

NOT FOR PUBLICATION
SUMMARY OF 2018
WEED CONTROL EXPERIMENTS

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Fargo, North Dakota

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METHODS

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

FORMULATION

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

MISCELLANEOUS

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 (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	

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 = Prickly 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
Eda=Edamame	Smwe = Annual smartweed
Fach = False chamomile	Soyb, Sobe = Soybean
Fibw = Field bindweed	Spsp = Spotted spurge (prostrate spurge)
Fipc = Field pennycress	Sugb, Sgbr = Sugarbeet
Fisb = Field sandbur	Snfl, Suf1 = Sunflower
Flwe = Flixweed	Swcl = Sweet clover
Foba = Foxtail barley, Forage Barley	Tabw = Tame buckwheat
Fomi, Ftmi = Foxtail millet	Tamu = Tansy mustard
Fota, Fxtl = Foxtail species	Tumu = Tumble mustard
Girw = Giant ragweed	Tymu = Tame yellow mustard
Grft = Green foxtail	Vowh = Volunteer wheat
Gsft = Goosefoot	Vele = Velvetleaf
HNS, Hans = Hairy nightshade	Vema = Venice mallow
Howe = Horseweed	Wahe=Waterhemp
HRSW = Hard red spring wheat	Wht = Volunteer wheat
KOCZ = Kochia	Wibw = Wild buckwheat
Lath = Ladysthumb	Wigr = witchgrass
Lent = Lentils	Wimu = Wild mustard
Llsa = Lanceleaf sage	Wioa = Wild oat
Mael = marshelder	Wipm = Wild-proso millet
Mlgf = Mapleleaf goosefoot	Yeft = Yellow foxtail
Nabe = Navy bean goosefoot	

Soil Test Results at Various Weed Experiment Locations						
	Soil Texture	Organic Matter	pH	lb/A N	PPM	
					P	K
A. K. Eckre Grassland Preserve (ND)	Loamy sand	2.9	6.8	3	3	70
Absaraka, ND	Loam	2.0	7.2			
Ada, MN (Peters)	Sandy loam	1.8	8.4	120	23	46
Bathgate, ND	Silty loam	6.5	7.9	242	38	550
Becker, MN	Sandy loam	1.8	6.6	51	22	140
Casselton, ND	Silty clay	4.0	7.9	Fertilized by test		
Crookston	Clay	3.0	8.0	211	6	105
Crookston, MN (Peters)	Loam	3.3	8.6	16	10	62
Dwight	Sandy Clay Loam	1.7	7.9	50	4	60
Eckelson, ND	Loam	8.0	7.3	20	5	515
Fargo, ND (campus)	Silty clay	7.0	7.8	Fertilized by test		
Fargo, ND (section 22)	Silty clay	5.6	7.7	Fertilized by test		
Foxhome, MN (Peters)	Sandy loam	3.6	8.4	16	16	114
Geneseo, ND	Loam	6.0	4.0			
Glyndon, MN		4.6	8.1	Fertilized by test		
Hawley, MN	Loam	2.2	8.5	3	4	105
Herman, MN (Peters)	Loam	4.5	7.7	28	20	238
Hettinger, ND	Silty loam	2.9	6.7	Fertilized by test		
Hickson	Clay	7.2	7.5	103	55	975
Hillsboro, ND	Loam	5.6	6.6	68	28	318
Inkster, ND	Loamy sand	2.1	6.0	Fertilized by test		
Jamestown, ND (Pipestream Dam)	Loam	6.8	6.8	28	5	290
Lake Lillian, MN (Peters)	Clay-Loam	6	7.8	Fertilized by test		
Mayville, ND (Zollinger)	Sandy Loam	2.9	7.1	16	18	80
Minot, ND	Loam	2.7	7.0	Fertilized by test		
Moorhead, MN	Loam	4.9	7.9	186	104	495
Moorhead, MN (Peters)	Silty clay loam	4.5	8.2	30	33	308
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			
Ottertail, MN	Sandy loam	1.5	6.6		48	88
Park Rapids, MN	Sandy loam	1.5	6.1	Fertilized by test		
Prosper, ND (Peters)	Loam	3.9	7.5	74	22	118
Prosper, ND	Silt loam	4.2	7.3	90	41	350
Tappen, ND	Sandy loam	1.8	7.6			
Valley City, ND	Fine loam	8.2	6.7	11	15	640
Wheaton, MN (Peters)	Loam	4.2	6.9	94	24	236
Williston, ND	Loam	2.3	6.8	Fertilized by test		
Wyndmere, ND	Loamy sand	1.9	5.7	Fertilized by test		

LIST OF HERBICIDES TESTED IN 2015				
Common Name	Abbreviation	Company	Formulation	Trade Name
Acetochlor + atrazine	Acet + Atra	Corteva	4 + 1.5 L	Keystone LA NXT
Acetochlor + Dichlormid	Acet + Dcmd	Corteva	6.4 EC 3.2 ME	Surpass, Volley, TopNotch
Acetochlor + Clopyralid + Flumetsulam		Corteva	3.75+0.29+0.12 SC	Sure Start II
Acetochlor + fomesafen	Acet + fmsf	Monsano	2.83 + 0.64 EC	Warrant Ultra
Acetochlor + MON 4660	Acet + 4660	Monsanto	7 EC	Harness
Acetochlor		Monsanto	3.0 SE	Warrant
Acetochlor+Fomesafen	Acet+Fome	Monsanto	2.83+0.64 E	Warrant Ultra
Acetochlor+Mesotrione	Acet+Meso	Monsanto	3.52+0.33 EC	Harness Max
Acifluorfen	Acif	BASF	2 E, S	Ultra Blazer
Ambicarbazone		Bayer	70 DF	
Aminocyclopyrachlor	AMCP	Bayer	60 DF	Method 25L
Aminopyralid + 2, 4-D	GF-1004 GF-750	Corteva	0.33 + 2.67	Forefront
Aminopyralid	Amino	Corteva	2SL	Milestone
Atrazine	Atra	Various	90 DF	Several
Atrazine + Pyroxasulfone + Fluthiacet	Atra + Pxsf + Fltc	FMC		
Atrazine+s- metolachlor+Mesotrione+ bicyclopyrone	Atra+meto+meso+ bcpy	Syngenta	2.14+1+0.24+0.06 ZC	Acuron
Bentazon	Bent, Bsgn	BASF	4 1 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	Corteva	2.9 EC	Starane NXT
Bromoxynil & Fluroxypyr & MCPA/2,4-D	Brox +Flox +MCPA /2,4-D	Winfield Solutions	1.67 + 0.67 + 1.67 EC	Carnivore /Kochiavore
Bromoxynil & Pyrasulfotole	Brox + Pyst	Bayer	2.8 EC	Huskie
Bromoxynil & Pyrasulfotole & Thiencarbazone	Brox + Pyst + Thecz	Bayer	1.46 + 0.26 + 0.042 OD	Huskie Complete
Bromoxynil&Bicyclopyrone	Brox+Bcpy	Syngenta	1.46+0.31 EC	Talinor
Carfentrazone	Carf	FMC	40 WG	Aim, Quick Silver
Carfentrazone + 2,4-D	Carf + 2,4-D	FMC	0.13 + 3.9	Rage D-Tech
Carfentrazone + Halosulfuron	Priority	Tenkoz	12.5 + 50 WDG	Priority
Carfentrazone + Sulfentrazone		FMC	0.35+3.15 SE	Spartan Charge
Chlorimuron		Corteva	25 DF	Classic
Chlorsulfuron		Corteva, Bayer	75 WG, 75 WG	Telar / Glean

Clethodim	Clet	Valent Valent Agasco Tenkoz	2 EC 1 EC 2 EC 2 EC	Select Select Max Clethodim Volunteer
Clodinafop	Clfp	Syngenta	2 EC	Discover
Clopyralid	Clpy	Corteva	3 S	Stinger, ClopyrAg, Transline
Clopyralid + Acetochlor + mesotrione	Clpy + Acet + Meso	Corteva	0.19 + 2.8 + 0.3 SC	Resicore
Clopyralid & fluroxypyr	Clpy + Flox	Corteva/UAP	0.75 + 0.75	Widematch/Colt
Clopyralid + Triclopyr	Clpy + Tric	Corteva	0.75 + 2.25 EC	Redeem
Clopyralid + 2, 4-D	Clpy + 2,4-D	Corteva	0.38 + 2 S	Curtail
Cloransulam	Clor, FrstRt	Corteva	84 DF	Amplify, FirstRate
Cycloate	Cycl	Helm Agro	6 EC	Ro-Neet SB
Desmedipham + Phenmedipham	Desm + Phen	Various	0.65 + 0.65 E	Several
Dicamba	Dica	Various	4 S	Banvel, Clarity, Engenia, Several
Dicamba + diflufenzopyr + isoxadifin safener	BAS799	BASF	40 + 16 WDG	Status
Dicamba-dga + tembotrione	Dica + Tmbo	Bayer	1.86 + 0.27 SC	DiFlexx Duo
Dicamba-dga + "VaproGrip"	Dica + Vagr	Monsanto	2.9 SL	Xtendimax/FeXapan
Dichlobenil		Uniroyal	4 G	Casoron 4G
Diflufenzopyr + Dicamba	Difl + Dica	BASF	50+ 20 WDG	Distinct, Overdrive
Difenzoquat	Dife	AMVAC	2 S	Avenge
Diflufenzopyr	Difl	BASF	70 WG	None
Dimethenamid-P	Dime	BASF, Rosens	6 EC	Outlook / Propel
Diquat	Diqu	Syngenta, Helm Agro	2 S	Diquat
EPTC		Gowen	7 EC	Eptam
Ethalfluralin	Etha	Corteva	3 EC, 10 G	Sonalan
Ethofumesate	Etho	Various	4 F	Several
Fenoxaprop-P	Fenx	Bayer	1 EC	Puma
Fluazifop-P	Flfp-P	Syngenta	2 EC	Fusilade DX
Fluazifop-P + fenoxaprop	Flfp-P + fenx	Syngenta	2 + 0.66 EC	Fusion
Flucarbazone-NA	Flcz	Bayer	70 WDG	Everest / PRE-PARE
Flumiclorac		Valent	0.86SL	Resource
Flumetsulam + Clopyralid	Flms + Clpy	Corteva	18.5 + 50 WDG	Hornet WDG
Flumetsulam	Flms	Corteva	80 WG	Python
Flumioxazin	Flum	Valent, Tenkoz	50 WP	Valor / Encompass
Flumioxazin + cloransulam	Flum + clsm	Corteva	36 + 12 WDG	Surveil
Flumioxazin + Metribuzin + Imazethapyr	Flum + Metr + Imep	NuFarm	0.67 + 3 + 0.56 SC	Panther Pro
Flumioxazin+Thifensulfuron+ Tribenuron	Flum&Thif&Trib	Corteva	40.8+5+5	Afforia
Flumioxazin + pyroxasulfone		Valent	33.5 + 42.5 WDG	Fierce

Fluroxypyr	Flox	Corteva	1.5 EC	Starane
Fluroxypyr + 2, 4-Dioe	Flox + 2,4D	Corteva	0.75 + 3 lb/G EC	Starane + Salvo
Fluroxypyr + MCPAioe	Flox + MCPA	Corteva	0.71 + 2.84 EC	Starane + Sword
Fluroxypyr + 2, 4-Ddma	Flox + 2,4Da	Corteva	0.5 + 2 EC	Starane + Saber
Fluroxypyr + 2, 4-De		Corteva	3.75 EC	Starane + Esteron
Fluroxypyr + MCPAe		Corteva	3.55 EC	Starane + MCPA
Fluroxypyr + MCPAe + Clopyralid	Flox+MCPA+clpy	Winfield solutions	0.4 + 1.75 + 0.50 EC	Weld
Florasulam	Flas	Syngenta		not commercial
Florasulam + MCPA	Flas + MCPA	Syngenta	2.373L	Orion
Fluthiacet-methyl	Flut	FMC	0.91 EC	Cadet
Fluthiacet + Pyroxasulfone	Flut + pysf	FMC	0.0632 + 2.09 SC	Anthem
Fluthiacet + Pyroxasulfone	Flut + pysf	FMC	0.126+4.174 SC	Anthem Maxx
Fomesafen		Syngenta	2 EC	Reflex
Fomesafen + Fluthiacet		Syngenta, FMC	2.88 + 0.12 SC	Marvel
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		Albaugh	4 S	Krenite
Glufosinate	Gluf, Lbrty	BASF	1.67 SL ,2.33 SL	Liberty/Ignite 280
Glyphosate-ipa	Glyt	Various	3 ae/G S	Several
Glyphosate-K	Mon 78270 Touchdown KPMG	Monsanto, Syngenta	4.5 S 4.175	RU Weathermax, Touchdown Total
Halauxifen	Haux	Corteva	0.572 EC	Elevore
Halauxifen&Florasulam	Haux&Flas	Corteva	0.1+0.1 WDG	Quelex
Glyphosate-(NH ₃) ₂	Glyt	Syngenta	3 ae/G 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
Imazethapry + Pendimethalin	Imep + Pend	BASF	2.9 EC	Pursuit Plus
Imazethapyr	Imep, Prst	BASF	2 S	Pursuit
Imazethapyr + Saflufenacil	Imep = Saff	BASF	0.5 + 0.178 SC	Balance Pro/Balance Flexx
Indaziflam		Bayer	1.67 EC	Alion
Isoxadifen		Bayer	50 WG	Isoxadifen
Isoxaflutole		Bayer	4 SC, 2 SC	BalancePro / Balance Flexx

Isoxaflutole + thien carbazon + Safener		Bayer	2.63 SC	Corvus
Lactofen		Valent	2 EC	Cobra
Linuron		TKI	50 DF	Lorox
MCPA	MCPA	Various	4 EC, S	Several
Mesosulfuron + safener	Mess	Bayer	2 WG	Silverado
Mesosulfuron + Propoxycarbazone	Mess + Prcz	Bayer	8.14 + 2.03 WDG	Rimfire
Mesotrione	Mest	Syngenta	4 SC	Callisto
Mesotrione + glyphosate-K + S-metolachlor	Mest + glyt + Meto	Syngenta	4.93 SC (1:10:10)	Halex GT
Mesotrione + S-metolachlor	Mest + Meto	Syngenta	0.33 + 3.3 SC	Camix, Zemax
Mesotrione + S-metolachlor + Atrazine		Syngenta	0.25 + 2.5 + 0.94 SC	Lumax EZ
S-metolachlor	Meto	Syngenta	7.62 EC	Dual Magnum, Cinch
S-metolachlor + Benoxacor (active isomer)		Syngenta	7.6 E	Dual/II/Magnum
S-metolachlor + Atrazine		Syngenta	2.4 + 3.1 L 3.23 + 2.67L	Bicep II Magnum Bicep Lite II Magnum, Cinch ATZ
S-metolachlor + fomesafen		Syngenta	4.34 + 0.95 EC	Prefix
S-metolachlor + Mesotrione + Bicyclopyrone	Meto + Mest + Bycl	Syngenta	2.86 + 0.32 + 0.08 SC	Acuron Flexi
S-meto + mesotrione + glyt		Syngenta	4.38 SC	Halex GT
S-metolachlor + Metribuzin	Meto + Metr	Syngenta	5.25 + 1.25 L	Boundary
S-metolachlor + sulfentrazone	Meto + Sulf	FMC	6.3 + 0.7 EC	Authority Elite/Broadaxe XC
Metribuzin	Metr	Bayer	4 F, 75 DF	Sencor, several
Metribuzin + Sulfentrazone	Metr + Suen	FMC	0.27+0.187 WDG	Authority MTZ
Metsulfuron	Mets	Bayer	60 DF	Ally, Escort, Cimarron
Metsulfuron+Thifensulfuron+Fluroxypyr	Mets+thif+Flox, STD 71	FMC	0.025+0.25+1.3 OD	Travallas
Nicosulfuron	Nico	Corteva	75 DF	Accent
Nicosulfuron + Rimsulfuron	Nico + Rims	Corteva	50 + 25 DF	Steadfast
Oxyfluorfen	Oxyf	Corteva	2 EC/4 WBF	Goal/Goal Tender
Paraquat	Para	Syngenta	2.5 S	Several
Pendimethalin	Pend	BASF Tenkoz	3.8 ACS 3.3 EC	Prowl / H ₂ O Acumen Satellite
Picloram		Corteva	2 S	Tordon 22K
Pinoxaden	Pxdn	Syngenta	0.83 EC	Axial
Pinoxaden + Fenoxaprop	Pxdn +Fenx	Syngenta	0.42 + 0.42 EC	Foxfire
Pinoxaden + Florasulam	Pxdn + Flsm	Syngenta	0.774 + 0.0645	Axial TBC
Pinoxaden + Fluroxypyr	Pxdn + Flox	Syngenta	0.42 + 0.73 EC	Axial Star
Propoxycarbazone	Prcz	Bayer	70 WDG	Olympus
Propoxycarbazone&Mesosulfuron	Prcz&Mess	Bayer	6.75 + 4.5 WDG	Olympus Flex

Pyrasulfotole + bromoxynil +Safener + Fenoxaprop	Pyst + Brox + Renx	Bayer	1.32 EC	Wolverine
Pyroxasulfone	Pxsf	BASF	85 WG	Zidua
Pyroxasulfone + saflufenacil + imazethapyr	Pxsf + Saff + Imep	BASF	2.28 + 0.48 + 1.33 SC	Zidua Pro
Pyroxasulfone+Sulfentrazone	Pxsf+Suen	FMC	2.08+2.08 SC	Authority Supreme
Pyraflufen	pyff	Gowan	0.21 EC	ET/Vida
Pyroxsulam	Pxlm	Corteva	7.5 WG 21.5 WDG	PowerFlex Team Mate
Pyroxsulam + Fluroxypyr	Pxlm + flox	Corteva	0.107+0.95 SE	OpenSky
Pyroxsulam+Clopyralid+ Fluroxypyr	Pxlm+Clpy+Flox	Corteva	1.66 SE	Perfect Match
Pyroxsulam + Florasulam + Fluroxypyr	Pxlm + Flas + Flox	Corteva	0.838L	Goldsky
Quinclorac	Quin	BASF	75 WP	Facet
Quizalofop-P	Qufp-P	Corteva, Gowan	0.88 EC	Assure II, Targa
Rimsulfuron + Mesotrione	Rims + Meso	Corteva	4.17 + 41.67 WDG	Instigate
Rimsulfuron + Mesotrione	Rims + Meso	Corteva	7.5 + 31.25 SG	Realm Q
Rimsulfuron + Thifensulfuron	Rims + Thif	Corteva	16.7 + 16.7 SG	Alluvex
Rimsulfuron + Thifensulfuron	Rims + Thif,	Corteva	75 DF	Basis
Rimsulfuron + Thifensulfuron	Rims + Thif	Corteva, Adama	18.4 + 4 SG	Resolve Q
Rimsulfuron	Rims	Corteva	25 DF	Matrix / Resolve
Saflufenacil	BAS 800 04, Saff	BASF	2.85 SC	Sharpen
Saflufenacil + dimethenamid	Saff + dime	BASF	5.57 EC	Verdict
Sethoxydim	Seth	BASF	1.5 EC	Poast
Simazine		Syngenta	4 L	Princep 4L
Sulfentrazone	Suen	FMC	75 DF	Authority, Spartan, Payload
Sulfentrazone + Cloransulam		FMC	70 WDG	Authority First, Sonic
Sulfentrazone + Imazethapyr	Suen = Imep	FMC	3.33 + 0.67 L	Authority Assist
Sulfometuron	Sume	Bayer	75 DF	Oust
Sulfosulfuron	Sulf	Monsanto	75 WG	Maverick, Outrider
Tebuthiuron		Corteva	20 WG	Spike
Tembotrione + isoxadifen safener	AE172747, Temb	Bayer	(2:1) 3.5 SL	Laudis
Tembotrione + Thien carbazone	Temb + Thecz	Bayer	2.88 + 0.57 SC	Capreno
Thien carbazone	Thecz	Bayer	0.083 OD	Varro
Thifensulfuron+Fluroxypyr	Thif+Flox	FMC	0.25+1.3 OD	Sentrallas
Thifensulfuron + Tribenuron	Thif + Trib	FMC	50 + 25 DF	Several
Thifensulfuron + Tribenuron		FMC	25 + 25 SP	Affinity Broad Spectrum
Thifensulfuron + Tribenuron		FMC	40 + 10 SP	Affinity Tankmix
Thifensulfuron + Tribenuron + Fluroxypyr	Thif + Pinn + Flox	Arysta	4.5 + 1.5 + 25 EG	Supremacy
Thifensulfuron	Thif, Pinn ,Pncl	FMC, Corteva	75 DF	Several

Tolpyralate	Tolp	ISK	3.33 EC	
Topramezone		AmVac	2.8 SC	Impact
Topramezone+Atrazine	Topr+Atra	AmVac	0.26+4 SC	Impact Z
Topramezone + dimethenamid	Topr + Dime	BASF	0.1 + 5.25 SC	Armezon Pro
Tralkoxydim	Tral	Syngenta	40 DF	Achieve
Triallate	GWN 3040, Tria	Gowan	4EC	Far-Go
Tribenuron	Trib	FMC	75 DF	Several
Triclopyr	Trep	Corteva	4 EC	Garlon / Remedy
Trifluralin	Trif	Corteva	4 EC, 10 G	Several
Triflurosulfuron-methyl	Tfsu	FMC	50 DF	UpBeet
2,4-D	2,4-D	Various	Various EC, S, WSP	Several
2,4-DB	2,4-DB	Various		Several
2,4-D + Dicamba	2,4-D + dica	NuFarm	3.07+1 EC	BurnMaster
2,4-D-dma + Dicamba – dma salt		Winfield	2.87 + 1 SL	Brash
2,4-D + Dicamba + Fluroxypyr	2,4-D + dica + flox	NuFarm	3.02 + 1 + 0.75 EC	Scorch
2,4-D + Glyphosate		Corteva	3.33 SL	Enlist Duo

*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

				Flame	Loveland	\$40.00 G	0.5% v/v
				N-Tense	West Central	\$25.00 G	0.25 to 0.75% v/v
				Transport Ultra	Precision Labs	\$25.00 G	0.25 to 0.75% v/v
				Surfactant & AMS & AMS Replacement (WCA)			
				Bronc Total	Wilbur-Ellis	\$30.00 G	0.75 to 1% v/v
				Transport	Precision Labs	\$34.00 G	0.5 % v/v
				Acidic AMS Replacement (WCA)			
				AMADS - Monocarbamide dihydrogen sulfate or urea + sulfuric acid			
				Brimstone	Wilbur-Ellis	\$34.00 G	3 pt/100 G
				CT-301	Cheltec	\$ - G	4-8 fl oz/100 G
				ET-4000	MK Ag Service	\$31.00 G	4 pt/100 G
				Gun Smoke	Loveland	\$35.00 G	3 to 4 pt/100 G
				Hel-Fire	Helena	\$35.00 G	3 to 4 pt/100 G
				Import	Precision Labs	\$34.00 G	3 to 4 pt/100 G
				N Go/N Tank	Adjuvants Plus	\$34.00 G	3 to 4 pt/100 G
				Basic pH Blend			
				Linkage	West Central	\$19.00 G	1% v/v
				Mycrimix Plus	J.R. Simplot	\$19.00 G	1% v/v
				Quad 7	Loveland	\$15.50 G	1% v/v
				Petroleum Oil Concentrate			
				Agri-Dex	Helena	\$16.00 G	2 to 4 pt/A
				Crop Oil Concen.	Helena	\$ - G	2 to 4 pt/A
				Herbimax	Loveland	\$12.00 G	2 to 4 pt/A
				Ortech	Rosens	\$7.50 G	2 to 4 pt/A
				Premium Crop Oil	United Suppl.	\$10.00 G	2 to 4 pt/A
				Premium COC	West Central	\$10.00 G	2 to 4 pt/A
				Prime Oil	Winfield	\$10.00 G	2 to 4 pt/A
				Protyx Aerial	Precision Labs	\$22.00 G	0.5 pt/A
				ROC Crop Oil	Wilbur-Ellis	\$12.00 G	2 to 4 pt/A
				Methylated Seed Oil (MSO)			
				Adigor	Syngenta	w/Axial	9.6 fl oz/A
				MSO Leci-Tech	Loveland	\$18.00 G	1 to 2 pt/A
				MSO Ultra	Precision Labs	\$20.00 G	1 to 2 pt/A
				Persist Ultra	J.R. Simplot	\$20.00 G	1 to 2 pt/A
				Premium MSO	Helena	\$18.00 G	1 to 2 pt/A
				Soy-Stik	West Central	\$18.00 G	1 to 2 pt/A
				Succeed	United Suppl.	\$17.00 G	1 to 2 pt/A
				Sundance II	Rosens	\$16.00 G	1 to 2 pt/A
				Superspread MSO	Wilbur-Ellis	\$21.00 G	1 to 2 pt/A
				Upland MSO	West Central	\$20.00 G	1 to 2 pt/A
				High Surfactant Oil Concentrate			
				Between (PO)	United Suppl.	\$15.00 G	1 to 2 pt/A
				Destiny HC (MSO)	Winfield	\$34.00 G	1 to 2 pt/A
				Diplomat (PO)	Rosens	\$11.50 G	1 to 2 pt/A
				Exchange (PO)	Precision Labs	\$22.00 G	1 to 2 pt/A
				Hi-Load (PO)	Simplot	\$ - G	1 to 2 pt/A
				High Load (PO)	Wilbur-Ellis	\$20.00 G	1 to 2 pt/A
				Kixyt (MSO)	Precision Labs	\$32.50 G	1 to 2 pt/A
				Savvy (MSO)	West Central	\$29.00 G	1 to 2 pt/A
				Stake (PO)	West Central	\$16.50 G	1 to 2 pt/A
				Superb HC (PO)	Winfield	\$20.00 G	1 to 2 pt/A
				Oil Based Surfactant			
				Trophy Gold	West Central	\$32.00 G	0.5 pt/A
				Base Oil, Surfactant & WCA			
				Simplyx	Precision Labs	\$ - G	0.5 pt/A

MSO & Basic pH Blend			
Base	West Central	\$26.00 G	1 to 2 pt/A
Entro	Various	\$26.00 G	1 to 2 pt/A
Renegade	Wilbur-Ellis	\$23.00 G	1 to 2 pt/A

MSO & AMS Replacement (WCA)			
SuperCharge	Syngenta	w/Achieve	0.5% v/v

MSO & Organosilicone Surfactant			
Air Force	United Suppl.	\$44.00 G	4 to 6 fl oz/A
Dyne-Amic	Helena	\$51.50 G	4 to 6 fl oz/A
Rivet	Winfield	\$44.00 G	4 to 6 fl oz/A
Syl-tac	Wilbur-Ellis	\$59.00 G	4 to 6 fl oz/A

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

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

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

AMS & Deposition/Retention & Defoamer			
Array	Rosens	\$1.60 lb	9 to 14 lbs/100 G
Border Xtra DF	Precision Labs	\$1.60 lb	18 lb/100 G
Border Xtra 4L	Precision Labs	\$5.00 G	5% v/v
Border Xtra 8L	Precision Labs	\$8.00 G	2.5% v/v
Vector	Rosens	\$5.20 lb	2 lb/100 G

AMS & Surfactant & Deposition/Retention & Defoamer			
One-Ap XL	West Central	\$1.85 lb	9 to 15 lb/100 G
BroncPlus DryEDT	Wilbur-Ellis	\$1.8560 lb	10 lb/100 G
Bronc Triple	Wilbur-Ellis	\$34.00 G	2 qt/100 G
Pay Off Plus	United Suppl.	\$2.00 lb	10 to 13 lb/100 G
Zenith	Rosens	\$1.25 lb	1.5 to 2.25 lb/A

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

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

AMS Replacement (WCA) & Surfactant & Deposition/Retention & Defoamer			
Weather-Gard	Loveland	\$50.00 G	1 to 2 qt/100 G
Complete Leci-Tec			

AMS Replacement (WCA) & Deposition/Retention & Defoamer			
Formula 1	United Suppl.	\$30.00 G	1 to 3 qt/100 G

Deposition/Retention - Drift Retardants			
Affect GC	United Suppl.	\$40.00 qt	1 to 2 fl oz/100 G
Border EG 250	Precision Labs	\$1.00 oz	10 oz/100 G
Corral Poly	Winfield	\$25.00 qt	4 to 12 fl oz/100 G
Coverage G-20	Wilbur-Ellis	\$32.00 G	2 to 4 fl oz/A
Direct	Precision Labs	\$25.00 qt	1 to 4 oz/100 G
Drift Down	Rosens	\$15.00 qt	4 to 8 fl oz/100 G
In-Place	Wilbur-Ellis	\$36.00 G	4 fl oz/pt-lb herbicide
InterLock	Winfield	\$45.00 G	4 to 6 fl oz/A
Placement	Winfield	\$38.00 G	4 fl oz/pt-lb herbicide
Shroud II	United Suppl.	\$15.00 qt	10 to 12 oz/100 G

Deposition/Retention & Surfactant & Drift Retardant			
Powerlock	Winfield	\$44.00 G	5 to 8 oz/AI

Drift Retardant & Defoamer			
Compadre Leci-Tc	Loveland	\$55.00 G	1 pt/100 G
Sedate	West Central	\$35.00 G	1 pt/100 G

Acidifying Agents			
Complete	Winfield	\$35.00 G	1 to 3 pt/100 G
Indicate 5	United Suppl.	\$48.00 G	2 to 4 pt/100 G
LI-700 Leci-Tech	Loveland	\$28.00 G	2 to 4 pt/100 G
New Balance	Precision Lab	\$32.00 G	2 to 4 pt/100 G
SuperSpread 7000	Wilbur-Ellis	\$32.00 G	0.5 to 2 pt/100 G
Tri-Fol	Wilbur-Ellis	\$30.00 G	0.5 to 2 pt/100 G

Compatibility Agents			
CompatibilityAgent	West Central	\$30.00 G	1 to 3 pt/100 G
Complete	Winfield	\$35.00 G	1 to 3 pt/100 G
Convert	Precision Labs	\$35.00 G	1 to 6 pt/100 G
Embrace	Wilbur-Ellis	\$36.00 G	1 to 4 pt/100 G
EZ-Mix	Loveland	\$30.00 G	1 to 4 pt/100 G
Mix-All	Rosens	\$35.00 G	1 to 4 pt/100 G
Compatibility Plus	United Suppl.	\$41.50 G	1 to 2 pt/100 G

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

NORTH DAKOTA ADJUVANT COMPENDIUM

For other adjuvants: www.herbicide-adjuvants.com/

Nonionic Surfactant (NIS)			
Activator 90	Loveland	\$32.00/G	0.25 - 0.5% v/v
APSA-80	Amway	\$32.00/G	0.25 - 0.5% v/v
ChemSurf	United Suppl.	\$32.00/G	0.25 - 0.5% v/v
Wetcit	Oro Agri	\$75.00/G	0.25 - 0.5% v/v
Haf-Pynt	Drexel	\$31.00/G	0.25 - 0.8% v/v
Hypertonic	CHS	\$33.00/G	0.25 - 0.5% v/v
Induce	Helena	\$31.00/G	0.25 - 0.5% v/v
Insist 90	Wilbur-Ellis	\$24.00/G	0.25 - 0.5% v/v
K-Tone	West Central	\$33.00/G	0.25 - 0.5% v/v
Liberate LeciTech	Loveland	\$44.00/G	0.25 - 0.5% v/v
Pen-A-trate II	Precision Labs	\$32.00/G	0.25 - 0.5% v/v
Prefer 90	West Central	\$33.00/G	0.25 - 0.5% v/v
Preference	Winfield	\$35.00/G	0.25 - 0.5% v/v
Protyx	Precision Labs	\$100.00/G	0.125% v/v
R-11	Wilbur-Ellis	\$32.00/G	0.25 - 0.5% v/v
Rainier EA	Wilbur-Ellis	\$37.00/G	0.25 - 0.5% v/v
Surf-AC 910	Drexel	\$25.00/G	0.25 - 0.5% v/v
Tradition 93	Rosens	\$-/G	0.25 - 0.5% v/v
Translate	United Suppl.	\$38.00/G	0.25 - 0.5% v/v
Wet-Sol 99	Schaeffers	\$28.00/G	0.25 - 0.5% v/v

NIS Approved for us in water

Surfactants approved for use in bodies of water are:

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

Surfactant & Silicone

Freeway	Loveland	\$110.00/G	0.75 to 2 pt./100 G
Kinetic	Helena	\$115.00/G	0.75 to 2 pt./100 G
Sil-Fact	Drexel	\$45.00/G	0.75 to 2 pt./100 G
Silkin	Winfield	\$100.00/G	0.75 to 2 pt./100 G
Speed	Precision Labs	\$135.00/G	0.75 to 2 pt./100 G
Sur-Plus	United Suppl.	\$87.00/G	0.5 to 2 pt./100 G
Sylcoat	Wilbur-Ellis	\$122.00/G	0.75 to 2 pt./100 G

Surfactant & Deposition/Retention (Drift Retardant)

Cerium Elite	West Central	\$41.00/G	1 qt/100 G
Fixate Pro	West Central	\$41.00/G	1 qt/100 G
MasterLock	Winfield	\$55.00/G	5 to 8 fl oz/A
Parachute	West Central	\$42.00/G	3 to 4 fl oz/A

Surfactant & Drift Retardant & Antifoam

Powerlock	Winfield	\$55.00/G	5 to 8 oz/A
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Surfactant & Nono-technology (carbon tubes)

Chem Xcel Gen 3	C&R Enterprise	\$62.50/G	22-25 fl oz/G
Nano Excel	Enviro Science	-	2 to 8 fl oz/A
Nano-Revolution 3.0	Max Systems	\$145.00G	2 to 8 fl oz/A

Petroleum Oil Concentrate (POC/COC)

Agri-Dex	Helena	\$21.00/G	1 to 2 pt/A
Herbimax	Loveland	\$22.00/G	1 to 2 pt/A
Redur Crop Oil	West Central	\$14.00/G	1 to 2 pt/A
Peptoil	Drexel	\$12.00/G	1 to 2 pt/A
Prime Oil	Winfield	\$15.00/G	1 to 2 pt/A
Protyx Aerial	Precision Labs	\$21.00/G	0.5 pt/A
R-Way	Rosens	\$-/G	1 to 2 pt/A
ROC Crop Oil	Wilbur-Ellis	\$15.00/G	1 to 2 pt/A

Crop (Soybean) Oil Concentrate

BeanOil	Drexel	\$15.00/G	1 to 2 pt/A
High Surfactant Petroleum Oil Concentrate (HSPOC)			
Between	United Suppl.	\$20.00/G	1 to 2 pt/A
Diplomat	Rosens	\$21.00/G	1 to 2 pt/A
Exdchange	Precision Labs	\$26.00/G	1 to 2 pt/A
Hi-Load	Simplot	\$26.00/G	1 to 2 pt/A
High Load	Wilbur-Ellis	\$26.00/G	1 to 2 pt/A
High Mark	Loveland	\$26.00/G	1 to 2 pt/A
Sitka	CHS	\$24.00/G	1 to 2 pt/A
Stake	West Central	\$24.00/G	1 to 2 pt/A
Superb HC	Winfield	\$25.00/G	1 to 2 pt/A

Methylated Seed Oil (MSO)

Emulate	CHS	\$22.00/G	1 to 2 pt/A
Fire-Zone	Helena	\$27.00/G	1 to 2 pt/A
Hasten	Wilbur-Ellis	\$34.00/G	1 to 2 pt/A
MES-100	Drexel	\$15.00/G	1 to 2 pt/A
MSO Leci-Tech	Loveland	\$27.00/G	1 to 2 pt/A
MSO Ultra	Precision Labs	\$26.00/G	1 to 2 pt/A
Noble	Winfield	\$23.00/G	1 to 2 pt/A
Persist Ultra	J.R. Simplot	\$20.00/G	1 to 2 pt/A
Premium MSO	Helena	\$20.00/G	1 to 2 pt/A
Succeed	United Suppl.	\$19.00/G	1 to 2 pt/A
Sundance II	Rosens	\$21.00/G	1 to 2 pt/A
Superspread MSO	Wilbur-Ellis	\$27.00/G	1 to 2 pt/A
Upland MSO	West Central	\$22.00/G	1 to 2 pt/A

MSO & Organosilicone Surfactant

Air Force	United Suppl.	\$47.00/G	4 to 6 fl oz/A
Dyne-Amic	Helena	\$57.00/G	4 to 6 fl oz/A
Inergy	Winfield	\$55.00/G	4 to 6 fl oz/A
Sil-MES 100	Drexel	\$40.00/G	4 to 6 fl oz/A
Syl-Tac	Wilbur-Ellis	\$63.00/G	4 to 6 fl oz/A

MSO & Basic pH Blend

Entro	Various	\$28.00/G	1 to 2 pt/A
Renegade EA	Wilbur-Ellis	\$30.00/G	1 to 2 pt/A

MSO & Deposition/Retention (Drift Retardant)

StrikeLock	Winfield	\$-/G	10 to 12 fl pt/A
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MSO & Surfactant & Deposition/Retention (Drift Retardant)

Plexus	Rosens	\$-/G	10 to 12 fl oz/A
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High Surfactant Methylated Oil Concentrate (HSMOC)

Cide Winder	Helena	\$42.00/G	1 to 1.5 pt/A
Destiny HC	Winfield	\$40.00/G	1 to 1.5 pt/A
Duce	Helena	\$36.00/G	1 to 1.5 pt/A
Glacier EA	Wilbur-Ellis	\$50.00/G	1 to 1.5 pt/A
Hot MES	Drexel	\$20.00/G	1 to 1.5 pt/A
Kixyt	Precision Labs	\$44.00/G	1 to 1.5 pt/A
Savvy	West Central	\$37.00/G	1 to 1.5 pt/A
Top Shelf	Loveland	\$32.00/G	1 to 1.5 pt/A
Woodside	CHS	\$37.00/G	1 to 1.5 pt/A

ADJUVANTS CONTAINING AMMONIUM**Ammonium sulfate (AMS)/Urea ammonium nitrate (UAN)**

Fertilizer			
AMS (Dry)	Various	\$0.35 lb	4 to 8.5 lb/100G
AMS (liquid)	Various	\$6-9/G	2 to 4 qt/A
28% UAN/bulk	Various	\$3-10/G	2 to 4 qt/A

AMS & Surfactant (NIS)

Cayuse Plus	Wilbur-Ellis	\$27.00/G	2 to 6 qt/100 G
Class Act NG	Winfield	\$13.00/G	2.5% v/v
Class Act Flex	Winfield	\$15.00/G	1 to 4% v/v
Deliver	Precision Labs	\$14.00/G	2.5% v/v
Impressive DB	Rosens	\$1.25/lb	2.25 lb/A
Powerhouse	Rosens	\$12.00/G	5 to 10 qt/100 G
Precinct	West Central	\$13.00/G	2.5% v/v
Re-Duce	Helena	\$12.00/G	1% v/v
Surfate	Loveland	\$23.00/G	1% v/v
Ultra Surf AMS	United Suppl.	\$10.00/G	2.5% v/v
Wheelhouse	CHS	\$13.00/G	2.5% v/v

AMS & Drift Retardant (Deposition)

AMS 20/10	United Suppl.	\$1.60/lb	10 lb/100 G
Array	Rosens	\$2.50/lb	9 lbs/100 G
Lox Plus	Drexel	\$15.00/G	1 to 2 G/100 G
StrikeZone MXD	Helena	\$5.00/G	2 lb/100 G
Vector	Rosens	\$7.50/G	2 lb/100 G

AMS & Defoamer

AMS-Xtra	Drexel	\$4.00/G	2.5 to 5% v/v
Omnix LDF	Precision Labs	\$9.00/G	2.5 to 5% v/v

AMS & Deposition & Defoamer

AMS-Supreme	Drexel	\$15.00/G	2.5 to 5% v/v
Border Xtra DF	Precision Labs	\$2.00/lb	18 lbs/100 G
Border Xtra 8L	Precision Labs	\$13.00/G	2.5% v/v
Drift-Gard	Rosens	\$-/G	9 lbs/100 G

AMS & Surfactant & Deposition & Defoamer

AMS-All	Drexel	\$11.00/G	1 to 5 G/100 G
Blue Diamond	NWC,Emerado	\$15.00/G	1 to 2 qt/100 G
Bronc Triple	Wilbur-Ellis	\$43.00/G	10 lb/100 G
Pay Off Plus	United Suppl.	\$2.00/lb	10 lb/100 G
Zenith	Rosens	\$1.80/lb	1.5 to 2.25 lb/A

AMS & Surfactant & Paraffinic oil

Flame	Loveland	\$42.00/G	0.5% v/v
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AMS & WCA* (AMS Replacement)

Alliance	Winfield	\$18.00/G	1.25% v/v
Bronc Max	Wilbur-Ellis	\$25.00/G	0.5 to 1% v/v
Choice W-Master	Loveland	\$30.00/G	0.5% v/v
Enact	Rosens	\$25.00/G	0.5% v/v
SeQuel	Helena	\$17.00/G	1 to 5 pt/100 G
Transport LpH	Precision Lab	\$20.00/G	0.5% v/v

AMS & WCA* & Deposition

AMS 2000	United Suppl.	\$1.25/lb	10 to 17 lb/100 G
AmSol Plus	United Suppl.	\$6.00/G	
Double Down	United Suppl.	\$8.00/G	
Rush	Winfield	\$25.00/G	

AMS & WCA* & Deposition & Defoamer

Holzit	Drexel	\$1.60/lb	9 lb/100 G
Stay Down	Rosens	\$-/G	5 lb/100 G

AMS & WCA* & Surfactant & Deposition & Defoamer

Veracity	West Central	\$26.00/G	3 qt/100 G
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Basic pH Blend

Axon	CHS	\$24.00/G	1% v/v
Linkage	West Central	\$24.00/G	1% v/v
Newtone	Winfield	\$30.00/G	1% v/v
Quad 7	Loveland	\$22.00/G	1% v/v
Sequestra	Drexel	\$24.00/G	1% v/v

Acidic AMS Replacement (contains AMADS)

AMADS=Monocarbamide dihydrogen sulfate =urea + sulfuric acid			
Aduro	Winfield	\$32.00/G	4 pt/100 G
Brimstone	Wilbur-Ellis	\$42.00/G	4 pt/100 G
ET-4000	MK Ag Service	\$31.00/G	4 pt/100 G
Fixate	CHS	\$32.00/G	4 pt/100 G
GunSmoke	Loveland	\$40.00/G	4 pt/100 G
Hel-Fire	Helena	\$36.00/G	4 pt/100 G
Import	Precision Labs	\$37.00/G	4 pt/100 G
Jackhammer	West Central	\$32.00/G	4 pt/100 G

Acidic WCA*

ET-4000	MK Ag Service	\$31.00/G	4 pt/100 G
Regulator 2.0	Max Systems	\$22.00/G	2 to 4 qt/100 G

Acidic WCA* & Surfactant & Base Oil

Simplyx	Precision Labs	\$40.00/G	0.5 pt/A
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*Non ammonium/non-AMS water conditioning agent

ADJUVANTS CONTAINING NO AMMONIUM**WCA* / AMS Replacement**

Choice Trio	Loveland	\$29.00/G	0.5% v/v
Citron	Farm Direct	\$3.50/lb	2.2 lb/100 G
Class Act Ridion	Winfield	\$ -	0.5 to 2% v/v
Cut-Rate	Wilbur-Ellis	\$2.75/lb	3 to 4 lb/100 G
Quest/Request	Helena	\$22.00/G	0.5% v/v
Speedway	United Suppl.	\$38.00/G	0.5% v/v

WCA* & Surfactant

Best Shot	CHS	\$ -	0.25 to 0.5% v/v
Fastrack	United Suppl.	\$28.00/G	0.75% v/v
Flame	Loveland	\$42.00/G	0.5% v/v
Jackhammer Elite	West Central	\$27.00/G	2 qt/100 G
Last Chance	West Central	\$ -	0.25 to 0.5% v/v
Ransport Ultra	Precision Labs	\$39.00/G	0.25 to 0.75% v/v
Wheelhouse Pro	CHS	\$27.00/G	2 qt/100 G

WCA* & HSMOC

Zaar	Helena	\$37.00/G	1% v/v
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WCA* & Surfactant & Deposition/Retention & Defoamer

Strike Force	Loveland	\$65.00/G	2 qt/100 G
Trapline Pro	CHS	\$62.00/G	2 qt/100 G
Trapline Pro II	CHSI	\$51.00/G	2 qt/100 G
Veracity Elite	West Central	\$62.00/G	2 qt/100 G
Veracity Elite II	West Central	\$51.00/G	2 qt/100 G
Weather-Gard	Loveland	\$65.00/G	2 qt/100 G
Complete Leci-Tec			

WCA* & Deposition/Retention & Defoamer

AccuQuest WM	Helena	\$36.00/G	1 to 3 qt/100 G
Formula 1	United Suppl.	\$30.00/G	1 to 3 qt/100 G

*Non ammonium/non-AMS water conditioning agent

UTILITY ADJUVANTS**Deposition/Retention – Drift Retardants**

Affect GC	United Suppl.	\$40.00/qt	1 to 2 fl oz/100 G
Border EG 250	Precision Labs	\$1.20/oz	10 oz/100 G
Buckhorn Total	CHS	\$58.00/G	2 to 6 fl oz/A
Cognitive 1	West central	\$34.00/G	2 to 4 qt/100 G
Corral Poly	Winfield	\$25.00/qt	4 to 12 fl oz/100 G
Crosshair	Wilbur-Ellis	\$51.00/G	4 fl oz/A
Direct	Precision Labs	\$34.00/qt	1 to 4 oz/100 G
In-Place	Wilbur-Ellis	\$51.00/G	4 fl oz/pt-lb
InterLock	Winfield	\$60.00/G	Herbicide
Lox	Drexel	\$25.00/G	4 to 6 fl oz/A
Placement	Winfield	\$45.00/G	4 to 8 fl oz/A
Point Blank	Helena	\$42.00/qt	2 to 6 fl oz/100 G
Sedate Max	West Central	\$58.00/G	2 to 6 fl oz/A

Deposition/Retention & Defoamer

Compadre Leci-Tc	Loveland	\$58.00/G	1 pt/100 G
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Acidifying Agents

BS-500	Drexel	\$17.00/G	2 to 4 pt/100 G
Complete	Winfield	\$44.00/G	1 to 3 pt/100 G
Denali EA	Wilbur-Ellis	\$35.00/G	0.4 to 4 pt/100 G
Indicate 5	United Suppl.	\$48.00/G	2 to 4 pt /100 G
Induce pH	Helena	\$37.00/G	2 to 4 pt /100 G
LI-700 Leci-Tech	Loveland	\$39.00/G	2 to 4 pt /100 G
New Balance	Precision Lab	\$44.00/G	2 to 4 pt /100 G
SuperSpread 7000	Wilbur-Ellis	\$31.00/G	0.5 to 2 pt/100 G
Sequestra	Drexel	\$24.00/G	1 to 5 G/100 G
Tri-Fol	Wilbur-Ellis	\$36.00/G	0.5 to 4 pt/100 G

Compatibility Agents

Blendex	Helena	\$55.00/G	1 to 5 pt/100 G
Compatibilyt Agent	West Central	\$35.00/G	1 to 3 pt/100 G
Complete	Winfield	\$44.00/G	1 to 3 pt/100 G
Convert	Precision Labs	\$50.00/G	1 to 6 pt/100 G
EZ-Mix	Loveland	\$38.00/G	1 to 4 pt/100 G
Mix	Drexel	\$20.00/G	1 to 4 pt/100 G
Mix-All	Rosens	\$45.00/G	1 to 4 pt/100 G
Compatibility Plus	United Suppl.	\$41.50/G	1 to 2 pt/100 G

Spray Tank Cleaners

Tank Cleaner	Various	\$12-25 qt	1 to 2 qt/100 G
Tank Cleaner	Various	\$5-7.00 lb	1 to 2 lb/100 G

CLIMATIC DATA, 2018, Ada MN

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	0.18	0.37	0.00	0.00	0.04	24	9	46	36	79	55	81	58	64	51	78	49						
2	0.00	0.00	0.45	0.12	0.00	0.36	28	12	70	66	52	83	58	74	39	74	46							
3	0.00	0.00	0.00	0.20	0.00	0.00	21	8	73	73	51	84	64	82	58	78	43							
4	0.00	0.00	0.00	0.84	0.00	0.00	30	7	81	83	46	85	61	86	65	78	52							
5	0.00	0.00	0.11	0.00	0.00	0.00	26	13	81	84	52	76	55	85	56	69	41							
6	0.00	0.00	0.11	0.00	0.00	0.00	23	4	83	75	53	81	51	77	55	73	38							
7	0.00	0.08	0.00	0.00	0.00	0.27	24	8	88	79	47	91	67	86	50	75	54							
8	0.00	1.33	0.00	0.08	0.00	0.00	32	14	63	81	59	84	63	87	60	76	55							
9	0.00	0.01	0.07	0.00	0.00	0.00	33	22	66	92	65	83	58	87	53	76	59							
10	0.00	0.00	0.00	0.02	0.00	0.00	40	29	54	86	61	83	61	88	57	81	52							
11	0.11	0.00	0.33	0.00	0.00	0.00	44	26	65	68	46	92	71	93	55	86	53							
12	0.04	0.00	0.01	0.00	0.00	0.00	40	32	69	74	44	83	59	93	67	76	50							
13	0.00	0.00	0.00	0.00	0.00	0.00	37	28	76	81	50	89	56	90	60	74	58							
14	0.00	0.00	0.01	0.00	0.01	0.49	35	25	82	86	60	89	63	72	48	77	50							
15	0.00	0.00	0.01	0.21	0.00	0.04	38	25	83	86	68	78	60	79	41	74	57							
16	0.00	0.00	0.48	0.00	0.00	0.00	44	23	87	75	62	75	52	85	46	92	53							
17	0.00	0.38	0.31	0.00	0.00	0.00	53	25	63	76	57	78	47	82	51	62	44							
18	0.00	0.02	0.00	0.00	0.00	0.00	55	31	74	81	53	85	51	83	54	67	42							
19	0.00	0.00	0.00	0.15	0.99	0.00	57	28	68	82	57	73	64	71	56	68	40							
20	0.00	0.00	0.00	0.00	0.00	1.57	58	32	72	85	53	76	61	76	51	57	45							
21	0.00	0.00	0.00	0.00	0.00	0.02	62	33	76	88	57	75	56	75	51	62	40							
22	0.00	0.00	0.00	0.74	0.00	0.00	66	34	81	87	61	84	58	83	47	67	43							
23	0.00	0.18	0.02	0.00	0.04	0.00	66	41	87	85	60	77	60	81	57	65	44							
24	0.03	0.00	0.01	0.00	0.42	0.00	54	29	91	84	61	79	53E	78	60	58	40							
25	0.00	0.00	0.00	0.10	0.00	0.00	66	27	93	81	59	74	56	80	59	55	37							
26	0.00	0.00	0.00	0.00	1.12	0.07	60	37	94	84	61	71	51	74	57	60	36							
27	0.00	0.22	0.00	0.00	0.02	0.03	54	30	83	88	59	76	46	65	52	53	36							
28	0.00	0.00	0.00	0.00	0.00	0.00	60	24	88	88	58	80	47	61	48	46	24							
29	0.00	0.03	0.79	0.00	0.00	0.01	73	39	91	76	64	82	49	72	44	44	25							
30	0.00	0.04	0.00	0.00	0.00	0.00	81	38	79	81	59	86	50	79	55	47	33							
31		0.00		0.00	0.02				81			90	58	79	67									
Total/Avg	0.18	2.47	3.08	2.46	2.62	2.9	46	24	77	81	56	81	51	80	54	68	45							

CLIMATIC DATA, 2018, Carrington, 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	1.47	0.04	0.00	0.02	23	6	51	34	79	60	78	54	68	48	80	41						
2	0.00	0.02	0.00	0.01	0.00	0.00	20	8	69	29	63	53	83	54	77	48	73	46						
3	0.00	0.00	0.00	1.48	0.00	0.00	21	3	75	33	75	47	83	62	89	60	82	44						
4	0.00	0.00	0.00	0.64	0.00	0.03	30	7	80	36	84	52	75	59	90	59	72	49						
5	0.00	0.00	0.12	0.00	0.00	0.00	26	8	81	48	87	55	76	54	81	53	71	44						
6	0.00	0.00	0.00	0.00	0.00	0.00	19	-2	82	40	76	57	79	59	79	57	74	44						
7	0.00	0.00	0.02	0.00	0.00	0.00	26	1	81	45	77	52E	90	67	89	54	80	55						
8	0.00	0.24	0.00	0.17	0.00	0.00	24	13	61	51	85	58	85	63	88	58	78	54						
9	0.05	0.12	0.00	0.00	0.00	0.00	29	13	66	37	89	58	82	57	89	54	82	54						
10	0.00	0.00	0.39	0.07	0.00	0.00	40	22	51	29	86	62	82	66	92	53	82	45						
11	0.00	0.00	0.51	0.00	0.00	0.00	35	28	62	39	67	54	84	66	94	52	87	52						
12	0.01	0.00	0.04	0.00	0.00	0.00	33	27	67	38	71	51	83	60	100	70	70	44						
13	0.00	0.00	0.00	0.00	0.01	0.00	32	21	77	50	79	49	88	58	83	58	71	49						
14	0.00	0.00	0.00	0.00	0.00	0.00	36	20	78	45	84	56	88	65	73	48	74	43						
15	0.00	0.00	0.00	0.00	0.00	0.00	38	20	84	41	81	64	77	56	82	44	74	50						
16	0.00	0.00	0.20	0.00	0.00	0.00	43	21	84	54	76	58	78	51	89	48	83	51						
17	0.00	0.03	0.00	0.00	0.00	0.00	44	28	64	49	73	56	80	50	82	49	63	37						
18	0.00	0.71	0.00	0.00	0.00	0.00	50	31	50	42	77	49	83	60	90	57	68	32						
19	0.00	0.00	0.00	0.07	0.00	0.00	54	27	64	35	80	57	82	61	72	48	66	38						
20	0.00	0.00	0.00	0.01	0.00	0.66	56	30	72	35	82	55	76	56	73	42	51	39						
21	0.00	0.00	0.04	0.00	0.00	0.04	61	32	76	41	86	56	77	51	79	46	57	40						
22	0.00	0.00	0.02	0.00	0.00	0.00	66	36	83	50E	86	64	79	58	83	44	66	39						
23	0.00	0.00	0.54	0.00	0.03	0.00	62	36	83	58E	81	62	79	51	79	57	48	39						
24	0.00	0.00	0.41	0.04	0.00	0.00	55	34	88	63	78	61	82	47	81	62	54	42						
25	0.00	0.00	0.04	0.12	0.03	0.00	67	32	94	61	76	62	73	54	70	54	58	37						
26	0.00	0.00	0.00	0.00	0.03	0.00	66	31	94	57	80	62	71	50	75	50	62	34						
27	0.00	0.14	0.01	0.00	0.11	0.00	54	37	82	63	83	62	76	47	60	43	55	35						
28	0.00	0.01	0.00	0.00	0.03	0.00	62	27	82	60	89	59	80	48	64	45	45	27						
29	0.00	0.00	0.82	0.00	0.00	0.00	78	40	87	58	78	62	81	48	76	46	49	32						
30	0.00	0.00	0.00	0.00	0.00	0.00	66	37	79	61	74	57	85	49	82	55	44	29						
31		0.01		0.00	0.00				83	58			87	59	86	54								
Total/Avg	0.06	1.28	4.63	2.65	0.24	0.75	44	22	75	46	79	58	81	56	81	52	67	42						

CLIMATIC DATA, 2018 Grand Forks, 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			
	0.00	0.03	0.47	0.10	0.00	0.00	27	10	45	35	77	57	82	58	64	45	76	49						
1	0.00	0.03	0.47	0.10	0.00	0.00	27	10	45	35	77	57	82	58	64	45	76	49						
2	0.00	0.11	0.10	0.00	0.00	0.00	21	11	66	31	65	52	83	54E	73	40	74	51						
3	0.00	0.00	0.00	1.15	0.00	0.00	22	5	71	38	75	51	83	61	82	56	79	42						
4	0.00	0.00	0.00	0.51	0.00	0.00	31	8	75	43	79	49	81	60	87	62	77	57						
5	0.00	0.00	0.34	0.00	0.00	0.00	29	11	73	44	87	52	77	58	81	56	71	42						
6	0.00	0.00	0.00	0.00	0.00	0.59	26	3	81	40	76	56	80	55	77	54	70	38						
7	0.00	0.07	0.00	0.00	0.00	0.43	25	9	86	43	79	50	92	65	87	53	65	54						
8	0.00	0.45	1.62	0.18	0.00	0.00	29	8	62	50	80	57	81	66	87	61	73	54						
9	0.00	0.00	0.00	0.00	0.00	0.00	32	19	66	40	86	64	83	61	87	56	78	56						
10	0.00	0.00	0.00	0.00	0.00	0.00	38	28	54	31	86	64	82	63	87	58	80	54						
11	0.00	0.00	1.42	0.00	0.00	0.00	38	27	65	31	69	53	89	68	91	55	87	54						
12	0.10	0.00	0.00	0.00	0.00	0.00	37	29	69	42	74	50	84	61	92	66	73	48						
13	0.00	0.00	0.00	0.00	0.00	0.12	35	22	78	50	81	53	90	60	88	64	73	56						
14	0.00	0.00	0.00	0.00	0.00	0.00	36	24	79	49	87	60	90	63	92	50	70	48						
15	0.00	0.00	0.00	0.00	0.00	0.00	36	24	84	40	83	67	78	60	80	42	80	54						
16	0.00	0.00	0.06	0.00	0.00	0.00	41	24	84	57	80	61	76	56	89	45	92	51						
17	0.00	0.66	0.07	0.00	0.00	0.00	48	27	69	49	77	58	78	47	80	54	58	43						
18	0.00	0.17	0.00	0.00	0.00	0.00	49	31	49	44	81	54	85	51	83	54	67	38						
19	0.00	0.00	0.00	0.00	0.53	0.00	56	31	66	41	83	60	77	61	72	56	66	41						
20	0.00	0.00	0.00	0.00	0.00	1.34	54	32	74	37	87	59	73	63	75	52	55	44						
21	0.00	0.00	0.00	0.00	0.00	0.02	59	34	78	43	87	61	78	57	76	52	60	42						
22	0.00	0.00	0.00	0.93	0.00	0.00	62	37	81	51	90	62	83	58	83	50	61	42						
23	0.05	0.00	0.32	0.00	0.08	0.00	63	37	85	58	87	56	77	59	78	54	54	41						
24	0.00	0.00	0.29	0.00	0.02	0.00	53	35	92	61	83	60	78	55	78	59	52	45						
25	0.00	0.00	0.02	0.00	0.00	0.00	62	34	94	58	79	58	74	58	81	57	55	41						
26	0.00	0.00	0.00	0.00	0.44	0.00	61	37	92	60	84	64	72	56	78	56	60	36						
27	0.00	0.14	0.00	0.00	0.00	0.00	51	34	85	59	88	63	78	51	64	51	51	37						
28	0.00	0.00	0.01	0.00	0.01	0.01	58	30	86	60	85	60	80	50	61	51	43	25						
29	0.00	0.00	0.39	0.00	0.00	0.00	72	41	93	60	79	66	81	52	74	47	48	27						
30	0.67	0.11	0.00	0.00	0.00	0.00	77	36	84	62	77	61	85	53	80	55	46	33						
31		0.00		0.00	0.26				79	61			87	60	80	59								
Total/Avg	0.82	1.74	5.11	2.87	1.34	2.51	44	25	76	47	81	58	81	58	80	54	66	45						

CLIMATIC DATA, 2018 Hettinger, 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			
1	0.00	0.02	0.01	0.00	0.00	0.00	35E	2E	52	35	85	53	76	52	77	58	86	40						
2	0.00	0.00	0.00	0.00	0.00	0.00	26E	12E	65	33	72	50	82	54	91	54	76	49						
3	0.00	0.02	0.00	0.53	0.21	0.00	22E	6E	69	33	81	40	77	55	95	63	88	53						
4	0.01	0.00	0.00	0.00	0.01	0.00	40	8	78	38	90	52	73	53	87	51	71	51						
5	0.00	0.00	0.00	0.00	0.00	0.00	32	17	79	48	89	58	79	49	80	49	70	48						
6	0.00	0.00	0.00	0.00	0.00	0.00	23	1	78	37	79	50	93	64	79	50	87	52						
7	0.00	0.11	0.11	0.30	0.00	0.00	34	7	85	54	82	55	91	65	91	54	90	47						
8	0.15	0.07	0.02	0.00	0.00	0.00	25	19	69	51	85	52	85	68	93	55	85	56						
9	0.10	0.00	0.00	0.00	0.00	0.00	35	16	71	46	90	57	89	65	94	52	86	47						
10	0.00	0.21	0.07	0.00	0.00	0.00	55	18	50	34	89	62	96	65	98	61	85	43						
11	0.35	0.20	0.13	0.00	0.00	0.00	50	32	41	36	75	49	84	64	100	56	80	54						
12	0.10	0.33	0.11	0.00	0.00	0.00	37	29	48	39	70	43	84	62	102	65	78	47						
13	0.00	0.02	0.00	0.00	0.00	0.00	29	16	65	45	78	38	88	57	83	54	74	44						
14	0.13	0.00	0.00	0.00	0.00	0.00	33	11	73	44	93	55	98	64	76	47	73	51						
15	0.00	0.00	0.00	0.00	0.00	0.00	43	17	75	40	78	53	79	55	82	55	66	55						
16	0.00	0.00	0.33	0.00	0.00	0.00	47	21	81	44	59	53	86	50	88	53	78	50						
17	0.00	0.06	0.00	0.00	0.00	0.00	39	27	75	55	63	52	89	51	90	57	70	43						
18	0.00	0.02	0.22	0.87	0.15	0.00	54	29	56	43	67	44	72	56	91	60	69	38						
19	0.00	0.00	0.00	0.01	0.45	0.03	56	23	61	42	69	55	86	53	72	54	57	45						
20	0.00	0.00	0.00	0.00	0.00	1.01	59	30	65	31	75	55	79	53	67	42	52	39						
21	0.00	0.00	0.00	0.00	0.00	0.00	59	37	74	37	81	49	83	57	70	50	57	36						
22	0.00	0.10	0.19	0.00	0.00	0.00	68	30	80	47	79	54	84	55	82E	44E	78	38						
23	0.11	0.00	0.47	0.00	0.00	0.00	64	31	76	57	73	54	80	45	81	57	47	39						
24	0.27	0.00	0.51	0.00	0.00	0.38	52	31	81	52	74	53	89	52	86	51	65	40						
25	0.00	0.00	0.00	0.00	0.00	0.07	69	28	86	52	77	56	79	51	78	55	56	33						
26	0.00	0.00	1.02	0.00	0.03	0.00	65	31	89	48	84	56	74	43	75	51	68	32						
27	0.00	0.00	0.02	0.00	0.04	0.00	63	39	82	61	82	52	75	44	55	49	49	37						
28	0.00	0.09	0.21	0.00	0.00	0.00	66	34	79	60	88	61	78	56	61	41	51	27						
29	0.08	0.00	0.26	1.01	0.00	0.04	79	47	76	57	73	55	74	52	81	36	42	37						
30	0.09	0.33	0.00	0.00	0.00	0.17	56	38	79	59	73	53	81	46	92	49	39	32						
31		0.06		0.00	0.00				85	55			90	55	83	49								
Total/Avg	1.39	1.64	3.68	2.72	0.89	1.7	49	25	72	46	78	52	83	55	77	49	69	43						

CLIMATIC DATA, 2018 Hillsboro, 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	0.09	0.16	0.00	0.06	0.00	24	6	47	35	79	58	80	59	63	45	63	45	63	45	79	48		
2	0.00	0.00	0.46	0.00	0.00	0.21	25	7	71	28	66	55	83	53	74	40	74	40	74	40	75	47		
3	0.00	0.00	0.00	0.26	0.00	0.00	18	5	73	34	76	52	83	65	82	58	82	58	82	58	79	43		
4	0.00	0.00	0.00	0.57	0.00	0.00	29	3	81	39	84	48	83	59	87	65	87	65	87	65	78	55		
5	0.02	0.00	1.09	0.00	0.00	0.00	27	7	81	44	85	54	77	54	83	55	83	55	83	55	72	43		
6	0.00	0.00	0.01	0.00	0.00	0.00	21	1	83	38	75	54	80	54	78	57	78	57	78	57	72	40		
7	0.00	0.09	0.00	0.00	0.00	0.39	22	3	87	41	77	50	90	66	86	52	86	52	86	52	76	55		
8	0.00	0.90	0.24	0.40	0.00	0.00	31	0	62	50	79	59	82	66	88	60	88	60	88	60	76	52		
9	0.00	0.02	0.02	0.00	0.00	0.00	30	17	68	39	89	65	83	59	87	55	87	55	87	55	77	57		
10	0.00	0.00	0.00	0.03	0.00	0.00	38	25	54	30	85	63	82	64	89	59	89	59	89	59	82	54		
11	0.07	0.00	0.49	0.00	0.00	0.00	38	22	65	30	69	49	90	66	91	55	91	55	91	55	88	55		
12	0.03	0.00	0.00	0.00	0.00	0.00	38	31	69	41	74	45	82	59	93	66	93	66	93	66	77	49		
13	0.00	0.00	0.00	0.00	0.00	0.00	33	24	77	51	81	48	89	59	89	61	89	61	89	61	75	58		
14	0.00	0.00	0.00	0.00	0.00	0.08	36	26	83	47	85	59	88	62	74	49	74	49	74	49	75	50		
15	0.00	0.00	0.00	0.12	0.00	0.03	34	25	84	37	84	67E	78	55	81	42	81	42	81	42	75	55		
16	0.00	0.00	0.15	0.00	0.00	0.00	38	21	87	56	78	63	77	53	87	46	87	46	87	46	94	53		
17	0.00	0.38	0.19	0.00	0.00	0.00	45	27	65	54	76	58	79	47	83	54	83	54	83	54	62	44		
18	0.00	0.02	0.00	0.00	0.00	0.00	49	32	54	45	80	54	84	55	83	55	83	55	83	55	69	41		
19	0.00	0.00	0.00	0.33	1.38	0.00	53	29	68	40	80	60	74	63	71	56	71	56	71	56	68	42		
20	0.00	0.00	0.00	0.00	0.00	1.81	56	32	74	34	84	54	76	62	76	53	76	53	76	53	56	43		
21	0.00	0.00	0.00	0.00	0.00	0.02	60	32	77	39	86	60	76	60	77	51	77	51	77	51	63	39		
22	0.00	0.00	0.00	1.04	0.00	0.00	64	35	81	48	87	62	83	59	83	46	83	46	83	46	68	40		
23	0.00	0.00	0.01	0.00	0.03	0.00	62	39	86	56	85	59	78	56	79	53	79	53	79	53	63	42		
24	0.01	0.00	0.00	0.00	0.58	0.00	52	32	93	65	83	59	80	52	80	61	80	61	80	61	52	43		
25	0.00	0.00	0.12	0.14	0.00	0.00	63	32	94	59	81	57	75	55	82	59	82	59	82	59	58	38		
26	0.00	0.00	0.00	0.00	0.60	0.04	59	38	95	54	83	61	73	50	73	55	73	55	73	55	62	34		
27	0.00	0.24	0.00	0.00	0.02	0.01	51	31	84	59	86	61	78	48	66	51	66	51	66	51	54	35		
28	0.00	0.00	0.16	0.00	0.00	0.00	59	27	87	64	89	59	81	48	62	49	62	49	62	49	49	24		
29	0.00	0.00	1.10	0.00	0.00	0.00	73	40	92	61	78	65	83	49	73	44	73	44	73	44	46	25		
30	0.00	0.00	0.00	0.00	0.00	0.00	80	38	81	63	78	60	85	51	79	55	79	55	79	55	49	33		
31		0.00		0.00	0.00				82	61			88	57	80	62			80	62				
Total/Avg	0.13	1.74	4.2	2.89	2.67	2.59	44	23	77	47	81	57	81	57	80	54	80	54	80	54	69	45		

CLIMATIC DATA, 2018 Inkster, 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	0.01	0.47	0.12	0.00	0.00	27	9	47	30	73	57	80	56	64	44	80	46						
2	0.00	0.00	0.01	0.00	0.00	0.00	20	7	68	26	62	51	81	55	74	42	75	50						
3	0.00	0.00	0.00	0.39	0.00	0.00	22	2	75	32	74	49	83	58	82	56	81	41						
4	0.00	0.00	0.00	0.58	0.00	0.00	34	12	77	42	75	47	77	59	89	60	77	54						
5	0.00	0.00	0.03	0.00	0.00	0.00	28	9	73	42	85	50	76	55	82	59	71	39						
6	0.00	0.00	0.00	0.00	0.00	0.30	25	0	82	36	74	51	79	55	79	51	72	37						
7	0.00	0.23	0.00	0.00	0.00	0.18	28	7	88	42	79	47	90	65	89	59	67	53						
8	0.00	0.52	1.66	0.05	0.00	0.00	30	11	60	48	78	55	86	61	89	59	75	54						
9	0.00	0.00	0.01	0.00	0.00	0.00	36	11	68	37	80	64	82	57	87	57	79	55						
10	0.00	0.00	0.00	0.00	0.00	0.00	41	28	53	28	84	65	81	64	91	61	81	50						
11	0.00	0.00	0.50	0.00	0.00	0.17	38	27	63	25	69	53	87	68	94	62	87	53						
12	0.09	0.00	0.00	0.00	0.00	0.00	36	26	70	42	73	51	85	63	97	68	61	44						
13	0.00	0.00	0.00	0.00	0.01	0.00	34	18	77	49	78	53	90	62	87	60	68	49						
14	0.00	0.00	0.00	0.00	0.00	0.00	39	21	77	42	84	55	89	63	72	49	66	41						
15	0.00	0.00	0.00	0.00	0.00	0.00	40	20	85	39	80	60	77	56	83	45	74	53						
16	0.00	0.00	0.21	0.00	0.00	0.00	45	17	80	53	75	54	76	50	89	53	89	48						
17	0.00	0.07	0.00	0.00	0.00	0.00	49	23	62	46	73	56	79	44	79	51	57	37						
18	0.00	1.28	0.00	0.00	0.00	0.00	54	28	47	40	77	49	87	55	88	59	66	34						
19	0.00	0.00	0.00	0.09	0.00	0.00	58	28	64	39	80	57	80	61	75	53	63	40						
20	0.00	0.00	0.00	0.00	0.00	0.75	56	32	74	42	83	55	71	60	75	49	52	39						
21	0.00	0.00	0.00	0.00	0.00	0.02	63	31	78	45	88	60	80	51	78	48	59	39						
22	0.00	0.00	0.00	0.96	0.00	0.00	67	40	82	54	86	63	84	53	85	51	55	38						
23	0.00	0.00	0.00	0.00	0.00	0.00	64	37	86	60	84	54	77	56	82	60	48	38						
24	0.00	0.00	0.01	0.00	0.00	0.00	54	33	91	60	81	53	78	53	81	60	52	42						
25	0.00	0.00	0.40	0.00	0.00	0.01	67	35	94	62	78	58	74	54	81	53	58	35						
26	0.00	0.00	0.00	0.00	0.47	0.05	64	36	91	56	81	61	73	52	73	50	56	34						
27	0.00	0.14	0.00	0.00	0.07	0.00	53	30	82	58	83	60	77	51	61	49	49	32						
28	0.00	0.00	0.00	0.00	0.03	0.00	60	23	83	59	87	57	79	48	62	50	41	23						
29	0.00	0.00	0.46	0.23	0.00	0.00	77	40	89	55	78	63	80	53	75	48	49	27						
30	0.03	0.53	0.01	0.00	0.00	0.00	73	34	77	60	74	57	85	58	81	54	44	31						
31		0.00		0.00	0.00				77	57			84	60	84	58								
Total/Avg	0.12	2.78	3.77	2.42	0.58	1.48	46	23	75	45	79	56	81	57	81	54	81	65	42					

CLIMATIC DATA, 2018 Langdon, 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			
	0.00	0.00	0.85	0.18	0.00	0.00	24	5	42	30	67	52	76	52	61	40	80	40	80	40				
2	0.00	0.10	0.02	0.00	0.00	0.00	15	1	62	28	59	49	76	53	74	38	71	46	71	46				
3	0.00	0.00	0.00	0.00	0.00	0.00	22	-1	71	34	70	45	79	57	82	57	80	44	80	44				
4	0.00	0.00	0.00	0.55	0.00	0.00	30	7	71	42	71	50	72	58	85	62	69	48	69	48				
5	0.01	0.00	0.03	0.00	0.00	0.00	25	6	70	47	81	50	74	53	75	55	66	37	66	37				
6	0.00	0.00	0.00	0.00	0.00	0.21	23	-2	77	40	73	51	79	52	77	50	70	38	70	38				
7	0.00	0.14	0.00	0.00	0.00	0.00	26	5	83	43	80	48	88	67	88	56	61	52	61	52				
8	0.00	0.00	0.02	0.00	0.00	0.28	28	9	66	44	72	57	83	62	84	58	69	54	69	54				
9	0.00	0.00	0.00	0.00	0.00	0.00	32	10	64	35	82	62	80	53	87	54	73	56	73	56				
10	0.00	0.00	0.00	0.00	0.00	0.00	37	25	50	24	82	64	80	65	90	54	77	44	77	44				
11	0.00	0.00	0.13	0.50	0.00	0.06	35	23	61	29	69	49	81	66	95	56	80	51	80	51				
12	0.03	0.00	0.20	0.00	0.00	0.00	30	20	69	41	71	49	81	61	99	66	58	41	58	41				
13	0.00	0.00	0.00	0.00	0.00	0.25	27	13	78	42	75	47	84	59	77	55	62	45	62	45				
14	0.00	0.00	0.27	0.00	0.00	0.00	35	16	72	45	80	55	87	60	70	45	60	42	60	42				
15	0.00	0.00	0.15	0.00	0.00	0.00	36	17	84	38	76	62	74	53	85	46	67	50	67	50				
16	0.00	0.00	0.07	0.00	0.00	0.00	42	19	71	48	72	57	69	50	76	52	79	43	79	43				
17	0.00	0.46	0.00	0.00	0.00	0.00	47	28	53	44	72	56	77	47	81	50	54	39	54	39				
18	0.00	0.60	0.00	0.00	0.00	0.00	50	30	46	39	76	49	86	54	89	60	65	34	65	34				
19	0.00	0.00	0.00	0.95	0.00	0.00	51	30	63	34	78	57	80	60	73	53	58	40	58	40				
20	0.00	0.00	0.00	0.06	0.00	0.42	55	32	73	42	82	52	72	58	70	46	48	38	48	38				
21	0.00	0.00	0.00	0.00	0.00	0.01	61	33	76	45	85	61	75	52	76	46	56	39	56	39				
22	0.00	0.00	0.18	0.16	0.00	0.00	60	36	79	52	84	62	78	59	82	46	45	34	45	34				
23	0.00	0.00	0.00	0.00	0.00	0.01	58	36	83	56	81	56	72	54	84	56	42	32	42	32				
24	0.00	0.05	0.00	0.00	0.00	0.00	53	29	89	60	77	58	72	49	81	57	50	38	50	38				
25	0.00	0.00	0.04	0.00	0.03	0.00	65	34	91	56	74	57	67	50	69	54	56	35	56	35				
26	0.00	0.00	0.00	0.00	0.61	0.08	62	31	85	56	80	63	70	53	69	46	56	35E	56	35E				
27	0.00	0.14	0.00	0.00	0.27	0.00	50	30	81	60	81	57	74	49	57	47	46	37	46	37				
28	0.00	0.00	0.00	0.00	0.09	0.02	60	28	81	58	85	52	77	48	60	48	38	25	38	25				
29	0.00	0.00	1.42	0.00	0.00	0.00	74	40	86	58	75	59	79	49	72	49	49	27	49	27				
30	0.00	0.03	0.00	0.00	0.00	0.00	58	32	72	60	71	56	84	51	81	57	41	29	41	29				
31		0.01		0.00	0.00				79	53			77	56	79	55								
Total/Avg	0.04	1.53	3.38	2.4	1.00	1.34	42	21	72	45	76	55	78	55	78	52	61	30	61	30				

CLIMATIC DATA, 2018 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		
	0.00	0.00	0.61	0.00	0.02	0.03	21	2	51	34	72	57	77	55	72	49E	83	42	72	49E	83	42		
2	0.00	0.00	0.21	0.00	0.00	0.00	16	1	66	35	61	50	79	53	83	52E	73	45	79	53	83	45		
3	0.00	0.00	0.00	0.37	0.00	0.14	24	2	75	35	76	45	80	58	98	57	83	49	80	58	98	49		
4	0.00	0.00	0.00	0.06	0.00	0.00	28	6	78	41	84	50	73	59	89	60	70	50	73	59	89	50		
5	0.00	0.00	0.03	0.00	0.00	0.00	22	1	76	48	82	54	76	51	80	57	68	38	76	51	80	38		
6	0.00	0.00	0.00	0.00	0.00	0.00	15	-5	80	47	77	51	84	58E	81	55	77	44	84	58E	81	44		
7	0.00	0.00	0.00	0.00	0.00	0.00	22	-5	81	53	81	58	90	68	94	57	77	49	90	68	94	49		
8	0.00	0.00	0.00	0.00	0.00	0.00	24	13	73	48	84	61	84	60	87	56	80	58	84	60	87	58		
9	0.03	0.00	0.00	0.00	0.00	0.00	29	8	70	39	90	58	84	56	91	55	79	51	84	56	91	51		
10	0.00	0.00	0.96	0.44	0.00	0.00	36	17	52	31	91	60	84	65	96	54	79	43	91	60	96	43		
11	0.00	0.00	0.13	0.00	0.00	0.00	35	22	59	42	71	57	81	65	100	63	73	43	71	57	100	43		
12	0.00	0.00	0.00	0.00	0.00	0.19	32	25	70	38	71	54	83	61	103	68	63	40	71	54	103	40		
13	0.00	0.00	0.00	0.00	0.00	0.01	32	19	77	44	83	52	88	61	81	55	69	49	83	52	81	49		
14	0.00	0.00	0.83	0.00	0.00	0.00	33	17	78	50	84	57	92	61	78	43	63	49	84	57	78	49		
15	0.00	0.00	0.00	0.00	0.00	0.00	32	12	84	44	75	57	77	51	85	56	68	46	77	51	85	46		
16	0.00	0.00	0.36	0.00	0.00	0.00	35	14	84	55	60	54	77	53	83	55	63	47	84	55	83	47		
17	0.00	0.00	0.00	0.00	0.00	0.00	39	26	64	46	71	56	83	50	88	51	64	42	71	56	88	42		
18	0.00	0.15	0.00	0.00	0.00	0.00	44	30	54	42	75	50	84	58	95	66	67	37	44	30	95	37		
19	0.00	0.00	0.00	0.41	0.00	0.00	43	31	67	33	78	59	87	62	74	57	61	40	78	59	74	40		
20	0.00	0.00	0.00	0.00	0.00	0.69	54	30	74	39	80	55	78	58E	73	41	45	38	80	55	73	38		
21	0.00	0.00	0.00	0.00	0.00	0.01	62	36	79	38	81	57	79	56	77	42	53	37	81	57	77	37		
22	0.00	0.00	0.00	0.00	0.00	0.00	62	37	85	52	83	59	82	55	83	48	55	35	83	59	83	35		
23	0.00	0.00	0.14	0.00	0.00	0.00	52	36	84	55	80	61	79	54	84	61	44	35	84	55	84	35		
24	0.00	0.00	0.91	0.07	0.00	0.00	59	30	85	58	80	56	78	52	85	57	55	39	85	58	85	39		
25	0.00	0.00	0.09	0.01	0.00	0.01	69	38	90	59	77	59	73	51	69	46	57	30	90	59	69	30		
26	0.00	0.00	0.01	0.00	0.63	0.00	68	33	91	56	83	62	72	50	69	40	61	32	91	56	69	32		
27	0.00	0.28	0.00	0.00	0.45	0.00	57	36	83	61	79	57	78	48	55	47	51	35	83	61	55	35		
28	0.00	0.00	0.05	0.01	0.02	0.00	66	30	80	58	85	56	78	51	61	48	49	23	80	58	61	23		
29	0.05	0.12	0.61	0.07	0.00	0.00	81	47	78	55	76	60	82	49	77	44	53	32	78	55	77	32		
30	0.00	0.01	0.00	0.00	0.00	0.00	60	37	77	58	73	56	86	54	90	53	40	31	77	58	90	31		
31		0.09		0.00	0.00				77	56			82	58	81	47			77	56	81			
Total/Avg	0.08	0.65	4.94	1.44	1.12	1.08	42	21	75	47	78	56	81	56	83	53	64	41	81	56	83	41		

CLIMATIC DATA, 2018 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	0.01	0.03	0.00	0.00	27	6	50	34	88	61	82	60	65	49	79	50	82	60	65	49	79	50
2	0.00	0.00	0.00	0.00	0.00	0.27	25	17	71	31	70	55	86	55	77	43	72	49	86	55	77	43	72	49
3	0.00	0.00	0.00	0.63	0.38	0.00	17	4	74	37	78	49	83	63	79	60	81	47	83	63	79	60	81	47
4	0.00	0.00	0.00	0.94	0.00	0.00	27	-1	83	39	91	50	83	60	86	63	73	58	83	60	86	63	73	58
5	0.00	0.00	0.29	0.00	0.00	0.00	28	9	83	45	95	61	78	56	81	57	71	46	78	56	81	57	71	46
6	0.00	0.00	0.14	0.01	0.01	0.00	16	2	82	39	77	58	79	60	77	62	76	45	79	60	77	62	76	45
7	0.00	0.19	0.00	0.00	0.01	0.00	25	0	87	45	80	53	90	66	85	59	79	49	90	66	85	59	79	49
8	0.00	0.01	0.00	1.02	0.00	0.00	27	18	71	54	90	58	92	69	87	61	78	48	92	69	87	61	78	48
9	0.03	0.00	0.00	0.00	0.00	0.00	29	13	74	45	92	66	81	63	84	56E	79	56	81	63	84	56E	79	56
10	0.00	0.00	0.00	1.44	0.00	0.00	41	28	52	32	86	60	87	63	89	59	82	56	87	63	89	59	82	56
11	0.05	0.00	1.02	0.00	0.00	0.00	41	27	57	42	70	52	89	69	90	60	88	59	89	69	90	60	88	59
12	0.01	0.00	0.00	0.00	0.00	0.00	36	32	63	45	75	51	79	65	91	68	90	52	79	65	91	68	90	52
13	0.00	0.00	0.00	0.00	0.00	0.00	33	28	76	40	81	47	86	60	91	63	78	62	86	60	91	63	78	62
14	0.00	0.00	0.00	0.00	0.00	0.08	32	25	82	55	89	56	85	62	72	54	77	53	89	56	72	54	77	53
15	0.00	0.00	0.00	0.07	0.00	0.00	35	24	82	44	86	70	76	58	77	49	78	58	86	70	77	49	78	58
16	0.00	0.00	0.75	0.00	0.00	0.00	41	21	88	51	77	60	82	53	84	58	92	52	88	51	77	60	82	53
17	0.00	0.52	0.04	0.00	0.00	0.01	47	27	83	56	73	59	81	60	79	54	62	45	83	56	73	59	81	60
18	0.00	0.01	0.00	1.06	0.00	0.00	47	31	66	45	75	60	81	61	85	55	69	41	66	45	75	60	81	61
19	0.00	0.00	0.00	2.15	0.71	0.03	55	26	67	42	80	60	72	61	71	58	60	51	67	42	80	60	72	61
20	0.00	0.00	0.00	0.00	0.00	1.14	57	28	72	35	79	57	77	57	72	53	53	45	72	35	79	57	77	57
21	0.00	0.00	0.00	0.00	0.00	0.05	60	36	70	50	84	63	77	61	75	53	60	41	70	50	84	63	77	61
22	0.00	0.00	0.00	0.00	0.00	0.00	64	30	84	48	86	59	81	63	80	50	71	40	86	48	86	59	81	63
23	0.00	0.07	0.00	0.00	0.09	0.00	70	33	81	59	81	60	77	58	73	56	71	43	81	59	81	60	77	58
24	0.17	0.00	2.89	0.00	0.03	0.15	55	33	90	62	73	63	83	53	78	58	53	47	90	62	73	63	83	53
25	0.00	0.00	0.00	0.31	0.00	0.29	65	28	93	58	78	64	75	57	83	54	58	40	93	58	78	64	75	57
26	0.00	0.00	0.00	0.00	0.19	0.00	63	39	95	60	80	59	67	54	77	58	66	37	95	60	80	59	67	54
27	0.00	0.00	0.00	0.00	0.00	0.00	56	33	95	66	87	64	76	51	68	51	55	35	95	66	87	64	76	51
28	0.00	0.05	0.00	0.00	0.00	0.00	62	25	87	65	92	65	78	51	63	46	52	31	87	65	92	65	78	51
29	0.00	0.00	0.16	0.00	0.00	0.02	77	42	90	59	78	65	78	52	74	43	44	32	90	59	78	65	78	52
30	0.00	0.00	0.00	0.00	0.00	0.02	78	43	83	60	78	62	81	53	79	58	46	35	83	60	78	62	81	53
31		0.00		0.00	0.00				86	56			88	54	83	61			86	56			88	54
Total/Avg	0.26	0.85	5.3	7.66	1.42	2.06	45	24	78	48	82	59	81	59	79	56	70	47	81	59	79	56	70	47

CLIMATIC DATA, 2018 Prosper, 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	0.11	0.03	0.08	0.00	0.01	22	5	46	35	81	59	80	62	43	80	49							
2	0.00	0.00	0.15	0.23	0.00	0.35	23	6	71	31	66	57	80	74	38	75	49							
3	0.00	0.00	0.00	0.37	0.00	0.00	17	2	74	37	76	52	82	81	60	79	44							
4	0.00	0.00	0.00	0.75	0.00	0.00	27	4	82	43	88	50	83	88	64	78	57							
5	0.01	0.00	0.58	0.00	0.00	0.00	25	5	82	45	87	53	76	84	55	71	44							
6	0.00	0.00	0.06	0.12	0.12	0.00	19	2	83	41	75	54	78	77	55	74	42							
7	0.07	0.00	0.00	0.00	0.00	0.00	27	0	86	42	77	50	89	87	51	78	55							
8	0.00	0.23	0.00	0.00	0.00	0.00	25	-1	64	51	80	58	86	89	58	78	50							
9	0.04	0.16	0.00	0.00	0.00	0.00	33	17	70	40	91	64	83	87	57	79	55							
10	0.00	0.00	0.00	0.23	0.00	0.00	35	22	53	32	85	63	80	87	58	82	54							
11	0.00	0.00	1.01	0.00	0.00	0.00	34	19	65	29	70	50	89	93	53	90	57							
12	0.00	0.00	0.00	0.00	0.00	0.00	34	30	69	45	74	46E	81	95	68	87	51							
13	0.00	0.00	0.00	0.00	0.00	0.00	30	22	76	47	79	48	88	90	63	75	59							
14	0.00	0.00	0.00	0.00	0.08	0.77	32	22	83	48	82	61	87	75	50	78	50							
15	0.00	0.00	0.03	0.00	0.00	0.04	31	22	85	40	85	67	77	80	44	76	57							
16	0.00	0.00	0.25	0.00	0.00	0.00	33	18	88	57	76	62	78	86	47	92	54							
17	0.00	1.15	0.04	0.00	0.00	0.00	37	23	65	53	76	58	79	82	55	62	43							
18	0.00	0.00	0.00	0.00	0.00	0.00	44	31	58	44	78	54	82	86	51	67	42							
19	0.00	0.00	0.00	0.53	1.51	0.00	52	30	66	40	80	59	72	70	57	66	44							
20	0.00	0.00	0.00	0.01	0.00	1.55	54	32	72	37	83	57	74	75	53	54	44							
21	0.00	0.00	0.00	0.00	0.00	0.01	60	32	75	41	86	60	74	77	54	61	39							
22	0.00	0.00	0.00	0.16	0.00	0.00	63	33	83	49	84	59	82	83	46	70	41							
23	0.00	0.00	0.20	0.01	0.00	0.00	62	38	84	61	82	59	78	79	53	66	42							
24	0.02	0.00	0.16	0.00	0.68	0.00	52	33	93	66	80	61	81	80	62	53	41							
25	0.00	0.00	0.00	0.08	0.00	0.00	63	32	96	60	78	58	75	84	59	59	38							
26	0.00	0.00	0.00	0.00	0.51	0.01	59	39	96	59	83	59	71	74	56	64	36							
27	0.00	0.15	0.00	0.00	0.10	0.04	52	34	81	60	86	62	76	64	51	54	36							
28	0.00	0.00	0.00	0.00	0.07	0.00	59	30	87	63	88	60	79	61	48	49	26							
29	0.00	0.00	0.61	0.00	0.02	0.01	74	40	92	59	78	64	81	74	42	44	27							
30	0.01	0.32	0.00	0.00	0.00	0.00	79	38	81	62	78	59	84	80	55	47	31							
31		0.00		0.00	0.00			61	81	61			88	81	60									
Total/Avg	0.15	2.12	3.12	2.57	3.09	2.79	42	22	77	48	80	57	80	80	56	80	54	70	45					

CLIMATIC DATA, 2018 St Thomas, ND

Date	Precipitation												August		July		June		May		April		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
1	0.00	0.00	0.67	0.15	0.00	0.00	30	12	44	31	72	55	81	56	66	45	81	56	66	45	81	56	66	45	81	49
2	0.00	0.27	0.02	0.00	0.00	0.00	22	8	64	32	65	53	81	56	74	38	75	56	74	38	75	56	74	38	75	49
3	0.00	0.00	0.00	0.08	0.00	0.00	25	5	74	37	71	50	82	58	84	54	84	58	84	54	84	58	84	54	84	43
4	0.00	0.00	0.00	0.89	0.00	0.00	34	16	74	46	74	51	80	60	86	63	86	60	86	63	86	60	86	63	86	53
5	0.00	0.00	0.00	0.00	0.00	0.00	30	11	75	43	83	51	77	55	81	56	81	55	81	56	81	55	81	56	81	42
6	0.00	0.00	0.00	0.00	0.00	0.19	28	3	82	37	74	53	80	53	79	47	79	47	79	47	79	47	79	47	79	36
7	0.00	0.27	0.00	0.00	0.00	0.57	28	11	88	41	82	47	91	65	91	55	91	65	91	55	91	65	91	55	91	54
8	0.00	0.00	1.25	0.01	0.16	0.07	31	14	62	49	78	56	88	62	91	63	91	62	91	63	91	62	91	63	91	55
9	0.00	0.00	0.00	0.00	0.00	0.08	37	17	67	37	79	64	84	57	89	56	89	57	89	56	89	57	89	56	89	56
10	0.00	0.00	0.00	0.00	0.00	0.00	40	29	55	32	85	65	83	64	94	57E	94	64	94	57E	94	64	94	57E	94	52
11	0.00	0.00	0.57	0.01	0.00	0.00	39	26	66	30	70	52	86	68	96	57	96	68	96	57	96	68	96	57	96	55
12	0.15	0.00	0.05	0.00	0.00	0.01	35	26	73	37	74	50	86	62	99	63	99	62	99	63	99	62	99	63	99	45
13	0.00	0.00	0.00	0.00	0.00	0.28	35	18	81	50	80	52	90	59	86	62	86	59	86	62	86	59	86	62	86	51
14	0.00	0.00	0.43	0.00	0.00	0.04	39	22	77	47	85	55	90	59	91	52	91	59	91	52	91	59	91	52	91	46
15	0.00	0.00	0.50	0.00	0.00	0.01	40	24	87	34	80	62	78	58	86	43	86	58	86	43	86	58	86	43	86	54
16	0.14	0.00	0.10	0.00	0.00	0.00	47	24	78	52	74	58	74	52	87	48	87	52	87	48	87	52	87	48	87	47
17	0.00	0.09	0.00	0.00	0.00	0.00	49	26	64	46	75	58	79	45	82	53	82	45	82	53	82	45	82	53	82	42
18	0.00	1.13	0.00	0.00	0.00	0.00	55	30	47	41	78	52	86	50	90	59	90	50	90	59	90	50	90	59	90	38
19	0.00	0.00	0.00	0.02	0.00	0.00	60	31	66	40	82	55	82	61	78	59	78	61	78	59	78	61	78	59	78	44
20	0.00	0.00	0.00	0.00	0.00	0.48	59	32	76	42	84	57	75	57	76	48	76	57	76	48	76	57	76	48	76	40
21	0.00	0.00	0.00	0.00	0.00	0.00	64	32	79	42	88	61	80	53	79	51	79	53	79	51	79	53	79	51	79	42
22	0.00	0.00	0.00	0.12	0.00	0.00	65	34	82	49	90	60	83	57	87	51	87	57	87	51	87	57	87	51	87	38
23	0.00	0.01	0.96	0.00	0.00	0.00	63	36	89	56	86	55	79	56	86	57	86	56	86	57	86	56	86	57	86	37
24	0.00	0.00	0.00	0.00	0.00	0.00	54	33	93	62	81	60	80	53	83	61	83	53	83	61	83	53	83	61	83	42
25	0.00	0.00	0.24	0.00	0.00	0.00	66	32	94	59	78	59	74	53	81	55	81	53	81	55	81	53	81	55	81	38
26	0.00	0.00	0.00	0.00	0.17	0.10	64	38	87	59	83	64	77	56	73	51	73	56	73	51	73	56	73	51	73	36
27	0.00	0.04	0.00	0.00	0.17	0.02	54	34	83	57	85	58	82	53	63	50	63	53	63	50	63	53	63	50	63	38
28	0.00	0.00	0.00	0.00	0.07	0.00	60	28	84	61	88	55	83	48	63	50	63	48	63	50	63	48	63	50	63	27
29	0.00	0.00	0.75	0.00	0.00	0.00	75	38	92	57	79	61	86	50	76	52	76	50	76	52	76	50	76	52	76	27
30	0.02	0.34	0.00	0.00	0.00	0.00	53	36	77	62	77	61	90	53	83	54	83	53	83	54	83	53	83	54	83	34
31		0.00		0.00	0.00				76	61			85	58	83	55		58	83	55		58	83	55		
Total/Avg	0.31	2.15	5.54	1.28	0.57	1.85	46	24	75	46	79	56	82	56	82	54	82	56	82	54	82	56	82	54	82	44

CLIMATIC DATA, 2018 Wahpeton, 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	0.05	0.16	0.07	0.00	0.00	26	3	49	37	85	60	83	61	67	49	80	54						
1	0.00	0.05	0.16	0.07	0.00	0.00	26	3	49	37	85	60	83	61	67	49	80	54						
2	0.00	0.00	0.41	0.00	0.00	0.72	31	5	70	30	67	56	88	57	76	41	73	53						
3	0.00	0.00	0.00	0.22	0.13	0.00	23	6	73	41	74	53	84	67	78	61	78	50						
4	0.00	0.00	0.00	1.02	0.00	0.00	29	2	82	40	90	50	85	62	88	66	76	58						
5	0.00	0.00	0.00	0.00	0.00	0.00	30	7	82	48	90	60	76	56	86	58	71	48						
6	0.00	0.00	0.80	0.00	0.17	0.00	18	4	83	38	73	52	79	56	79	59	74	45						
7	0.00	0.00	0.00	0.00	0.00	0.00	26	2	86	43	77	49	92	65	84	57	78	53						
8	0.00	0.24	0.00	0.18	0.00	0.00	28	12	77	54	85	59	95	68	90	60	76	54						
9	0.03	0.12	0.00	0.01	0.00	0.00	32	14	71	42	90	66	83	62	88	59	76	54						
10	0.00	0.00	0.00	0.55	0.00	0.00	40	28	56	30	87	60	82	66	89	60	81	57						
11	0.00	0.00	0.84	0.00	0.00	0.00	42	26	65	35	71	51	93	72	92	60	88	62						
12	0.00	0.00	0.01	0.00	0.00	0.00	44	32	68	44	73	47	82	66	93	70	89	53						
13	0.00	0.00	0.00	0.00	0.00	0.00	38	32	78	44	83	48	88	62	95	67	79	62						
14	0.00	0.00	0.00	0.00	0.73	0.00	34	26	83	53	86	61	89	61	73	58	77	55						
15	0.00	0.00	0.00	0.00	0.00	0.00	35	25	82	37	86	68	77	58	77	51	87	62						
16	0.00	0.00	2.97	0.00	0.00	0.00	42	24	90	52	79	62	79	54	83	50E	95	56						
17	0.00	0.00	0.14	0.00	0.00	0.00	50	28	80	56	73	59	81	49	80	55	63	45						
18	0.00	0.05	0.01	0.00	0.00	0.00	52	32	80	45	78	59	85	61	84	57	71	43						
19	0.00	0.00	0.00	2.28	1.61	0.00	57	28	69	44	78	58	73	62	69	61	67	50						
20	0.00	0.00	0.00	0.01	0.00	1.30	55	31	74	33	80	54	78	59	75	55	58	47						
21	0.00	0.00	0.00	0.00	0.00	0.03	60	31	73	46	85	61	76	60	76	54	61	42						
22	0.00	0.00	0.00	0.01	0.00	0.00	63	32	84	49	84	63	82	61	80	49	71	41						
23	0.00	0.00	0.00	0.03	0.42	0.00	69	33	81	62	85	62	80	58	76	55	72	42						
24	0.02	0.00	0.00	0.00	0.07	0.28	54	32	93	67	80	64	84	53	78	62	63	48						
25	0.00	0.00	0.00	0.15	0.00	0.00	63	27	94	59	78	60	77	55	80	61	58	40						
26	0.00	0.00	0.00	0.00	0.14	0.00	59	37	95	57	80	61	69	52	78	60	64	37						
27	0.00	0.12	0.00	0.00	0.04	0.00	55	36	94	64	87	61	78	47	73	53	56	39						
28	0.00	0.00	0.00	0.00	0.01	0.00	57	27	89	66	90	65E	80	50	63	48	50	28						
29	0.00	0.00	0.00	0.00	0.00	0.01	72	40	92	65	81	67	82	51	72	44	45	30						
30	0.05	0.02	0.00	0.00	0.00	0.00	79	40	79	58	80	61	85	51	78	56	48	32						
31		0.00		0.00	0.07		82	54					90	57	76	63								
Total/Avg	0.1	0.6	5.34	4.53	3.39	2.34	45	23	79	48	81	59	82	59	80	57	80	71	48					

CLIMATIC DATA, 2018 Williston, 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		
	0.07	0.00	0.41	0.20	0.00	0.00	26	-2	54	40	71	52	76	54	77	55	84	50	84	50	84	50		
2	0.00	0.00	0.17	0.00	0.00	0.00	22	9	64	44	69	48	79	52	94	59	74	42	94	59	74	42		
3	0.00	0.00	0.00	0.90	0.00	0.00	26	11	73	42	78	46	77	56	93	60	91	52	93	60	91	52		
4	0.00	0.00	0.00	0.01	0.00	0.00	30	10	78	43	88	56	74	51	86	61	63	45	86	61	63	45		
5	0.00	0.00	0.08	0.00	0.11	0.00	25	1	76	50	77	58	78	50	82	54	73	43	82	54	73	43		
6	0.00	0.00	0.00	0.00	0.00	0.00	15	-4	80	45	78	50	90	63	84	53	81	53	84	53	81	53		
7	0.00	0.02	0.00	0.00	0.00	0.00	31	3	75	53	82	59	92	68	95	60	79	48	95	60	79	48		
8	0.00	0.01	0.00	0.00	0.00	0.06	25	16	74	50	82	60	85	64	91	54	90	62	91	54	90	62		
9	0.06	0.00	0.00	1.65	0.00	0.00	32	8	69	42	90	59	88	63	96	57	79	53	96	57	79	53		
10	0.00	0.08	0.00	0.02	0.00	0.00	43	19	49	39	85	62	87	66	100	59	85	46	100	59	85	46		
11	0.00	0.00	0.00	0.03	0.00	0.00	52	31	50	40	73	46	81	61	105	67	72	50	105	67	72	50		
12	0.00	0.00	0.00	0.00	0.00	0.00	38	30	66	42	73	48	83	59	108	69	65	48	108	69	65	48		
13	0.00	0.00	0.00	0.00	0.08	0.00	34	23	74	41	85	48	90	62	76	54	68	46	76	54	68	46		
14	0.00	0.00	0.00	0.00	0.00	0.00	39	20	78	48	83	55	88	58	81	48	64	49	81	48	64	49		
15	0.00	0.00	0.15	0.00	0.00	0.00	49	24	84	49	74	50	79	51	88	56	64	48	88	56	64	48		
16	0.00	0.00	0.13	0.00	0.00	0.00	51	26	88	52	63	55	80E	50E	87	58	65	46	87	58	65	46		
17	0.01	0.22	0.00	0.00	0.00	0.00	46	31	74	48	71	48	88E	53E	94	63	65	48	94	63	65	48		
18	0.00	0.00	0.00	0.07	0.00	0.00	49	30	56	43	78	51	87	64	89	64	69	41	89	64	69	41		
19	0.00	0.00	0.00	0.00	0.00	0.06	54	32	65	39	77	54	84E	64	74	52	51	42	74	52	51	42		
20	0.00	0.00	0.00	0.00	0.00	1.01	66	33	73	42	81	51	80	54E	70	45	46	34	80	54E	70	45		
21	0.00	0.00	0.00	0.38	0.00	0.01	69	35	79	45	85	58	87	63	78	44	58	31	78	44	58	31		
22	0.00	0.12	0.04	0.00	0.00	0.00	67	39	80	54	84	59	78	60	84	46	68	38	84	46	68	38		
23	0.00	0.31	1.46	0.00	0.04	0.00	51	35	75	56	79	57	79	52	69	57	45	36	69	57	45	36		
24	0.00	0.00	0.03	0.00	0.00	0.00	62	29	77	55	79	61	78	55	89	50	52	37	89	50	52	37		
25	0.00	0.00	0.00	0.00	0.00	0.10	69	36	86	57	80	58	75	52	70	48	57	36	70	48	57	36		
26	0.00	0.01	0.00	0.00	0.16	0.00	70	31	89	56	81	60	70	49	69	46	64	34	69	46	64	34		
27	0.00	0.39	0.00	0.00	0.29	0.00	62	38	80	59	80	49	76	47E	55	49	50	35	55	49	50	35		
28	0.00	0.27	0.94	0.00	0.02	0.00	74	39	77	58	87	55	80	53	62	44	51	25	62	44	51	25		
29	0.33	0.09	0.00	0.02	0.00	0.00	81	45	77	57	75	57	82	58	80	42	53	36	80	42	53	36		
30	0.10	0.04	0.00	0.00	0.00	0.03	56	42	79	60	74	54	89	54	88	54	40	29	88	54	40	29		
31		0.26		0.00	0.00		67	57					77	58	79	55			79	55				
Total/Avg	0.57	1.82	3.41	3.28	0.7	1.27	47	24	73	49	79	54	82	57	84	54	66	43	84	54	66	43		