal | 1 pt/100 gal |

| Acidifying Agents |               |             |                     |
|-------------------|---------------|-------------|---------------------|
| Complete          | Winfield      | \$40.00 gal | 1 to 3 pt/100 gal   |
| Indicate 5        | United Suppl. | \$48.00 gal | 2 to 4 pt/100 gal   |
| Induce pH         | Helena        | \$39.00 gal | 2 to 4 pt/100 gal   |
| LI-700 Leci-Tech  | Loveland      | \$32.00 gal | 2 to 4 pt/100 gal   |
| New Balance       | Precision Lab | \$39.00 gal | 2 to 4 pt/100 gal   |
| SuperSpread 7000  | Wilbur-Ellis  | \$32.00 gal | 0.5 to 2 pt/100 gal |
| Tri-Fol           | Wilbur-Ellis  | \$30.00 gal | 0.5 to 2 pt/100 gal |

| Compatibility Agents |                |             |                   |
|----------------------|----------------|-------------|-------------------|
| Blendex              | Helena         | \$59.00 gal | 1 to 5 pt/100 gal |
| CompatibilityAgent   | West Central   | \$30.00 gal | 1 to 3 pt/100 gal |
| Complete             | Winfield       | \$40.00 gal | 1 to 3 pt/100 gal |
| Convert              | Precision Labs | \$43.00 gal | 1 to 6 pt/100 gal |
| EZ-Mix               | Loveland       | \$35.00 gal | 1 to 4 pt/100 gal |
| Mix-All              | Rosens         | \$35.00 gal | 1 to 4 pt/100 gal |
| Compatibility Plus   | United Suppl.  | \$41.50 gal | 1 to 2 pt/100 gal |

| Spray Tank Cleaners |         |             |                   |
|---------------------|---------|-------------|-------------------|
| Tank Cleaner        | Various | \$15-35 qt  | 1 to 2 qt/100 gal |
| Tank Cleaner        | Various | \$5-7.00 lb | 1 to 2 lb/100 gal |



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## METHODS

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|                                 |                                  |
|---------------------------------|----------------------------------|
| EPP = Early preplant            | MPOST = Mid postemergence        |
| PPI = Preplant incorporated     | LPOST = Late postemergence       |
| PEI = Preemergence incorporated | LLPOST = Late-late postemergence |
| PRE, PE = Preemergence          | P, PO, POST = Postemergence      |
| EPOST = Early postemergence     | POSTDIR = Postemergence Directed |

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## FORMULATION

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|                                  |                                      |
|----------------------------------|--------------------------------------|
| ACS = Aqueous capsule suspension | WBF = Water-based flowable           |
| DF = Dry Flowable                | WP = Wettable powder                 |
| E, EC = Emulsifiable concentrate | WG, WDG = Water dispersible granules |
| FL, F = Flowable                 | WSP, SP = Water Soluble powder       |
| L = Liquid flowable              | G = Granules or gallon/A             |
| ME = Micro-encapsulated          | S = Solution                         |
|                                  | SG = Soluble granules                |

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## MISCELLANEOUS

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|   |   |
|---|---|
| F = Fall                                  | AMS = ammonium sulfate                                      |
| S = Spring                                | bee = butoxyethyl ester                                     |
| Inc., I = Incorporation                   | dea = diethanolamine salt                                   |
| Applic = Application                      | dga = diglycolamine   |
| Cntl = Control                            | dma = dimethylamine salt                                    |
| Inju = Injury                             | ioe = isooctyl ester  |
| %ir, inju = Percent injury rating         | MSO, MVO = methylated vegetable oil                         |
| %sr, %std, strd = Percent stand reduction | NIS = nonionic surfactant                                   |
| HT = Plant height                         | PO, OC, POC = Petroleum oil concentrate<br>(17% emulsifier) |
| SPK = Spike stage                         | SURF, S = Surfactant  |
| Tswt, TW = Test weight                    | TMS = trimethylsulfonium salt                               |
| Yld = Yield                               | 28N, UAN = 28% liquid nitrogen fertilizer                   |
| alk = alkanolamine salt                   |   |
| AMN = ammonium nitrate                    |   |

**Soil Test Results at Various Weed Experiment Locations**

|   | Soil Texture     | Organic Matter | pH      | PPM                |    |     |
|---|------------------|----------------|---------|--------------------|----|-----|
|   |                  |                |         | lb/A N             | P  | K   |
| A. K. Eckre Grassland Preserve (ND)                     | Loamy sand       | 2.9            | 6.8     | 3                  |    |     |
| Absaraka, ND  | Loam             | 2.0            | 7.2     |                    |    |     |
| Bathgate, ND  | Silty loam       | 6.5            | 7.9     | 242                | 38 | 550 |
| Buffalo, ND (Zollinger, Soybean)                        | Loam             | 3.4-4.5        | 6.7-8.0 |                    |    |     |
| Buffalo, ND (Zollinger, carryover)                      | Loam             | 3.9            | 7.9     |                    |    |     |
| Casselton, ND   | Silty clay       | 4.0            | 7.9     | Fertilized by test |    |     |
| Eckelson, ND  | Loam             | 8.0            | 7.3     | 20                 | 5  | 515 |
| Fargo, ND (campus)                                      | Silty clay       | 6.8            | 7.2     | Fertilized by test |    |     |
| Fargo, ND (section 22)                                  | Silty clay       | 4.5-6.0        | 7.5     | Fertilized by test |    |     |
| Geneseo, ND   | Loam             | 6.0            | 4.0     |                    |    |     |
| Glyndon, MN   |                  | 4.6            | 8.1     | Fertilized by test |    |     |
| Hillsboro, ND   | Loam             | 4.1            | 7.7     | 132                | 7  | 210 |
| Hawley, MN  | Loam             | 2.2            | 8.5     | 3                  | 4  | 105 |
| Hettinger, ND   | Silty loam       | 2.9            | 6.7     | Fertilized by test |    |     |
| Holloway, MN (Stachler-Ro-Neet vs Nortron trial)        | Clay             | 4.7            | 8.0     | 16                 | 5  | 195 |
| Holloway, MN (Stachler-soybe and remaining sgbt trials) | Clay loam        | 6.6            | 6.9     | 31                 | 12 | 175 |
| Inkster, ND   | Loamy sand       | 2.1            | 6.0     |                    |    |     |
| Jamestown, ND (Pipestream Dam)                          | Loam             | 6.8            | 6.8     | 28                 | 5  | 290 |
| Mayville, ND (Stachler)                                 | Sandy clay loam  | 2.1            | 7.0     | 16                 | 16 | 110 |
| Minot, ND   | Loam             | 2.7            | 7.0     | Fertilized by test |    |     |
| Oakes, ND   | Sandy loam       | 2.0            | 6.8     |                    |    |     |
| Oriska, ND  | Silty clay       | 4.1            | 7.4     | Fertilized by test |    |     |
| Oriska, ND (sunflower)                                  | Sandy loam       | 5.9            | 3.2     |                    |    |     |
| Prosper, ND   | Clay loam        | 3.5            | 7.5     | 90                 | 23 | 315 |
| Prosper, ND (Stachler)                                  | Clay loam        | 3.9            | 6.8     | 122                | 56 | 310 |
| Prosper, ND (Zollinger)                                 | Silt loam - loam | 4.4-4.5        | 5.6-7.2 |                    |    |     |
| Tappen, ND  | Sandy loam       | 1.8            | 7.6     |                    |    |     |
| Thompson, ND (Zollinger)                                | Silt loam        | 4.0            | 8.1     |                    |    |     |
| Valley City, ND   | Fine loam        | 8.2            | 6.7     | 11                 | 15 | 640 |
| Valley City, ND (wheat)                                 | Sandy loam       | 7.3            | 6.1     |                    |    |     |
| Walcott, ND   | Loamy sand       | 2.6            | 6.7     |                    |    |     |
| Williston, ND   | Loam             | 2.3            | 6.8     | Fertilized by test |    |     |
| Wyndmere, ND  | Loamy sand       | 1.9            | 5.7     | Fertilized by test |    |     |



CLIMATIC DATA, 2011, Casselton, ND

| Date      | Precipitation |      |      |      |        |      |     |     |     |     |     |     | August |     | July |     | June |     | May |     | April |  | September |  |
|-----------|---------------|------|------|------|--------|------|-----|-----|-----|-----|-----|-----|--------|-----|------|-----|------|-----|-----|-----|-------|--|-----------|--|
|           | April         | May  | June | July | August | Sept | Max | Min | Max | Min | Max | Min | Max    | Min | Max  | Min | Max  | Min | Max | Min | Max   |  |           |  |
|           |               |      |      |      |        |      |     |     |     |     |     |     |        |     |      |     |      |     |     |     |       |  |           |  |
| 1         | -             | 0.15 | -    | -    | 1.42   | -    | 39  | 30  | 52  | 26  | 61  | 45  | 96     | 71  | 87   | 63  | 81   | 64  |     |     |       |  |           |  |
| 2         | -             | 0    | -    | -    | 0.05   | -    | 39  | 28  | 37  | 28  | 71  | 52  | 83     | 65  | 84   | 74  | 82   | 57  |     |     |       |  |           |  |
| 3         | -             | 0    | T    | -    | 0      | -    | 42  | 20  | 53  | 32  | 84  | 52  | 84     | 62  | 82   | 58  | 69   | 51  |     |     |       |  |           |  |
| 4         | -             | 0    | -    | -    | 0      | -    | 38  | 30  | 61  | 34  | 83  | 52  | 89     | 69  | 84   | 64  | 69   | 47  |     |     |       |  |           |  |
| 5         | -             | 0.05 | -    | 0.03 | 0      | -    | 38  | 30  | 64  | 38  | 72  | 57  | 91     | 69  | 84   | 62  | 75   | 43  |     |     |       |  |           |  |
| 6         | -             | 0    | -    | 0    | 0      | -    | 50  | 29  | 67  | 42  | 85  | 49  | 84     | 59  | 87   | 65  | 81   | 52  |     |     |       |  |           |  |
| 7         | -             | 0    | -    | 0    | 0.82   | -    | 64  | 29  | 74  | 42  | 90  | 63  | 85     | 67  | 71   | 56  | 82   | 50  |     |     |       |  |           |  |
| 8         | -             | 0    | -    | 0    | 0      | -    | 58  | 39  | 73  | 47  | 91  | 53  | 85     | 61  | 78   | 64  | 83   | 53  |     |     |       |  |           |  |
| 9         | -             | 1.05 | -    | 0.6  | 0      | -    | 52  | 39  | 60  | 54  | 64  | 46  | 88     | 61  | 80   | 60  | 85   | 57  |     |     |       |  |           |  |
| 10        | -             | 0.15 | -    | 0    | 0      | -    | 54  | 40  | 63  | 54  | 68  | 48  | 85     | 60  | 76   | 55  | 86   | 55  |     |     |       |  |           |  |
| 11        | 0.72          | 0    | 0.05 | 0.15 | 0      | -    | 52  | 35  | 73  | 50  | 65  | 45  | 80     | 60  | 82   | 57  | 86   | 55  |     |     |       |  |           |  |
| 12        | 00            | 0    | 0    | 0    | 0      | -    | 62  | 37  | 62  | 41  | 73  | 48  | 80     | 56  | 84   | 63  | 89   | 55  |     |     |       |  |           |  |
| 13        | 00            | 0    | 0.15 | 0    | 0.4    | -    | 63  | 35  | 46  | 39  | 63  | 53  | 75     | 61  | 77   | 65  | 80   | 44  |     |     |       |  |           |  |
| 14        | 00            | 0.11 | 0    | 0.13 | 0      | -    | 38  | 28  | 47  | 38  | 82  | 57  | 77     | 59  | 79   | 65  | 71   | 36  |     |     |       |  |           |  |
| 15        | 0.45          | 0.13 | 1.28 | 1.25 | 0.05   | -    | 49  | 29  | 59  | 42  | 80  | 57  | 72     | 61  | 82   | 66  | 71   | 32  |     |     |       |  |           |  |
| 16        | 0             | 0    | 0.3  | 0    | 0.02   | -    | 38  | 28  | 67  | 37  | 80  | 57  | 86     | 66  | 85   | 68  | 60   | 34  |     |     |       |  |           |  |
| 17        | 0.28          | 0    | 0    | 0.06 | 0      | 0.08 | 37  | 27  | 71  | 42  | 75  | 58  | 89     | 67  | 81   | 53  | 58   | 52  |     |     |       |  |           |  |
| 18        | 0             | 0    | 0    | 0    | 0      | 0    | 36  | 27  | 74  | 41  | 80  | 55  | 89     | 70  | 82   | 57  | 63   | 45  |     |     |       |  |           |  |
| 19        | 0             | 0    | 0    | 1.96 | 0.02   | 0    | 39  | 30  | 75  | 41  | 83  | 55  | 86     | 71  | 85   | 54  | 76   | 42  |     |     |       |  |           |  |
| 20        | 0.18          | 0    | 0    | 0    | 0      | 0.08 | 45  | 30  | 79  | 46  | 83  | 61  | 95     | 77  | 76   | 55  | 76   | 44  |     |     |       |  |           |  |
| 21        | 0.1           | 0.27 | 0    | 0    | 0      | 0.04 | 46  | 30  | 64  | 58  | 75  | 57  | 90     | 61  | 79   | 51  | 59   | 47  |     |     |       |  |           |  |
| 22        | 0             | 0.6  | 2.11 | 0    | 0      | 0    | 46  | 33  | 63  | 56  | 66  | 57  | 84     | 6   | 80   | 54  | 52   | 36  |     |     |       |  |           |  |
| 23        | 0.43          | 0.14 | 0.2  | 0.9  | 0      | -    | 44  | 38  | 69  | 56  | 60  | 55  | 84     | 61  | 86   | 59  | 61   | 36  |     |     |       |  |           |  |
| 24        | 0             | 0    | 0    | 0    | 0      | 0    | 36  | 36  | 66  | 44  | 76  | 55  | 72     | 58  | 85   | 61  | 69   | 36  |     |     |       |  |           |  |
| 25        | 0             | 0    | 0    | 0.07 | 0      | 0    | 41  | 41  | 58  | 41  | 71  | 62  | 82     | 61  | 82   | 53  | 72   | 48  |     |     |       |  |           |  |
| 26        | 0             | 0    | 0.6  | 0.24 | 0      | 0    | 45  | 45  | 67  | 35  | 77  | 61  | 83     | 67  | 84   | 53  | 71   | 39  |     |     |       |  |           |  |
| 27        | 0             | 0.1  | 0.7  | 0    | 0      | 0    | 43  | 43  | 68  | 35  | 78  | 59  | 82     | 68  | 79   | 55  | 73   | 41  |     |     |       |  |           |  |
| 28        | 0             | 0.63 | 0.24 | 0    | 0      | 0    | 35  | 35  | 57  | 46  | 71  | 53  | 84     | 62  | 80   | 52  | 82   | 46  |     |     |       |  |           |  |
| 29        | 0             | 0    | 0    | 0.22 | 0      | 0    | 46  | 46  | 63  | 46  | 75  | 61  | 85     | 64  | 80   | 59  | 89   | 49  |     |     |       |  |           |  |
| 30        | 0             | 0.03 | 0    | 0    | 0      | 0    | 42  | 42  | 63  | 46  | 87  | 66  | 86     | 65  | 83   | 54  | 65   | 37  |     |     |       |  |           |  |
| 31        |               | 0.45 |      | 0    | 0.16   |      | 80  | 56  |     |     |     |     | 86     | 58  | 67   | 61  |      |     |     |     |       |  |           |  |
| Total/Avg | 2.18          | 3.86 | 5.63 | 5.61 | 2.94   | 0.2  | 50  | 34  | 64  | 43  | 76  | 55  | 84     | 64  | 81   | 59  | 74   | 46  |     |     |       |  |           |  |

CLIMATIC DATA, 2011, Fargo, ND

| Date      | Precipitation |      |      |      |        |      |     |     |     |     |     |     | April |     | May |     | June |     | July |     | August |     | Sept |  |
|-----------|---------------|------|------|------|--------|------|-----|-----|-----|-----|-----|-----|-------|-----|-----|-----|------|-----|------|-----|--------|-----|------|--|
|           | April         | May  | June | July | August | Sept | Max | Min | Max | Min | Max | Min | Max   | Min | Max | Min | Max  | Min | Max  | Min | Max    | Min |      |  |
|           |               |      |      |      |        |      |     |     |     |     |     |     |       |     |     |     |      |     |      |     |        |     |      |  |
| 1         | 0.01          | 0.01 | 0.00 | 0.00 | 2.06   | 0.00 | 39  | 28  | 36  | 26  | 70  | 47  | 83    | 67  | 85  | 69  | 82   | 66  |      |     |        |     |      |  |
| 2         | 0.00          | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 46  | 28  | 52  | 31  | 80  | 56  | 84    | 60  | 82  | 62  | 76   | 58  |      |     |        |     |      |  |
| 3         | 0.00          | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 43  | 33  | 60  | 32  | 82  | 61  | 88    | 66  | 85  | 59  | 68   | 52  |      |     |        |     |      |  |
| 4         | 0.00          | 0.03 | 0.00 | 0.38 | 0.00   | 0.00 | 40  | 30  | 65  | 43  | 72  | 55  | 94    | 68  | 87  | 69  | 68   | 48  |      |     |        |     |      |  |
| 5         | 0.00          | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 46  | 30  | 66  | 39  | 84  | 54  | 82    | 62  | 89  | 67  | 73   | 48  |      |     |        |     |      |  |
| 6         | 0.00          | 0.00 | 0.00 | 0.00 | 0.41   | 0.00 | 52  | 28  | 72  | 47  | 91  | 63  | 84    | 58  | 75  | 61  | 80   | 54  |      |     |        |     |      |  |
| 7         | 0.01          | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 63  | 36  | 72  | 50  | 94  | 59  | 88    | 69  | 80  | 57  | 84   | 55  |      |     |        |     |      |  |
| 8         | 0.00          | 0.22 | 0.00 | 0.24 | 0.00   | 0.00 | 57  | 40  | 62  | 54  | 65  | 52  | 87    | 60  | 82  | 63  | 85   | 53  |      |     |        |     |      |  |
| 9         | 0.00          | 0.82 | 0.00 | 0.27 | 0.00   | 0.00 | 56  | 43  | 65  | 54  | 68  | 47  | 86    | 68  | 75  | 59  | 87   | 54  |      |     |        |     |      |  |
| 10        | 0.69          | 0.32 | 0.07 | 0.16 | 0.00   | 0.00 | 49  | 41  | 75  | 56  | 64  | 53  | 87    | 61  | 82  | 56  | 86   | 54  |      |     |        |     |      |  |
| 11        | 0.00          | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 61  | 37  | 61  | 46  | 73  | 46  | 80    | 59  | 86  | 60  | 90   | 60  |      |     |        |     |      |  |
| 12        | 0.00          | 0.00 | 0.01 | 0.00 | 0.19   | 0.00 | 62  | 41  | 48  | 41  | 70  | 56  | 74    | 56  | 82  | 60  | 79   | 46  |      |     |        |     |      |  |
| 13        | 0.00          | 0.01 | 0.10 | 0.00 | 0.00   | 0.00 | 47  | 31  | 46  | 39  | 76  | 57  | 77    | 58  | 79  | 60  | 71   | 38  |      |     |        |     |      |  |
| 14        | 0.00          | 0.15 | 0.00 | 0.25 | 0.00   | 0.00 | 49  | 28  | 60  | 40  | 81  | 61  | 70    | 60  | 83  | 61  | 57   | 34  |      |     |        |     |      |  |
| 15        | 0.12          | 0.00 | 0.56 | 0.80 | 0.01   | 0.00 | 37  | 30  | 65  | 37  | 71  | 58  | 86    | 67  | 84  | 68  | 60   | 33  |      |     |        |     |      |  |
| 16        | 0.29          | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 36  | 30  | 69  | 42  | 76  | 56  | 89    | 73  | 82  | 61  | 58   | 40  |      |     |        |     |      |  |
| 17        | 0.00          | 0.00 | 0.27 | 0.00 | 0.00   | 0.00 | 40  | 29  | 74  | 49  | 77  | 59  | 90    | 73  | 83  | 55  | 64   | 52  |      |     |        |     |      |  |
| 18        | 0.00          | 0.00 | 0.00 | 0.00 | 0.00   | 0.04 | 40  | 30  | 74  | 47  | 80  | 53  | 89    | 69  | 86  | 61  | 74   | 47  |      |     |        |     |      |  |
| 19        | 0.02          | 0.00 | 0.00 | 0.95 | 0.00   | 0.00 | 44  | 32  | 78  | 54  | 82  | 58  | 96    | 71  | 75  | 57  | 76   | 43  |      |     |        |     |      |  |
| 20        | 0.06          | 0.05 | 0.00 | 0.00 | 0.00   | 0.07 | 45  | 34  | 69  | 57  | 73  | 62  | 92    | 70  | 79  | 57  | 64   | 53  |      |     |        |     |      |  |
| 21        | 0.10          | 0.16 | 1.86 | 0.00 | 0.00   | 0.04 | 47  | 32  | 72  | 57  | 63  | 58  | 85    | 63  | 81  | 56  | 53   | 43  |      |     |        |     |      |  |
| 22        | 0.42          | 0.96 | 0.24 | 0.00 | 0.00   | 0.00 | 45  | 38  | 69  | 57  | 60  | 58  | 86    | 66  | 86  | 61  | 60   | 34  |      |     |        |     |      |  |
| 23        | 0.00          | 0.00 | 0.00 | 0.87 | 0.03   | 0.00 | 55  | 38  | 66  | 46  | 75  | 54  | 72    | 61  | 90  | 66  | 68   | 39  |      |     |        |     |      |  |
| 24        | 0.00          | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 63  | 41  | 59  | 44  | 75  | 57  | 82    | 60  | 80  | 59  | 72   | 45  |      |     |        |     |      |  |
| 25        | 0.00          | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 68  | 41  | 65  | 42  | 79  | 64  | 82    | 67  | 83  | 55  | 71   | 46  |      |     |        |     |      |  |
| 26        | 0.00          | 0.00 | 0.62 | 0.12 | 0.00   | 0.00 | 57  | 47  | 67  | 34  | 73  | 62  | 82    | 65  | 85  | 56  | 75   | 39  |      |     |        |     |      |  |
| 27        | 0.00          | 0.57 | 0.24 | 0.00 | 0.00   | 0.00 | 57  | 42  | 61  | 50  | 70  | 55  | 85    | 67  | 78  | 50  | 82   | 44  |      |     |        |     |      |  |
| 28        | 0.00          | 0.01 | 0.00 | 0.00 | 0.00   | 0.00 | 64  | 35  | 63  | 47  | 75  | 50  | 87    | 63  | 80  | 61  | 88   | 51  |      |     |        |     |      |  |
| 29        | 0.00          | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 71  | 46  | 62  | 46  | 88  | 63  | 86    | 65  | 84  | 60  | 67   | 44  |      |     |        |     |      |  |
| 30        | 0.08          | 0.99 | 0.00 | 0.05 | 0.16   | 0.00 | 54  | 28  | 86  | 54  | 98  | 75  | 88    | 66  | 69  | 62  | 63   | 34  |      |     |        |     |      |  |
| 31        |               | 0.02 |      | 0.00 | 0.00   |      | 61  | 53  |     |     |     |     | 86    | 58  | 81  | 64  |      |     |      |     |        |     |      |  |
| Total/Avg | 1.8           | 4.32 | 3.97 | 4.09 | 2.86   | 0.15 | 51  | 35  | 65  | 46  | 76  | 57  | 85    | 64  | 82  | 60  | 73   | 47  |      |     |        |     |      |  |

CLIMATIC DATA, 2011, Grand Forks, ND

| Date      | Precipitation |      |      |      |        |      |     |     |     |     |     |     | May |     | June |     | July |     | August |  | Sept |  |
|-----------|---------------|------|------|------|--------|------|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|------|-----|--------|--|------|--|
|           | April         | May  | June | July | August | Sept | Max | Min | Max | Min | Max | Min | Max | Min | Max  | Min | Max  | Min |        |  |      |  |
|           | 0.17          | 0.00 | 0.00 | 0.00 | 0.13   | 0.50 | 47  | 28  | 34  | 24  | 68  | 46  | 81  | 64  | 81   | 68  | 81   | 64  |        |  |      |  |
| 1         | 0.17          | 0.00 | 0.00 | 0.00 | 0.13   | 0.50 | 47  | 28  | 34  | 24  | 68  | 46  | 81  | 64  | 81   | 68  | 81   | 64  |        |  |      |  |
| 2         | 0.07          | 0.00 | 0.00 | 0.00 | 0.00   | 0.02 | 44  | 30  | 54  | 31  | 75  | 51  | 81  | 61  | 83   | 59  | 74   | 54  |        |  |      |  |
| 3         | 0.09          | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 38  | 34  | 59  | 33  | 81  | 61  | 87  | 58  | 80   | 54  | 69   | 51  |        |  |      |  |
| 4         | 0.00          | 0.05 | 0.00 | 0.00 | 0.00   | 0.00 | 42  | 31  | 53  | 39  | 70  | 54  | 92  | 68  | 90   | 64  | 68   | 46  |        |  |      |  |
| 5         | 0.00          | 0.08 | 0.19 | 0.00 | 0.23   | 0.00 | 49  | 31  | 63  | 37  | 82  | 50  | 82  | 60  | 82   | 64  | 73   | 41  |        |  |      |  |
| 6         | 0.00          | 0.00 | 0.04 | 0.00 | 0.76   | 0.00 | 50  | 31  | 70  | 38  | 81  | 63  | 84  | 56  | 69   | 56  | 79   | 51  |        |  |      |  |
| 7         | 0.05          | 0.01 | 0.01 | 0.00 | 0.00   | 0.00 | 52  | 32  | 70  | 48  | 81  | 55  | 86  | 63  | 78   | 51  | 84   | 49  |        |  |      |  |
| 8         | 0.04          | 0.00 | 0.00 | 0.98 | 0.03   | 0.00 | 56  | 37  | 63  | 50  | 64  | 49  | 83  | 55  | 77   | 61  | 87   | 51  |        |  |      |  |
| 9         | 0.00          | 0.23 | 0.00 | 0.43 | 0.00   | 0.00 | 55  | 41  | 65  | 52  | 67  | 43  | 83  | 62  | 76   | 56  | 87   | 52  |        |  |      |  |
| 10        | 0.69          | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 45  | 39  | 64  | 50  | 63  | 48  | 84  | 57  | 82   | 52  | 84   | 52  |        |  |      |  |
| 11        | 0.00          | 0.00 | 0.00 | 0.00 | 0.60   | 0.00 | 62  | 35  | 58  | 44  | 74  | 41  | 77  | 58  | 83   | 58  | 89   | 53  |        |  |      |  |
| 12        | 0.00          | 0.00 | 0.00 | 0.00 | 0.03   | 0.00 | 60  | 41  | 45  | 40  | 67  | 56  | 74  | 52  | 81   | 55  | 73   | 43  |        |  |      |  |
| 13        | 0.00          | 0.15 | 0.01 | 0.00 | 0.03   | 0.00 | 41  | 27  | 45  | 38  | 79  | 59  | 76  | 51  | 80   | 56  | 69   | 36  |        |  |      |  |
| 14        | 0.00          | 0.07 | 0.10 | 0.00 | 0.00   | 0.00 | 45  | 27  | 62  | 41  | 82  | 59  | 72  | 59  | 82   | 55  | 56   | 32  |        |  |      |  |
| 15        | 0.68          | 0.10 | 0.24 | 0.16 | 0.00   | 0.00 | 35  | 27  | 68  | 38  | 72  | 59  | 88  | 66  | 83   | 62  | 61   | 27  |        |  |      |  |
| 16        | 0.27          | 0.00 | 0.00 | 0.91 | 0.18   | 0.00 | 35  | 30  | 69  | 39  | 74  | 58  | 88  | 67  | 79   | 55  | 57   | 35  |        |  |      |  |
| 17        | 0.00          | 0.00 | 0.16 | 0.00 | 0.00   | 0.00 | 36  | 25  | 75  | 40  | 74  | 57  | 88  | 71  | 81   | 53  | 62   | 51  |        |  |      |  |
| 18        | 0.06          | 0.00 | 0.00 | 0.00 | 0.03   | 0.11 | 38  | 28  | 74  | 40  | 80  | 57  | 88  | 69  | 84   | 59  | 75   | 46  |        |  |      |  |
| 19        | 0.00          | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 44  | 28  | 78  | 47  | 78  | 58  | 86  | 74  | 75   | 52  | 76   | 39  |        |  |      |  |
| 20        | 0.03          | 0.08 | 0.00 | 0.07 | 0.00   | 0.54 | 47  | 32  | 76  | 53  | 68  | 59  | 88  | 68  | 75   | 50  | 59   | 52  |        |  |      |  |
| 21        | 0.13          | 0.26 | 0.65 | 0.00 | 0.00   | 0.06 | 46  | 33  | 66  | 56  | 66  | 58  | 84  | 58  | 79   | 47  | 52   | 40  |        |  |      |  |
| 22        | 0.41          | 0.00 | 0.26 | 0.00 | 0.00   | 0.00 | 45  | 38  | 73  | 55  | 60  | 56  | 78  | 59  | 85   | 57  | 60   | 33  |        |  |      |  |
| 23        | 0.06          | 0.00 | 0.00 | 0.91 | 0.00   | 0.00 | 55  | 39  | 64  | 45  | 77  | 54  | 66  | 57  | 89   | 64  | 68   | 36  |        |  |      |  |
| 24        | 0.00          | 0.00 | 0.00 | 0.01 | 0.00   | 0.00 | 63  | 38  | 60  | 42  | 76  | 53  | 79  | 54  | 81   | 55  | 71   | 43  |        |  |      |  |
| 25        | 0.05          | 0.00 | 0.26 | 0.00 | 0.00   | 0.00 | 67  | 36  | 65  | 41  | 80  | 61  | 81  | 57  | 82   | 48  | 71   | 43  |        |  |      |  |
| 26        | 0.00          | 0.00 | 0.73 | 0.11 | 0.00   | 0.00 | 60  | 43  | 67  | 32  | 70  | 58  | 78  | 55  | 82   | 52  | 72   | 38  |        |  |      |  |
| 27        | 0.00          | 0.57 | 0.24 | 0.00 | 0.00   | 0.00 | 59  | 41  | 60  | 48  | 69  | 53  | 83  | 63  | 72   | 46  | 82   | 44  |        |  |      |  |
| 28        | 0.00          | 0.04 | 0.00 | 0.08 | 0.00   | 0.00 | 63  | 34  | 63  | 45  | 72  | 49  | 84  | 59  | 80   | 51  | 85   | 44  |        |  |      |  |
| 29        | 0.00          | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 69  | 44  | 61  | 43  | 85  | 60  | 84  | 60  | 86   | 60  | 65   | 42  |        |  |      |  |
| 30        | 0.06          | 1.32 | 0.00 | 0.00 | 0.15   | 0.00 | 53  | 25  | 68  | 53  | 93  | 74  | 87  | 57  | 73   | 58  | 61   | 32  |        |  |      |  |
| 31        |               | 0.01 |      | 0.00 | 0.02   |      | 65  | 50  |     |     |     |     | 81  | 52  | 73   | 63  |      |     |        |  |      |  |
| Total/Avg | 2.86          | 2.97 | 2.89 | 3.66 | 2.19   | 1.23 | 50  | 34  | 63  | 43  | 74  | 55  | 82  | 60  | 80   | 56  | 72   | 48  |        |  |      |  |

CLIMATIC DATA, 2011, Hettinger ND

| Date      | Precipitation |      |      |      |        |      |       |     |      |      |        |      | August |     | July |      | June   |      | May   |     | April |      | September |      |
|-----------|---------------|------|------|------|--------|------|-------|-----|------|------|--------|------|--------|-----|------|------|--------|------|-------|-----|-------|------|-----------|------|
|           | April         | May  | June | July | August | Sept | April | May | June | July | August | Sept | April  | May | June | July | August | Sept | April | May | June  | July | August    | Sept |
|           | Max           | Min  | Max  | Min  | Max    | Min  | Max   | Min | Max  | Min  | Max    | Min  | Max    | Min | Max  | Min  | Max    | Min  | Max   | Min | Max   | Min  | Max       | Min  |
| 1         | 0.00          | 0.00 | 0.00 | 0.32 | 0.02   | 0.00 | 50    | 28  | 49   | 26   | 69     | 34   | 74     | 91  | 65   | 68   | 55     |      |       |     |       |      |           |      |
| 2         | 0.00          | 0.00 | 0.00 | 0.00 | 0.00   | 0.07 | 55    | 33  | 56   | 20   | 87     | 54   | 80     | 86  | 58   | 78   | 42     |      |       |     |       |      |           |      |
| 3         | 0.00          | 0.00 | 0.00 | 0.00 | 0.08   | 0.00 | 41    | 26  | 65   | 33   | 71     | 43   | 84     | 82  | 59   | 68   | 40     |      |       |     |       |      |           |      |
| 4         | 0.00          | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 49    | 18  | 61   | 36   | 70     | 45   | 86     | 88  | 54   | 71   | 34     |      |       |     |       |      |           |      |
| 5         | 0.07          | 0.00 | 0.00 | 0.00 | 0.99   | 0.00 | 46    | 28  | 66   | 31   | 81     | 53   | 81     | 85  | 61   | 86   | 48     |      |       |     |       |      |           |      |
| 6         | 0.01          | 0.00 | 0.01 | 0.02 | 0.01   | 0.00 | 56    | 29  | 67   | 40   | 82     | 56   | 83     | 75  | 57   | 87   | 46     |      |       |     |       |      |           |      |
| 7         | 0.00          | 0.00 | 0.05 | 0.00 | 0.00   | 0.00 | 57    | 30  | 68   | 34   | 76     | 46   | 81     | 81  | 56   | 85   | 45     |      |       |     |       |      |           |      |
| 8         | 0.01          | 0.00 | 0.00 | 0.00 | 0.09   | 0.00 | 63    | 36  | 75   | 50   | 59     | 44   | 84     | 77  | 52   | 83   | 48     |      |       |     |       |      |           |      |
| 9         | 0.00          | 0.16 | 0.01 | 0.00 | 0.00   | 0.00 | 50    | 34  | 70   | 51   | 51     | 43   | 81     | 74  | 47   | 83   | 45     |      |       |     |       |      |           |      |
| 10        | 0.02          | 0.76 | 0.77 | 0.00 | 0.00   | 0.00 | 57    | 33  | 59   | 42   | 58     | 46   | 83     | 81  | 48   | 84   | 46     |      |       |     |       |      |           |      |
| 11        | 0.00          | 0.00 | 0.01 | 0.00 | 0.12   | 0.00 | 66    | 27  | 53   | 41   | 64     | 44   | 76     | 83  | 57   | 88   | 45     |      |       |     |       |      |           |      |
| 12        | 0.00          | 0.00 | 0.52 | 0.00 | 0.01   | 0.00 | 59    | 38  | 57   | 37   | 74     | 50   | 77     | 74  | 51   | 66   | 40     |      |       |     |       |      |           |      |
| 13        | 0.00          | 0.00 | 0.01 | 0.00 | 0.00   | 0.03 | 56    | 27  | 51   | 33   | 78     | 49   | 68     | 78  | 47   | 63   | 34     |      |       |     |       |      |           |      |
| 14        | 0.03          | 0.00 | 0.01 | 0.02 | 0.00   | 0.00 | 34    | 23  | 44   | 35   | 72     | 48   | 86     | 89  | 60   | 57   | 37     |      |       |     |       |      |           |      |
| 15        | 0.32          | 0.01 | 0.00 | 0.01 | 0.49   | 0.00 | 41    | 26  | 61   | 29   | 76     | 46   | 89     | 92  | 59   | 50   | 34     |      |       |     |       |      |           |      |
| 16        | 0.00          | 0.00 | 0.00 | 0.00 | 0.21   | 0.00 | 52    | 27  | 64   | 40   | 75     | 53   | 91     | 74  | 50   | 59   | 41     |      |       |     |       |      |           |      |
| 17        | 0.04          | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 33    | 28  | 61   | 47   | 66     | 51   | 94     | 84  | 44   | 57   | 46     |      |       |     |       |      |           |      |
| 18        | 0.01          | 0.00 | 0.00 | 0.16 | 0.00   | 0.00 | 32    | 27  | 60   | 49   | 76     | 47   | 92     | 89  | 57   | 71   | 41     |      |       |     |       |      |           |      |
| 19        | 0.03          | 0.63 | 0.00 | 0.01 | 0.00   | 0.22 | 29    | 17  | 62   | 39   | 71     | 55   | 95     | 67  | 51   | 80   | 40     |      |       |     |       |      |           |      |
| 20        | 0.34          | 0.73 | 0.20 | 0.00 | 0.00   | 0.02 | 42    | 9   | 62   | 52   | 62     | 52   | 81     | 78  | 43   | 56   | 41     |      |       |     |       |      |           |      |
| 21        | 0.00          | 0.81 | 0.02 | 0.00 | 0.00   | 0.00 | 61    | 31  | 64   | 47   | 66     | 52   | 86     | 84  | 45   | 60   | 36     |      |       |     |       |      |           |      |
| 22        | 1.07          | 0.08 | 0.00 | 0.03 | 0.00   | 0.00 | 40    | 32  | 61   | 49   | 72     | 46   | 90     | 95  | 59   | 69   | 34     |      |       |     |       |      |           |      |
| 23        | 0.07          | 0.04 | 0.00 | 0.45 | 0.00   | 0.00 | 53    | 31  | 66   | 52   | 74     | 42   | 81     | 94  | 55   | 88   | 41     |      |       |     |       |      |           |      |
| 24        | 0.00          | 0.16 | 0.34 | 0.00 | 0.00   | 0.00 | 62    | 30  | 55   | 43   | 78     | 56   | 88     | 85  | 52   | 88   | 47     |      |       |     |       |      |           |      |
| 25        | 0.00          | 0.00 | 0.01 | 0.16 | 0.00   | 0.00 | 62    | 35  | 59   | 37   | 78     | 51   | 89     | 91  | 61   | 84   | 45     |      |       |     |       |      |           |      |
| 26        | 0.09          | 0.33 | 1.15 | 0.00 | 0.00   | 0.00 | 55    | 35  | 59   | 39   | 69     | 49   | 82     | 85  | 58   | 82   | 47     |      |       |     |       |      |           |      |
| 27        | 0.00          | 0.02 | 0.01 | 0.15 | 0.08   | 0.00 | 60    | 29  | 63   | 41   | 71     | 47   | 81     | 87  | 59   | 88   | 43     |      |       |     |       |      |           |      |
| 28        | 0.00          | 0.00 | 0.00 | 0.01 | 0.00   | 0.00 | 67    | 35  | 60   | 41   | 80     | 53   | 81     | 85  | 59   | 79   | 47     |      |       |     |       |      |           |      |
| 29        | 0.10          | 0.09 | 0.00 | 0.35 | 0.00   | 0.00 | 53    | 34  | 56   | 38   | 92     | 63   | 87     | 80  | 58   | 65   | 36     |      |       |     |       |      |           |      |
| 30        | 0.05          | 0.58 | 0.07 | 0.00 | 0.00   | 0.00 | 36    | 30  | 54   | 46   | 80     | 63   | 86     | 86  | 59   | 74   | 36     |      |       |     |       |      |           |      |
| 31        |               | 0.02 |      | 0.00 | 0.00   |      |       |     | 55   | 37   |        |      | 94     | 93  | 53   |      |        |      |       |     |       |      |           |      |
| Total/Avg | 2.26          | 4.42 | 3.19 | 1.69 | 2.1    | 0.34 | 51    | 29  | 60   | 40   | 73     | 49   | 84     | 84  | 59   | 84   | 55     | 74   | 42    |     |       |      |           |      |

CLIMATIC DATA, 2011, Langdon ND

| Date             | Precipitation |             |            |            |             |             |            |           |           |           |           |           |           |           |           |           |           |           |           |
|------------------|---------------|-------------|------------|------------|-------------|-------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|                  | April         |             | May        |            | June        |             | July       |           | August    |           | Sept      |           |           |           |           |           |           |           |           |
|                  | Max           | Min         | Max        | Min        | Max         | Min         | Max        | Min       | Max       | Min       | Max       | Min       |           |           |           |           |           |           |           |
| 1                | 0.00          | 0.00        | 0.00       | 0.06       | 0.11        | 0.67        | 0.01       | 0.01      | 0.00      | 0.00      | 0.00      | 0.00      |           |           |           |           |           |           |           |
| 2                | 0.00          | 0.00        | 0.03       | 0.00       | 0.00        | 0.01        | 0.00       | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      |           |           |           |           |           |           |           |
| 3                | 0.32          | 0.00        | 0.00       | 0.00       | 0.03        | 0.00        | 0.00       | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      |           |           |           |           |           |           |           |
| 4                | 0.00          | 0.07        | 0.00       | 0.00       | 0.00        | 0.00        | 0.00       | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      |           |           |           |           |           |           |           |
| 5                | 0.00          | 0.00        | 0.00       | 0.00       | 0.00        | 0.00        | 0.00       | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      |           |           |           |           |           |           |           |
| 6                | 0.01          | 0.00        | 0.00       | 0.00       | 0.29        | 0.00        | 0.00       | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      |           |           |           |           |           |           |           |
| 7                | 0.00          | 0.00        | 0.33       | 0.00       | 0.00        | 0.00        | 0.00       | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      |           |           |           |           |           |           |           |
| 8                | 0.37          | 0.02        | 0.03       | 1.43       | 0.15        | 0.00        | 0.00       | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      |           |           |           |           |           |           |           |
| 9                | 0.00          | 0.03        | 0.00       | 0.18       | 0.00        | 0.00        | 0.00       | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      |           |           |           |           |           |           |           |
| 10               | 0.01          | 0.16        | 0.00       | 0.00       | 0.00        | 0.00        | 0.00       | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      |           |           |           |           |           |           |           |
| 11               | 0.00          | 0.00        | 0.00       | 0.00       | 0.00        | 0.00        | 0.00       | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      |           |           |           |           |           |           |           |
| 12               | 0.00          | 0.00        | 0.00       | 0.00       | 0.00        | 0.00        | 0.00       | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      |           |           |           |           |           |           |           |
| 13               | 0.00          | 0.28        | 0.01       | 0.00       | 0.00        | 0.00        | 0.00       | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      |           |           |           |           |           |           |           |
| 14               | 0.00          | 0.01        | 0.01       | 0.00       | 0.00        | 0.00        | 0.00       | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      |           |           |           |           |           |           |           |
| 15               | 0.01          | 0.00        | 0.27       | 0.00       | 0.00        | 0.00        | 0.00       | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      |           |           |           |           |           |           |           |
| 16               | 0.12          | 0.00        | 0.01       | 0.00       | 0.07        | 0.00        | 0.00       | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      |           |           |           |           |           |           |           |
| 17               | 0.00          | 0.00        | 0.24       | 0.01       | 0.00        | 0.02        | 0.00       | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      |           |           |           |           |           |           |           |
| 18               | 0.03          | 0.00        | 0.00       | 0.00       | 0.00        | 0.01        | 0.00       | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      |           |           |           |           |           |           |           |
| 19               | 0.00          | 0.00        | 0.00       | 0.00       | 0.00        | 0.04        | 0.00       | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      |           |           |           |           |           |           |           |
| 20               | 0.00          | 0.00        | 0.00       | 0.18       | 0.00        | 3.31        | 0.00       | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      |           |           |           |           |           |           |           |
| 21               | 0.05          | 0.80        | 0.37       | 0.00       | 0.00        | 0.00        | 0.00       | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      |           |           |           |           |           |           |           |
| 22               | 0.10          | 0.01        | 0.92       | 0.00       | 0.00        | 0.00        | 0.00       | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      |           |           |           |           |           |           |           |
| 23               | 0.00          | 0.00        | 0.01       | 0.36       | 0.00        | 0.00        | 0.00       | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      |           |           |           |           |           |           |           |
| 24               | 0.00          | 0.00        | 0.00       | 0.00       | 0.00        | 0.00        | 0.00       | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      |           |           |           |           |           |           |           |
| 25               | 0.00          | 0.00        | 0.44       | 0.00       | 0.00        | 0.00        | 0.00       | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      |           |           |           |           |           |           |           |
| 26               | 0.00          | 0.00        | 0.02       | 0.11       | 0.00        | 0.00        | 0.00       | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      |           |           |           |           |           |           |           |
| 27               | 0.00          | 0.35        | 0.01       | 0.00       | 0.00        | 0.00        | 0.00       | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      |           |           |           |           |           |           |           |
| 28               | 0.00          | 0.13        | 0.00       | 0.02       | 0.00        | 0.00        | 0.00       | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      |           |           |           |           |           |           |           |
| 29               | 0.09          | 0.00        | 0.00       | 0.00       | 0.00        | 0.00        | 0.00       | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      |           |           |           |           |           |           |           |
| 30               | 0.02          | 0.28        | 0.00       | 0.05       | 0.00        | 0.00        | 0.00       | 0.00      | 0.00      | 0.00      | 0.00      | 0.00      |           |           |           |           |           |           |           |
| 31               |               | 0.07        |            | 0.00       | 0.00        |             |            |           |           |           |           |           |           |           |           |           |           |           |           |
| <b>Total/Avg</b> | <b>1.13</b>   | <b>2.21</b> | <b>2.7</b> | <b>2.4</b> | <b>0.65</b> | <b>4.06</b> | <b>2.9</b> | <b>29</b> | <b>46</b> | <b>58</b> | <b>41</b> | <b>71</b> | <b>52</b> | <b>79</b> | <b>58</b> | <b>78</b> | <b>54</b> | <b>69</b> | <b>44</b> |



CLIMATIC DATA, 2011, Minot ND

| Date             | Precipitation |             |             |             |             |             |           |           |           |           |           |           | April     |           | May       |           | June      |           | July      |           | August    |           | Sept      |  |
|------------------|---------------|-------------|-------------|-------------|-------------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--|
|                  | April         | May         | June        | July        | August      | Sept        | Max       | Min       | Max       | Min       | Max       | Min       | Max       | Min       | Max       | Min       | Max       | Min       | Max       | Min       | Max       | Min       |           |  |
|                  |               |             |             |             |             |             |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |  |
| 1                | 0.00          | 0.05        | 0.00        | 0.00        | 0.00        | 0.08        | 40        | 30        | 43        | 26        | 69        | 43        | 79        | 81        | 69        | 81        | 69        | 81        | 69        | 81        | 69        | 81        | 69        |  |
| 2                | 0.00          | 0.00        | 0.01        | 0.00        | 0.00        | 0.01        | 38        | 27        | 54        | 27        | 85        | 52        | 81        | 82        | 63        | 82        | 63        | 82        | 63        | 82        | 63        | 82        | 63        |  |
| 3                | 0.21          | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 35        | 29        | 65        | 37        | 72        | 54        | 87        | 84        | 67        | 84        | 67        | 84        | 67        | 84        | 67        | 84        | 67        |  |
| 4                | 0.00          | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 38        | 22        | 63        | 43        | 67        | 50        | 86        | 84        | 66        | 84        | 66        | 84        | 66        | 84        | 66        | 84        | 66        |  |
| 5                | 0.00          | 0.00        | 0.00        | 0.00        | 0.34        | 0.00        | 42        | 30        | 66        | 39        | 82        | 52        | 79        | 72        | 61        | 72        | 61        | 72        | 61        | 72        | 61        | 72        | 61        |  |
| 6                | 0.00          | 0.05        | 0.00        | 0.37        | 0.35        | 0.00        | 44        | 28        | 61        | 45        | 75        | 59        | 77        | 70        | 58        | 70        | 58        | 70        | 58        | 70        | 58        | 70        | 58        |  |
| 7                | 0.00          | 0.05        | 0.18        | 0.00        | 0.00        | 0.00        | 46        | 30        | 66        | 40        | 63        | 46        | 83        | 80        | 54        | 80        | 54        | 80        | 54        | 80        | 54        | 80        | 54        |  |
| 8                | 0.41          | 0.55        | 0.00        | 0.35        | 0.00        | 0.00        | 38        | 33        | 70        | 46        | 60        | 45        | 76        | 72        | 56        | 72        | 56        | 72        | 56        | 72        | 56        | 72        | 56        |  |
| 9                | 0.06          | 0.43        | 0.00        | 0.00        | 0.00        | 0.00        | 42        | 33        | 55        | 48        | 64        | 41        | 78        | 84        | 55        | 84        | 55        | 84        | 55        | 84        | 55        | 84        | 55        |  |
| 10               | 0.02          | 1.08        | 0.00        | 0.00        | 0.00        | 0.00        | 51        | 33        | 49        | 41        | 65        | 48        | 83        | 82        | 57        | 82        | 57        | 82        | 57        | 82        | 57        | 82        | 57        |  |
| 11               | 0.00          | 0.02        | 0.00        | 0.00        | 0.02        | 0.00        | 59        | 36        | 53        | 41        | 70        | 46        | 76        | 75        | 61        | 75        | 61        | 75        | 61        | 75        | 61        | 75        | 61        |  |
| 12               | 0.00          | 0.00        | 0.80        | 0.00        | 0.16        | 0.00        | 54        | 39        | 50        | 40        | 66        | 55        | 75        | 72        | 57        | 72        | 57        | 72        | 57        | 72        | 57        | 72        | 57        |  |
| 13               | 0.00          | 0.04        | 0.34        | 0.00        | 0.00        | 0.00        | 42        | 26        | 43        | 36        | 76        | 57        | 74        | 77        | 57        | 77        | 57        | 77        | 57        | 77        | 57        | 77        | 57        |  |
| 14               | 0.00          | 0.00        | 0.37        | 0.00        | 0.00        | 0.00        | 41        | 23        | 59        | 39        | 66        | 56        | 79        | 85        | 58        | 85        | 58        | 85        | 58        | 85        | 58        | 85        | 58        |  |
| 15               | 0.13          | 0.00        | 0.00        | 0.27        | 0.00        | 0.00        | 31        | 26        | 66        | 35        | 74        | 57        | 85        | 84        | 63        | 84        | 63        | 84        | 63        | 84        | 63        | 84        | 63        |  |
| 16               | 0.01          | 0.00        | 0.01        | 0.21        | 0.00        | 0.00        | 37        | 25        | 69        | 40        | 74        | 54        | 88        | 73        | 55        | 73        | 55        | 73        | 55        | 73        | 55        | 73        | 55        |  |
| 17               | 0.01          | 0.00        | 0.07        | 0.26        | 0.00        | 0.01        | 31        | 25        | 71        | 49        | 65        | 51        | 87        | 83        | 54        | 83        | 54        | 83        | 54        | 83        | 54        | 83        | 54        |  |
| 18               | 0.02          | 0.00        | 0.29        | 0.00        | 0.00        | 0.00        | 38        | 20        | 71        | 40        | 77        | 50        | 85        | 88        | 55        | 88        | 55        | 88        | 55        | 88        | 55        | 88        | 55        |  |
| 19               | 0.00          | 0.00        | 0.09        | 0.00        | 0.00        | 0.20        | 35        | 23        | 74        | 42        | 77        | 54        | 92        | 74        | 54        | 74        | 54        | 74        | 54        | 74        | 54        | 74        | 54        |  |
| 20               | 0.00          | 0.46        | 0.07        | 0.01        | 0.00        | 1.47        | 48        | 24        | 61        | 55        | 67        | 58        | 81        | 73        | 51        | 73        | 51        | 73        | 51        | 73        | 51        | 73        | 51        |  |
| 21               | 0.00          | 0.64        | 0.00        | 0.00        | 0.00        | 0.00        | 42        | 31        | 64        | 55        | 61        | 56        | 81        | 83        | 50        | 83        | 50        | 83        | 50        | 83        | 50        | 83        | 50        |  |
| 22               | 0.25          | 0.02        | 0.01        | 0.98        | 0.00        | 0.00        | 39        | 35        | 68        | 54        | 67        | 54        | 80        | 93        | 66        | 93        | 66        | 93        | 66        | 93        | 66        | 93        | 66        |  |
| 23               | 0.00          | 0.17        | 0.00        | 0.10        | 0.00        | 0.00        | 56        | 32        | 63        | 44        | 75        | 50        | 72        | 92        | 63        | 92        | 63        | 92        | 63        | 92        | 63        | 92        | 63        |  |
| 24               | 0.00          | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 63        | 36        | 54        | 39        | 72        | 57        | 81        | 80        | 59        | 80        | 59        | 80        | 59        | 80        | 59        | 80        | 59        |  |
| 25               | 0.00          | 0.00        | 0.52        | 0.00        | 0.00        | 0.00        | 66        | 41        | 63        | 37        | 80        | 57        | 81        | 88        | 55        | 88        | 55        | 88        | 55        | 88        | 55        | 88        | 55        |  |
| 26               | 0.17          | 0.09        | 0.01        | 0.79        | 0.00        | 0.00        | 57        | 35        | 63        | 38        | 72        | 55        | 76        | 81        | 58        | 81        | 58        | 81        | 58        | 81        | 58        | 81        | 58        |  |
| 27               | 0.00          | 0.12        | 0.00        | 0.00        | 0.00        | 0.00        | 63        | 41        | 64        | 48        | 68        | 54        | 78        | 82        | 58        | 82        | 58        | 82        | 58        | 82        | 58        | 82        | 58        |  |
| 28               | 0.00          | 0.08        | 0.00        | 0.00        | 0.10        | 0.00        | 67        | 40        | 61        | 45        | 79        | 52        | 77        | 84        | 56        | 84        | 56        | 84        | 56        | 84        | 56        | 84        | 56        |  |
| 29               | 0.13          | 0.02        | 0.00        | 0.32        | 0.00        | 0.00        | 60        | 45        | 58        | 44        | 90        | 62        | 83        | 86        | 59        | 86        | 59        | 86        | 59        | 86        | 59        | 86        | 59        |  |
| 30               | 0.05          | 2.42        | 0.00        | 0.07        | 0.00        | 0.00        | 45        | 23        | 51        | 45        | 83        | 68        | 80        | 77        | 59        | 77        | 59        | 77        | 59        | 77        | 59        | 77        | 59        |  |
| 31               |               | 0.59        |             | 0.00        | 0.81        |             | 57        | 45        | 57        | 45        |           |           | 88        | 83        | 57        | 83        | 57        | 83        | 57        | 83        | 57        | 83        | 57        |  |
| <b>Total/Avg</b> | <b>1.47</b>   | <b>6.88</b> | <b>2.77</b> | <b>3.73</b> | <b>1.78</b> | <b>1.77</b> | <b>46</b> | <b>31</b> | <b>60</b> | <b>42</b> | <b>72</b> | <b>53</b> | <b>81</b> | <b>81</b> | <b>58</b> | <b>81</b> | <b>58</b> | <b>81</b> | <b>58</b> | <b>81</b> | <b>58</b> | <b>81</b> | <b>58</b> |  |

CLIMATIC DATA, 2011, Oakes ND

| Date             | Precipitation |             |             |            |             |             |           |           |           |           |           |           | April     |           | May       |           | June      |           | July      |           | August    |           | Sept      |           |
|------------------|---------------|-------------|-------------|------------|-------------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|                  | April         | May         | June        | July       | August      | Sept        | Max       | Min       | Max       | Min       | Max       | Min       | Max       | Min       | Max       | Min       | Max       | Min       | Max       | Min       | Max       | Min       |           |           |
|                  | 0.00          | 0.00        | 0.00        | 0.28       | 0.00        | 0.00        | 44        | 29        | 46        | 26        | 72        | 45        | 79        | 64        | 98        | 72        | 81        | 63        | 81        | 63        | 98        | 72        | 81        | 63        |
| 2                | 0.02          | 0.00        | 0.00        | 0.00       | 0.02        | 0.00        | 43        | 29        | 53        | 31        | 85        | 59        | 83        | 60        | 83        | 59        | 76        | 56        | 83        | 59        | 83        | 59        | 76        | 56        |
| 3                | 0.04          | 0.00        | 0.00        | 0.00       | 0.00        | 0.00        | 40        | 32        | 60        | 31        | 80        | 58        | 84        | 66        | 84        | 57        | 69        | 51        | 84        | 57        | 84        | 57        | 69        | 51        |
| 4                | 0.00          | 0.06        | 0.00        | 0.00       | 0.00        | 0.00        | 42        | 30        | 61        | 41        | 73        | 55        | 86        | 69        | 85        | 65        | 68        | 46        | 86        | 69        | 85        | 65        | 68        | 46        |
| 5                | 0.00          | 0.01        | 0.00        | 0.02       | 0.00        | 0.00        | 52        | 30        | 67        | 40        | 85        | 54        | 83        | 63        | 88        | 62        | 74        | 44        | 83        | 63        | 88        | 62        | 74        | 44        |
| 6                | 0.00          | 0.08        | 0.00        | 0.00       | 0.00        | 0.00        | 54        | 27        | 74        | 40        | 94        | 61        | 81        | 58        | 81        | 62        | 78        | 52        | 81        | 62        | 81        | 62        | 78        | 52        |
| 7                | 0.00          | 0.00        | 0.00        | 0.00       | 0.00        | 0.00        | 65        | 35        | 71        | 42        | 89        | 61        | 87        | 62        | 80        | 56        | 82        | 49        | 87        | 62        | 80        | 56        | 82        | 49        |
| 8                | 0.00          | 0.05        | 0.00        | 0.40       | 0.00        | 0.00        | 56        | 36        | 66        | 54        | 66        | 51        | 87        | 65        | 83        | 59        | 82        | 51        | 87        | 65        | 83        | 59        | 82        | 51        |
| 9                | 0.02          | 0.31        | 0.00        | 0.01       | 0.00        | 0.00        | 59        | 37        | 75        | 54        | 64        | 47        | 85        | 68        | 75        | 58        | 84        | 53        | 85        | 68        | 75        | 58        | 84        | 53        |
| 10               | 0.71          | 0.00        | 0.00        | 0.98       | 0.00        | 0.00        | 48        | 39        | 78        | 54        | 65        | 49        | 89        | 61        | 81        | 55        | 84        | 53        | 89        | 61        | 81        | 55        | 84        | 53        |
| 11               | 0.00          | 0.00        | 0.01        | 0.01       | 0.00        | 0.00        | 64        | 35        | 63        | 48        | 71        | 46        | 81        | 59        | 84        | 58        | 88        | 56        | 81        | 59        | 84        | 58        | 88        | 56        |
| 12               | 0.00          | 0.09        | 0.14        | 0.00       | 0.05        | 0.00        | 63        | 40        | 50        | 40        | 71        | 57        | 74        | 59        | 81        | 59        | 78        | 52        | 74        | 59        | 81        | 59        | 78        | 52        |
| 13               | 0.00          | 0.00        | 0.23        | 0.28       | 0.00        | 0.00        | 47        | 28        | 47        | 38        | 77        | 59        | 74        | 57        | 80        | 59        | 71        | 42        | 77        | 59        | 80        | 59        | 71        | 42        |
| 14               | 0.07          | 0.00        | 1.38        | 0.12       | 0.11        | 0.00        | 40        | 27        | 47        | 37        | 80        | 59        | 83        | 61        | 75        | 59        | 57        | 34        | 80        | 59        | 83        | 61        | 75        | 59        |
| 15               | 0.12          | 0.00        | 0.03        | 0.00       | 0.21        | 0.00        | 34        | 27        | 66        | 40        | 75        | 57        | 90        | 69        | 85        | 65        | 60        | 31        | 75        | 57        | 90        | 69        | 85        | 65        |
| 16               | 0.18          | 0.00        | 0.00        | 0.00       | 0.17        | 0.00        | 34        | 24        | 66        | 40        | 77        | 53        | 92        | 73        | 79        | 57        | 55        | 41        | 77        | 53        | 92        | 73        | 79        | 57        |
| 17               | 0.02          | 0.00        | 0.61        | 0.00       | 0.00        | 0.00        | 33        | 24        | 72        | 42        | 78        | 57        | 95        | 72        | 80        | 51        | 61        | 51        | 72        | 42        | 78        | 57        | 95        | 72        |
| 18               | 0.00          | 0.00        | 0.00        | 0.01       | 0.00        | 0.28        | 36        | 29        | 71        | 43        | 77        | 53        | 89        | 70        | 86        | 59        | 78        | 46        | 77        | 53        | 89        | 70        | 86        | 59        |
| 19               | 0.16          | 0.00        | 0.00        | 0.00       | 0.00        | 0.00        | 37        | 31        | 73        | 50        | 81        | 57        | 97        | 78        | 69        | 56        | 76        | 39        | 73        | 50        | 81        | 57        | 97        | 78        |
| 20               | 0.04          | 0.23        | 0.01        | 0.00       | 0.00        | 0.04        | 43        | 31        | 61        | 58        | 70        | 62        | 89        | 65        | 76        | 56        | 64        | 50        | 61        | 58        | 70        | 62        | 89        | 65        |
| 21               | 0.15          | 0.33        | 2.23        | 0.00       | 0.00        | 0.00        | 44        | 30        | 73        | 56        | 63        | 55        | 84        | 60        | 80        | 53        | 51        | 46        | 73        | 56        | 63        | 55        | 84        | 60        |
| 22               | 0.26          | 0.08        | 0.19        | 0.00       | 0.11        | 0.00        | 41        | 36        | 65        | 54        | 60        | 56        | 86        | 65        | 86        | 59        | 62        | 35        | 65        | 54        | 60        | 56        | 86        | 65        |
| 23               | 0.00          | 0.00        | 0.00        | 0.83       | 0.16        | 0.00        | 56        | 36        | 65        | 48        | 75        | 55        | 80        | 61        | 91        | 62        | 69        | 37        | 65        | 48        | 75        | 55        | 80        | 61        |
| 24               | 0.00          | 0.00        | 0.09        | 0.00       | 0.00        | 0.00        | 64        | 34        | 56        | 44        | 73        | 55        | 82        | 56        | 78        | 56        | 75        | 40        | 56        | 44        | 73        | 55        | 82        | 56        |
| 25               | 0.00          | 0.00        | 0.00        | 0.00       | 0.00        | 0.00        | 65        | 39        | 64        | 43        | 83        | 60        | 85        | 63        | 83        | 51        | 73        | 39        | 64        | 43        | 83        | 60        | 85        | 63        |
| 26               | 0.06          | 0.00        | 0.22        | 1.41       | 0.00        | 0.00        | 52        | 44        | 67        | 37        | 74        | 63        | 81        | 64        | 84        | 56        | 73        | 37        | 67        | 37        | 74        | 63        | 81        | 64        |
| 27               | 0.02          | 0.90        | 0.29        | 0.00       | 0.00        | 0.00        | 62        | 45        | 61        | 49        | 72        | 56        | 85        | 67        | 79        | 55        | 81        | 41        | 61        | 49        | 72        | 56        | 85        | 67        |
| 28               | 0.00          | 0.00        | 0.00        | 0.00       | 0.15        | 0.00        | 66        | 41        | 63        | 46        | 77        | 51        | 85        | 63        | 79        | 58        | 89        | 49        | 63        | 46        | 77        | 51        | 85        | 63        |
| 29               | 0.21          | 0.00        | 0.00        | 0.00       | 0.00        | 0.00        | 72        | 45        | 59        | 47        | 89        | 64        | 87        | 66        | 78        | 56        | 68        | 41        | 59        | 47        | 89        | 64        | 87        | 66        |
| 30               | 0.08          | 0.14        | 0.00        | 0.45       | 0.27        | 0.00        | 49        | 28        | 78        | 55        | 95        | 74        | 87        | 63        | 68        | 58        | 65        | 34        | 78        | 55        | 95        | 74        | 87        | 63        |
| 31               |               | 0.00        |             | 0.00       | 0.00        |             |           |           | 62        | 50        |           |           | 90        | 63        | 83        | 65        |           |           |           |           |           |           |           |           |
| <b>Total/Avg</b> | <b>2.16</b>   | <b>2.28</b> | <b>5.43</b> | <b>4.8</b> | <b>1.25</b> | <b>0.32</b> | <b>50</b> | <b>33</b> | <b>64</b> | <b>44</b> | <b>76</b> | <b>56</b> | <b>85</b> | <b>64</b> | <b>81</b> | <b>58</b> | <b>72</b> | <b>45</b> | <b>64</b> | <b>44</b> | <b>76</b> | <b>56</b> | <b>85</b> | <b>64</b> |

CLIMATIC DATA, 2011, Prosper ND

| Date      | Precipitation |      |      |      |      |      |      |      |      |      |      |      | August |      |      |           |      |      | September |      |      |  |  |  |
|-----------|---------------|------|------|------|------|------|------|------|------|------|------|------|--------|------|------|-----------|------|------|-----------|------|------|--|--|--|
|           | April         |      |      | May  |      |      | June |      |      | July |      |      | August |      |      | September |      |      | October   |      |      |  |  |  |
|           | Max           | Min  | Avg  | Max  | Min  | Avg  | Max  | Min  | Avg  | Max  | Min  | Avg  | Max    | Min  | Avg  | Max       | Min  | Avg  | Max       | Min  | Avg  |  |  |  |
| 1         | 0.00          | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 |  |  |  |
| 2         | 0.00          | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 |  |  |  |
| 3         | 0.00          | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 |  |  |  |
| 4         | 0.00          | 0.03 | 0.00 | 0.00 | 0.00 | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 |  |  |  |
| 5         | 0.00          | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 |  |  |  |
| 6         | 0.00          | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.68 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 |  |  |  |
| 7         | 0.01          | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 |  |  |  |
| 8         | 0.00          | 0.21 | 0.00 | 0.00 | 0.00 | 0.40 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 |  |  |  |
| 9         | 0.00          | 0.57 | 0.00 | 0.00 | 0.10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 |  |  |  |
| 10        | 0.59          | 0.06 | 0.00 | 0.00 | 0.17 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 |  |  |  |
| 11        | 0.00          | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 |  |  |  |
| 12        | 0.00          | 0.00 | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.12 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 |  |  |  |
| 13        | 0.00          | 0.00 | 0.11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 |  |  |  |
| 14        | 0.00          | 0.17 | 0.11 | 0.00 | 0.18 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 |  |  |  |
| 15        | 0.13          | 0.00 | 1.41 | 0.00 | 1.09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 |  |  |  |
| 16        | 0.22          | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 |  |  |  |
| 17        | 0.00          | 0.00 | 0.34 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 |  |  |  |
| 18        | 0.00          | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 |  |  |  |
| 19        | 0.07          | 0.00 | 0.00 | 0.00 | 1.97 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 |  |  |  |
| 20        | 0.06          | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 |  |  |  |
| 21        | 0.08          | 0.31 | 1.58 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 |  |  |  |
| 22        | 0.39          | 0.27 | 0.17 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 |  |  |  |
| 23        | 0.03          | 0.00 | 0.00 | 0.00 | 0.87 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 |  |  |  |
| 24        | 0.00          | 0.00 | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 |  |  |  |
| 25        | 0.00          | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 |  |  |  |
| 26        | 0.00          | 0.00 | 1.10 | 0.00 | 0.50 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 |  |  |  |
| 27        | 0.00          | 0.76 | 0.33 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 |  |  |  |
| 28        | 0.00          | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 |  |  |  |
| 29        | 0.00          | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 |  |  |  |
| 30        | 0.19          | 0.73 | 0.00 | 0.00 | 0.33 | 0.00 | 0.00 | 0.12 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 | 0.00      | 0.00 | 0.00 |  |  |  |
| 31        |               | 0.00 |      |      | 0.01 | 0.00 |      | 0.00 |      |      |      |      |        |      |      |           |      |      |           |      |      |  |  |  |
| Total/Avg | 1.77          | 3.15 | 5.18 | 5.91 | 3.5  | 0.24 | 49   | 33   | 64   | 43   | 76   | 56   | 84     | 63   | 82   | 58        | 82   | 74   | 65        | 65   | 65   |  |  |  |



CLIMATIC DATA, 2011, Tappen ND

| Date      | Precipitation |      |      |      |        |      |       |      |      |      |        |      | August |     | July |     | June |     | May |     | April |     | Sept |    |
|-----------|---------------|------|------|------|--------|------|-------|------|------|------|--------|------|--------|-----|------|-----|------|-----|-----|-----|-------|-----|------|----|
|           | April         | May  | June | July | August | Sept | April | May  | June | July | August | Sept | Max    | Min | Max  | Min | Max  | Min | Max | Min | Max   | Min |      |    |
|           |               |      |      |      |        |      |       |      |      |      |        |      |        |     |      |     |      |     |     |     |       |     |      |    |
| 1         | 0.00          | 0.00 | 0.00 | 0.33 | 0.24   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 41     | 27  | 45   | 23  | 71   | 40  | 78  | 59  | 87    | 69  | 78   | 58 |
| 2         | 0.00          | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 44     | 26  | 52   | 24  | 81   | 52  | 84  | 54  | 79    | 60  | 74   | 50 |
| 3         | 0.00          | 0.00 | 0.60 | 0.00 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 35     | 28  | 61   | 34  | 76   | 53  | 85  | 64  | 86    | 58  | 69   | 48 |
| 4         | 0.00          | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 41     | 24  | 63   | 41  | 68   | 49  | 92  | 67  | 89    | 60  | 68   | 42 |
| 5         | 0.00          | 0.00 | 0.00 | 0.00 | 0.16   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 44     | 27  | 66   | 33  | 83   | 48  | 81  | 59  | 87    | 61  | 76   | 48 |
| 6         | 0.00          | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 50     | 29  | 70   | 38  | 82   | 59  | 78  | 59  | 68    | 54  | 83   | 48 |
| 7         | 0.02          | 0.00 | 0.02 | 0.00 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 54     | 34  | 70   | 35  | 79   | 49  | 83  | 55  | 80    | 50  | 83   | 48 |
| 8         | 0.01          | 0.17 | 0.00 | 1.06 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 49     | 36  | 69   | 53  | 64   | 46  | 83  | 58  | 75    | 59  | 81   | 49 |
| 9         | 0.00          | 0.11 | 0.04 | 0.00 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 49     | 37  | 61   | 53  | 62   | 37  | 80  | 60  | 74    | 55  | 82   | 50 |
| 10        | 0.08          | 0.24 | 0.01 | 0.00 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 49     | 35  | 70   | 52  | 61   | 42  | 84  | 56  | 80    | 52  | 84   | 52 |
| 11        | 0.00          | 0.00 | 0.03 | 0.00 | 0.21   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 66     | 30  | 53   | 44  | 69   | 37  | 79  | 54  | 85    | 57  | 88   | 54 |
| 12        | 0.00          | 0.00 | 0.63 | 0.00 | 0.16   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 59     | 33  | 45   | 37  | 71   | 55  | 74  | 56  | 76    | 57  | 70   | 44 |
| 13        | 0.00          | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 45     | 24  | 42   | 35  | 79   | 58  | 75  | 55  | 77    | 54  | 70   | 40 |
| 14        | 0.01          | 0.30 | 2.02 | 0.01 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 41     | 22  | 52   | 37  | 67   | 57  | 79  | 62  | 79    | 58  | 54   | 30 |
| 15        | 0.02          | 0.00 | 0.01 | 0.17 | 1.27   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 31     | 15  | 64   | 35  | 75   | 55  | 87  | 65  | 85    | 63  | 58   | 33 |
| 16        | 0.13          | 0.00 | 0.00 | 0.00 | 0.40   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 33     | 20  | 65   | 33  | 75   | 49  | 92  | 70  | 74    | 53  | 51   | 43 |
| 17        | 0.03          | 0.00 | 0.50 | 0.00 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 31     | 19  | 68   | 47  | 72   | 49  | 98  | 70  | 81    | 51  | 55   | 49 |
| 18        | 0.07          | 0.00 | 0.01 | 0.00 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 33     | 22  | 69   | 37  | 78   | 49  | 86  | 71  | 87    | 59  | 74   | 44 |
| 19        | 0.03          | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 33     | 21  | 71   | 39  | 79   | 54  | 97  | 78  | 71    | 49  | 79   | 40 |
| 20        | 0.06          | 0.13 | 0.07 | 0.00 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 40     | 26  | 61   | 56  | 66   | 59  | 83  | 60  | 73    | 53  | 57   | 49 |
| 21        | 0.17          | 0.62 | 0.59 | 0.00 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 39     | 27  | 71   | 51  | 60   | 56  | 84  | 55  | 80    | 46  | 49   | 33 |
| 22        | 0.30          | 0.00 | 0.16 | 0.91 | 1.03   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 38     | 35  | 68   | 49  | 61   | 54  | 83  | 57  | 89    | 63  | 61   | 28 |
| 23        | 0.01          | 0.00 | 0.00 | 0.27 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 56     | 33  | 66   | 46  | 75   | 49  | 76  | 57  | 91    | 60  | 76   | 43 |
| 24        | 0.00          | 0.00 | 0.00 | 0.01 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 65     | 32  | 57   | 40  | 71   | 54  | 84  | 54  | 77    | 54  | 78   | 47 |
| 25        | 0.00          | 0.00 | 0.01 | 0.00 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 66     | 39  | 62   | 37  | 81   | 56  | 85  | 60  | 84    | 63  | 74   | 51 |
| 26        | 0.07          | 0.00 | 0.32 | 0.00 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 53     | 39  | 62   | 33  | 69   | 57  | 76  | 64  | 81    | 55  | 71   | 44 |
| 27        | 0.10          | 0.07 | 0.33 | 0.00 | 0.08   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 60     | 40  | 68   | 46  | 70   | 47  | 81  | 60  | 77    | 54  | 81   | 43 |
| 28        | 0.01          | 0.00 | 0.00 | 0.00 | 0.25   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 68     | 39  | 61   | 42  | 77   | 45  | 79  | 57  | 79    | 59  | 82   | 48 |
| 29        | 0.31          | 0.00 | 0.00 | 0.03 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 71     | 41  | 64   | 41  | 88   | 64  | 84  | 56  | 80    | 59  | 65   | 36 |
| 30        | 0.10          | 0.53 | 0.00 | 0.12 | 0.10   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 45     | 23  | 58   | 48  | 88   | 66  | 85  | 60  | 68    | 59  | 64   | 33 |
| 31        |               | 0.04 |      | 0.07 | 0.01   |      |       |      |      |      |        |      |        |     | 59   | 43  |      |     | 87  | 57  | 80    | 57  |      |    |
| Total/Avg | 1.53          | 2.21 | 5.35 | 2.98 | 3.91   | 0.71 | 0.71  | 0.71 | 0.71 | 0.71 | 0.71   | 0.71 | 48     | 29  | 62   | 41  | 73   | 52  | 83  | 60  | 80    | 57  | 71   | 44 |

CLIMATIC DATA, 2011, Wahpeton ND

| Date      | Precipitation |      |      |      |        |      |       |     |      |      |        |      | July   |     | August |     | Sept |  |
|-----------|---------------|------|------|------|--------|------|-------|-----|------|------|--------|------|--------|-----|--------|-----|------|--|
|           | April         |      |      | May  |        |      | June  |     |      | July |        |      | August |     | Sept   |     |      |  |
|           | April         | May  | June | July | August | Sept | April | May | June | July | August | Sept | Max    | Min | Max    | Min |      |  |
| 1         | 0.00          | 0.00 | 0.00 | 0.18 | 2.51   | 0.00 | 38    | 25  | 27   | 70   | 47     | 84   | 65     | 84  | 66     | 85  | 66   |  |
| 2         | 0.00          | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 40    | 28  | 31   | 86   | 57     | 85   | 58     | 80  | 59     | 76  | 57   |  |
| 3         | 0.02          | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 47    | 33  | 60   | 85   | 57     | 87   | 62     | 85  | 54     | 70  | 49   |  |
| 4         | 0.00          | 0.01 | 0.00 | 0.51 | 0.00   | 0.00 | 40    | 30  | 66   | 41   | 77     | 91   | 66     | 86  | 66     | 69  | 46   |  |
| 5         | 0.00          | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 49    | 31  | 67   | 37   | 86     | 82   | 62     | 87  | 61     | 74  | 40   |  |
| 6         | 0.00          | 0.01 | 0.00 | 0.00 | 0.32   | 0.00 | 51    | 30  | 73   | 42   | 95     | 83   | 56     | 79  | 61     | 80  | 52   |  |
| 7         | 0.00          | 0.07 | 0.00 | 0.00 | 0.10   | 0.00 | 60    | 33  | 71   | 45   | 95     | 88   | 67     | 80  | 57     | 83  | 51   |  |
| 8         | 0.00          | 0.06 | 0.00 | 0.08 | 0.00   | 0.00 | 57    | 35  | 60   | 54   | 67     | 88   | 62     | 81  | 58     | 84  | 49   |  |
| 9         | 0.00          | 0.17 | 0.00 | 0.17 | 0.00   | 0.00 | 56    | 44  | 67   | 55   | 68     | 88   | 69     | 74  | 54     | 87  | 52   |  |
| 10        | 0.53          | 0.00 | 0.16 | 0.75 | 0.00   | 0.00 | 47    | 40  | 79   | 54   | 66     | 89   | 62     | 81  | 51     | 87  | 51   |  |
| 11        | 0.00          | 0.00 | 0.18 | 0.00 | 0.00   | 0.00 | 59    | 34  | 65   | 47   | 72     | 80   | 57     | 85  | 55     | 90  | 57   |  |
| 12        | 0.00          | 0.00 | 0.08 | 0.00 | 0.43   | 0.00 | 64    | 39  | 49   | 42   | 69     | 75   | 57     | 80  | 59     | 82  | 46   |  |
| 13        | 0.00          | 0.00 | 0.23 | 0.21 | 0.00   | 0.00 | 47    | 31  | 47   | 40   | 76     | 75   | 54     | 77  | 58     | 74  | 41   |  |
| 14        | 0.00          | 0.21 | 0.29 | 0.38 | 0.00   | 0.00 | 47    | 29  | 54   | 39   | 78     | 72   | 59     | 81  | 54     | 58  | 30   |  |
| 15        | 0.12          | 0.00 | 0.49 | 2.06 | 1.00   | 0.00 | 39    | 31  | 70   | 36   | 69     | 83   | 64     | 81  | 62     | 61  | 29   |  |
| 16        | 0.05          | 0.00 | 0.00 | 0.00 | 0.07   | 0.00 | 36    | 28  | 71   | 37   | 75     | 86   | 68     | 79  | 59     | 58  | 38   |  |
| 17        | 0.00          | 0.00 | 0.00 | 0.07 | 0.00   | 0.00 | 41    | 30  | 75   | 44   | 77     | 91   | 71     | 80  | 51     | 65  | 51   |  |
| 18        | 0.00          | 0.00 | 0.00 | 0.00 | 0.00   | 0.34 | 41    | 31  | 75   | 43   | 78     | 88   | 67     | 86  | 58     | 73  | 48   |  |
| 19        | 0.00          | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 46    | 32  | 78   | 49   | 83     | 95   | 73     | 74  | 56     | 77  | 40   |  |
| 20        | 0.05          | 0.16 | 0.00 | 0.00 | 0.02   | 0.07 | 45    | 31  | 66   | 60   | 71     | 92   | 66     | 77  | 54     | 63  | 52   |  |
| 21        | 0.06          | 0.31 | 1.24 | 0.00 | 0.00   | 0.10 | 46    | 30  | 73   | 56   | 63     | 83   | 59     | 79  | 53     | 52  | 46   |  |
| 22        | 0.42          | 0.53 | 0.24 | 0.00 | 0.00   | 0.00 | 43    | 36  | 63   | 55   | 58     | 88   | 63     | 85  | 57     | 60  | 36   |  |
| 23        | 0.02          | 0.00 | 0.00 | 0.90 | 0.27   | 0.00 | 54    | 36  | 65   | 47   | 73     | 76   | 61     | 90  | 61     | 68  | 32   |  |
| 24        | 0.00          | 0.00 | 0.00 | 0.01 | 0.00   | 0.00 | 62    | 34  | 63   | 44   | 73     | 82   | 57     | 78  | 55     | 71  | 43   |  |
| 25        | 0.00          | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 65    | 36  | 67   | 45   | 78     | 84   | 62     | 82  | 49     | 70  | 43   |  |
| 26        | 0.00          | 0.00 | 0.03 | 0.14 | 0.00   | 0.00 | 54    | 46  | 68   | 36   | 74     | 82   | 60     | 83  | 52     | 75  | 36   |  |
| 27        | 0.00          | 0.53 | 0.50 | 0.00 | 0.00   | 0.00 | 56    | 40  | 58   | 49   | 70     | 84   | 64     | 77  | 49     | 80  | 40   |  |
| 28        | 0.00          | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 63    | 35  | 66   | 43   | 75     | 85   | 58     | 78  | 58     | 89  | 46   |  |
| 29        | 0.00          | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 68    | 44  | 63   | 47   | 88     | 88   | 62     | 81  | 52     | 70  | 44   |  |
| 30        | 0.15          | 0.63 | 0.00 | 0.29 | 0.08   | 0.00 | 54    | 29  | 88   | 56   | 95     | 87   | 63     | 68  | 58     | 64  | 36   |  |
| 31        |               | 0.01 |      | 0.00 | 0.00   |      |       |     | 65   | 51   |        | 86   | 58     | 80  | 61     |     |      |  |
| Total/Avg | 1.42          | 2.7  | 3.44 | 5.75 | 4.8    | 0.51 | 51    | 34  | 65   | 45   | 76     | 85   | 62     | 81  | 57     | 73  | 45   |  |



CLIMATIC DATA, 2011, Williston ND

| Date      | Precipitation |      |      |      |        |      |       |      |      |      |        |      | August |     | July |     | June |     | May |     | April |     | Sept |    |
|-----------|---------------|------|------|------|--------|------|-------|------|------|------|--------|------|--------|-----|------|-----|------|-----|-----|-----|-------|-----|------|----|
|           | April         | May  | June | July | August | Sept | April | May  | June | July | August | Sept | Max    | Min | Max  | Min | Max  | Min | Max | Min | Max   | Min |      |    |
|           |               |      |      |      |        |      |       |      |      |      |        |      |        |     |      |     |      |     |     |     |       |     |      |    |
| 1         | 0.00          | 0.07 | 0.00 | 0.00 | 0.01   | 0.00 | 0.00  | 0.00 | 0.00 | 0.01 | 0.00   | 0.00 | 40     | 32  | 46   | 24  | 71   | 41  | 76  | 58  | 86    | 67  | 69   | 54 |
| 2         | 0.00          | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 41     | 31  | 54   | 29  | 83   | 53  | 82  | 53  | 89    | 57  | 75   | 47 |
| 3         | 0.08          | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 34     | 27  | 65   | 37  | 67   | 46  | 89  | 62  | 92    | 67  | 67   | 49 |
| 4         | 0.00          | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 43     | 23  | 61   | 39  | 68   | 49  | 82  | 61  | 86    | 62  | 73   | 41 |
| 5         | 0.14          | 0.00 | 0.00 | 0.00 | 0.18   | 0.00 | 0.00  | 0.00 | 0.00 | 0.18 | 0.00   | 0.00 | 42     | 30  | 67   | 39  | 81   | 51  | 81  | 57  | 71    | 63  | 86   | 47 |
| 6         | 0.00          | 0.00 | 0.00 | 0.00 | 0.01   | 0.00 | 0.00  | 0.00 | 0.00 | 0.01 | 0.00   | 0.00 | 47     | 29  | 66   | 44  | 77   | 55  | 85  | 63  | 78    | 63  | 88   | 49 |
| 7         | 0.00          | 0.04 | 0.21 | 0.00 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 52     | 33  | 65   | 39  | 63   | 46  | 85  | 61  | 87    | 59  | 85   | 53 |
| 8         | 0.52          | 0.00 | 0.00 | 0.02 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 36     | 32  | 67   | 43  | 62   | 46  | 80  | 66  | 75    | 54  | 88   | 56 |
| 9         | 0.01          | 1.02 | 0.00 | 0.20 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 39     | 32  | 55   | 46  | 59   | 42  | 80  | 56  | 78    | 50  | 88   | 57 |
| 10        | 0.00          | 1.70 | 0.40 | 0.00 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 52     | 30  | 47   | 42  | 62   | 47  | 83  | 53  | 85    | 53  | 90   | 56 |
| 11        | 0.00          | 0.01 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 65     | 32  | 52   | 42  | 69   | 48  | 78  | 55  | 82    | 59  | 89   | 55 |
| 12        | 0.00          | 0.00 | 0.05 | 0.00 | 0.03   | 0.00 | 0.00  | 0.00 | 0.00 | 0.03 | 0.00   | 0.00 | 54     | 35  | 60   | 40  | 74   | 53  | 79  | 60  | 72    | 55  | 67   | 48 |
| 13        | 0.00          | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 47     | 29  | 54   | 40  | 78   | 52  | 75  | 64  | 81    | 54  | 65   | 40 |
| 14        | 0.00          | 0.00 | 0.31 | 0.02 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 37     | 26  | 60   | 35  | 72   | 54  | 82  | 64  | 90    | 60  | 56   | 29 |
| 15        | 0.09          | 0.00 | 0.00 | 0.20 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 50     | 30  | 66   | 35  | 75   | 51  | 87  | 61  | 84    | 62  | 65   | 38 |
| 16        | 0.00          | 0.00 | 0.03 | 0.18 | 0.01   | 0.00 | 0.00  | 0.00 | 0.00 | 0.01 | 0.00   | 0.00 | 46     | 27  | 69   | 45  | 71   | 54  | 88  | 63  | 74    | 56  | 71   | 44 |
| 17        | 0.03          | 0.00 | 0.77 | 0.01 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.20 | 32     | 26  | 63   | 52  | 63   | 54  | 91  | 67  | 88    | 53  | 57   | 47 |
| 18        | 0.01          | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 40     | 22  | 69   | 53  | 75   | 52  | 92  | 72  | 83    | 53  | 69   | 45 |
| 19        | 0.00          | 0.00 | 0.36 | 0.00 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.41   | 0.00 | 40     | 26  | 73   | 50  | 75   | 56  | 98  | 70  | 72    | 53  | 74   | 46 |
| 20        | 0.00          | 0.85 | 0.01 | 0.00 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.56   | 0.00 | 50     | 25  | 60   | 54  | 73   | 57  | 78  | 60  | 78    | 49  | 62   | 46 |
| 21        | 0.00          | 1.02 | 0.04 | 0.00 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 54     | 33  | 60   | 54  | 69   | 56  | 84  | 56  | 90    | 50  | 60   | 41 |
| 22        | 0.00          | 0.28 | 0.00 | 0.51 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 44     | 32  | 66   | 54  | 74   | 53  | 82  | 58  | 97    | 65  | 73   | 40 |
| 23        | 0.00          | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 57     | 29  | 66   | 52  | 77   | 55  | 77  | 59  | 91    | 63  | 86   | 49 |
| 24        | 0.00          | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 64     | 33  | 53   | 42  | 80   | 61  | 84  | 56  | 86    | 56  | 88   | 53 |
| 25        | 0.00          | 0.00 | 0.03 | 0.00 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 69     | 37  | 63   | 40  | 76   | 59  | 87  | 57  | 95    | 62  | 89   | 52 |
| 26        | 0.00          | 0.19 | 0.00 | 0.06 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 60     | 37  | 60   | 45  | 74   | 52  | 80  | 64  | 83    | 59  | 82   | 50 |
| 27        | 0.00          | 0.22 | 0.00 | 0.00 | 0.45   | 0.00 | 0.00  | 0.00 | 0.00 | 0.45 | 0.00   | 0.00 | 64     | 36  | 61   | 45  | 72   | 51  | 79  | 58  | 86    | 57  | 86   | 47 |
| 28        | 0.00          | 0.14 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 69     | 38  | 58   | 44  | 84   | 54  | 80  | 57  | 86    | 60  | 74   | 51 |
| 29        | 0.85          | 0.16 | 0.01 | 0.02 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 49     | 35  | 61   | 44  | 94   | 66  | 88  | 56  | 89    | 62  | 64   | 42 |
| 30        | 0.10          | 0.83 | 0.00 | 0.00 | 0.00   | 0.00 | 0.00  | 0.00 | 0.00 | 0.00 | 0.00   | 0.00 | 35     | 27  | 50   | 46  | 82   | 65  | 82  | 62  | 82    | 59  | 77   | 44 |
| 31        |               | 0.48 |      | 0.00 | 0.28   |      |       |      |      |      |        |      |        |     | 61   | 43  |      |     | 96  | 64  | 84    | 58  |      |    |
| Total/Avg | 1.83          | 7.01 | 2.22 | 1.22 | 0.97   | 1.17 | 1.17  | 1.17 | 1.22 | 0.97 | 1.17   | 1.17 | 48     | 30  | 61   | 43  | 73   | 53  | 84  | 60  | 84    | 58  | 75   | 47 |

Gold Section: **Sugarbeet Weed Control**

Green section: **Weed Control in Small Grains**

Tan Section: **Application Technology**

Blue Section: **Weed Control in Corn and Soybean**

Yellow section: **Alfalfa, Canola, Dry Edible Bean, Fallow, Field Pea, Flax, Lentil, Onion, Potato, Safflower, Sunflower.**

Pink Section: **Perennial and Noxious Weed control**