

# HI PLAINS FARM EQUIPMENT

FEBRUARY 19, 2021

CUSTOMER : MULL FARMS

LEGAL : EDWARD 1

WISH-97875

LINDSAY GEN II  
8 TOWER - 1281.47 FT  
SYSTEM 450 GPM @ 30 PSI  
SENNINGER UP3 I-WOB2  
SENNINGER 10 PSI REGULATORS  
NO ENDGUN  
ELEVATION 15 FT UP, 15 FT DOWN

1509 SOUTH 2ND  
DODGE CITY, KANSAS 67801  
(620)225-0064

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#### WARRANTY

WATER APPLICATION UNIFORMITY OBTAINED WITH THIS SYSTEM CAN BE ADVERSELY AFFECTED BY MANY VARIABLES INCLUDING THE IMPROPER MAKEUP OR INSTALLATION OF THE SPRINKLER OR SPRAY NOZZLE PACKAGE, OBSTRUCTED NOZZLES, MAINTAINING INCORRECT PIVOT PRESSURE, UNFAVORABLE CLIMATIC CONDITIONS, TIGHT AND/OR SLOPING SOILS, IMPROPER END GUN ARC SETTINGS, ERRATIC AND IMPROPER OPERATING SPEED OF THE SYSTEM, POOR QUALITY OF WATER WITH ABRASIVES, CORROSIVES, AND/OR SOLIDS WHICH CAN CAUSE PLUGGING AND JAMMING, AS WELL AS INHERENT VARIABLES IN THE MANY COMPONENTS COMPRISING THE SYSTEM. THEREFORE WESTERN IRRIGATION SUPPLY HOUSE, INC., MAKES NO WARRANTY AS TO THE UNIFORMITY OF COVERAGE OBTAINED FROM THIS WATER APPLICATION PRINTOUT OTHER THAN ITS MATHEMATICAL ACCURACY.

IT IS THE RESPONSIBILITY OF THE END USER TO DETERMINE IF ANY INCOMPATIBILITY EXISTS BETWEEN THE WATER DISTRIBUTION DEVICES AND THE CROP, THE SOIL, AND THE PHYSICAL STRUCTURE OF THE MECHANICAL MOVE SYSTEM. WESTERN IRRIGATION SUPPLY HOUSE, INC., THEREFORE, DISCLAIMS ANY LIABILITY FOR DAMAGES DUE TO FAILURE OF THE SYSTEM TO PERFORM AS CONTEMPLATED.

FIGURES PRESENTED ON THIS COMPUTER PRINTOUT ARE BASED ON THE FOLLOWING:

1. DATA FURNISHED TO WESTERN IRRIGATION SUPPLY HOUSE, INC., ON PIPE LENGTH, DIAMETER, SURFACE FINISH, OUTLET SPACINGS, WATER FLOW, PIVOT PRESSURE AND ALL OTHER APPLICABLE INFORMATION.
2. THERE IS 100% WATER APPLICATION EFFICIENCY (ZERO WIND VELOCITY AND NO EVAPORATION).
3. PIVOT PRESSURE IS MEASURED ON THE MAIN HORIZONTAL DISTRIBUTION PIPE JUST AFTER THE LAST ELBOW.
4. MAIN PIPE PRESSURE IS CALCULATED AS IF THE PIVOT IS ALWAYS ON LEVEL GROUND.
5. SPRINKLER OR SPRAY NOZZLE BASE PRESSURE MAY BE LESS THAN MAIN LINE PIPE PRESSURE DUE TO THE USE OF PRESSURE REGULATORS. WHERE DROP PIPES ARE USED THE STATIC HEAD IS ADDED TO AND FRICTION LOSS IS SUBTRACTED FROM THE MAIN LINE PIPE PRESSURE TO DETERMINE INLET PSI. REGULATORS ARE CONSIDERED MOUNTED AT THE SAME HEIGHT AS THE SPRINKLING DEVICE UNLESS NOTED.

<u>DEALER</u>			<u>IRRIGATOR</u>			
HI PLAINS FARM EQUIPMENT			MULL FARMS			
1509 SOUTH 2ND			EDWARD 1			
DODGE CITY, KANSAS 67801						
TOTAL TARGET GPM	450.00	FRICTION FACTOR USED	140	SPANS	LENGTH	PIPE I.D.
TOP OF PIVOT PRESSURE	30.00	TOTAL LENGTH	1281.47	1	159.60	6.395
NO ENDGUN		NUMBER OF TOWERS	8	7	157.00	6.395
NUMBER OF OUTLETS	148	NUMBER OF SPRINKLERS	145	OH	22.87	5.369

SENNINGER UP3 I-WOB2 - LOW ANGLE 9 GROOVE BLUE PADS  
SENNINGER PSR-2 10 PSI SERIES REGULATORS  
DROPS AVERAGE 8.5 FT OF .75 I.D. FLEXIBLE HOSE - SENNINGER ONE WEIGHT  
ELEVATION IS 15 FT UP AND 15 FT DOWN

CAUTIONS AND WARNINGS

1. Inadequate crop clearance and/or structural interference may cause poor water distribution, resulting in decreased uniformity and possible streaking.

2. Over watering at beginning of system due to practical limitations on smallest nozzle sizes available and/or allowable for proper operation.

OUTLET NO.	LAST OUTLET	DISTANCE TO PIVOT	GPM NEED	GPM DEL.	PIPE PSI	NOZZLE PSI	SPRINKLER LABEL AND NOZZLE SIZE						SPRK NO.	REG SIZE	PLUG NO.	DROP LENGTH
1		9.09	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	1	
2		17.38	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	2	
3		26.26	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	3	
4	35.14	35.14	0.42	0.85	29.26	11.40	I-WOB2	UP3	6	GOLD			1	SPSR2-10		102
5	8.29	43.43	0.20	0.85	29.09	11.40	I-WOB2	UP3	6	GOLD			2	SPSR2-10		108
6	8.41	51.84	0.22	0.85	28.94	11.40	I-WOB2	UP3	6	GOLD			3	SPSR2-10		108
7	7.42	59.26	0.24	0.85	28.83	11.40	I-WOB2	UP3	6	GOLD			4	SPSR2-10		114
8	7.42	66.68	0.29	0.85	28.75	11.40	I-WOB2	UP3	6	GOLD			5	SPSR2-10		114
9	8.41	75.09	0.34	0.85	28.68	11.40	I-WOB2	UP3	6	GOLD			6	SPSR2-10		114
10	8.29	83.38	0.39	0.85	28.64	11.40	I-WOB2	UP3	6	GOLD			7	SPSR2-10		114
11	8.88	92.26	0.44	0.85	28.62	11.40	I-WOB2	UP3	6	GOLD			8	SPSR2-10		114
12	8.88	101.14	0.47	0.85	28.64	11.40	I-WOB2	UP3	6	GOLD			9	SPSR2-10		114
13	8.29	109.43	0.53	0.85	28.68	11.40	I-WOB2	UP3	6	GOLD			10	SPSR2-10		108
14	9.66	119.09	0.58	0.85	28.77	11.40	I-WOB2	UP3	6	GOLD			11	SPSR2-10		108
15	8.29	127.38	0.59	0.85	28.87	11.40	I-WOB2	UP3	6	GOLD			12	SPSR2-10		102
16	8.88	136.26	0.65	0.85	29.01	11.40	I-WOB2	UP3	6	GOLD			13	SPSR2-10		96
17	8.88	145.14	0.67	0.85	29.18	11.40	I-WOB2	UP3	6	GOLD			14	SPSR2-10		90
18	8.29	153.43	0.87	0.85	29.29	11.40	I-WOB2	UP3	6	GOLD			15	SPSR2-10		84
TOWER 1	159.60	159.60														
19	12.66	166.09	0.93	1.00	29.24	11.40	I-WOB2	UP3	6.5	GOLD			16	SPSR2-10		84
20	8.29	174.38	0.81	0.85	29.00	11.40	I-WOB2	UP3	6	GOLD			17	SPSR2-10		90
21	8.88	183.26	0.88	0.85	28.76	11.40	I-WOB2	UP3	6	GOLD			18	SPSR2-10		96
22	8.88	192.14	0.89	0.85	28.55	11.40	I-WOB2	UP3	6	GOLD			19	SPSR2-10		102
23	8.29	200.43	0.90	0.85	28.38	11.40	I-WOB2	UP3	6	GOLD			20	SPSR2-10		108
24	8.41	208.84	0.89	0.85	28.23	11.40	I-WOB2	UP3	6	GOLD			21	SPSR2-10		108
25	7.42	216.26	0.87	0.85	28.13	11.40	I-WOB2	UP3	6	GOLD			22	SPSR2-10		114
26	7.42	223.68	0.96	1.00	28.05	11.40	I-WOB2	UP3	6.5	GOLD			23	SPSR2-10		114
27	8.41	232.09	1.05	1.00	27.98	11.40	I-WOB2	UP3	6.5	GOLD			24	SPSR2-10		114
28	8.29	240.38	1.11	1.16	27.94	11.40	I-WOB2	UP3	7	LIME			25	SPSR2-10		114
29	8.88	249.26	1.19	1.16	27.93	11.40	I-WOB2	UP3	7	LIME			26	SPSR2-10		114
30	8.88	258.14	1.19	1.16	27.95	11.40	I-WOB2	UP3	7	LIME			27	SPSR2-10		114
31	8.29	266.43	1.29	1.35	27.99	11.40	I-WOB2	UP3	7.5	LIME			28	SPSR2-10		108
32	9.66	276.09	1.33	1.35	28.08	11.40	I-WOB2	UP3	7.5	LIME			29	SPSR2-10		108
33	8.29	284.38	1.32	1.35	28.18	11.40	I-WOB2	UP3	7.5	LIME			30	SPSR2-10		102
34	8.88	293.26	1.40	1.35	28.32	11.40	I-WOB2	UP3	7.5	LIME			31	SPSR2-10		96
35	8.88	302.14	1.40	1.35	28.50	11.40	I-WOB2	UP3	7.5	LIME			32	SPSR2-10		90
36	8.29	310.43	1.76	1.73	28.62	11.40	I-WOB2	UP3	8.5	LAVENDER			33	SPSR2-10		84
TOWER 2	157.00	316.60														
37	12.66	323.09	1.82	1.73	28.57	11.40	I-WOB2	UP3	8.5	LAVENDER			34	SPSR2-10		84
38	8.29	331.38	1.54	1.53	28.33	11.40	I-WOB2	UP3	8	LAVENDER			35	SPSR2-10		90
39	8.88	340.26	1.63	1.73	28.09	11.40	I-WOB2	UP3	8.5	LAVENDER			36	SPSR2-10		96
40	8.88	349.14	1.62	1.53	27.88	11.40	I-WOB2	UP3	8	LAVENDER			37	SPSR2-10		102
41	8.29	357.43	1.61	1.53	27.72	11.40	I-WOB2	UP3	8	LAVENDER			38	SPSR2-10		108
42	8.41	365.84	1.56	1.53	27.58	11.40	I-WOB2	UP3	8	LAVENDER			39	SPSR2-10		108
43	7.42	373.26	1.49	1.53	27.48	11.40	I-WOB2	UP3	8	LAVENDER			40	SPSR2-10		114
44	7.42	380.68	1.63	1.53	27.40	11.40	I-WOB2	UP3	8	LAVENDER			41	SPSR2-10		114
45	8.41	389.09	1.75	1.73	27.34	11.40	I-WOB2	UP3	8.5	LAVENDER			42	SPSR2-10		114
46	8.29	397.38	1.84	1.93	27.30	11.40	I-WOB2	UP3	9	GREY			43	SPSR2-10		114

OUTLET NO.	LAST OUTLET	DISTANCE TO PIVOT	GPM NEED	GPM DEL.	PIPE PSI	NOZZLE PSI	SPRINKLER LABEL AND NOZZLE SIZE	SPRK NO.	REG SIZE	PLUG NO.	DROP LENGTH
47	8.88	406.26	1.95	1.93	27.29	11.40	I-WOB2 UP3 9 GREY	44	SPSR2-10		114
48	8.88	415.14	1.92	1.93	27.32	11.40	I-WOB2 UP3 9 GREY	45	SPSR2-10		114
49	8.29	423.43	2.05	2.16	27.37	11.38	I-WOB2 UP3 9.5 GREY	46	SPSR2-10		108
50	9.66	433.09	2.10	2.16	27.46	11.38	I-WOB2 UP3 9.5 GREY	47	SPSR2-10		108
51	8.29	441.38	2.04	2.16	27.57	11.38	I-WOB2 UP3 9.5 GREY	48	SPSR2-10		102
52	8.88	450.26	2.16	2.16	27.71	11.38	I-WOB2 UP3 9.5 GREY	49	SPSR2-10		96
53	8.88	459.14	2.13	2.16	27.89	11.38	I-WOB2 UP3 9.5 GREY	50	SPSR2-10		90
54	8.29	467.43	2.65	2.63	28.02	11.34	I-WOB2 UP3 10.5 TURQUOISE	51	SPSR2-10		84
TOWER 3	157.00	473.60									
55	12.66	480.09	2.71	2.63	27.97	11.34	I-WOB2 UP3 10.5 TURQUOISE	52	SPSR2-10		84
56	8.29	488.38	2.26	2.16	27.74	11.38	I-WOB2 UP3 9.5 GREY	53	SPSR2-10		90
57	8.88	497.26	2.38	2.39	27.51	11.36	I-WOB2 UP3 10 TURQUOISE	54	SPSR2-10		96
58	8.88	506.14	2.34	2.39	27.31	11.36	I-WOB2 UP3 10 TURQUOISE	55	SPSR2-10		102
59	8.29	514.43	2.32	2.39	27.15	11.36	I-WOB2 UP3 10 TURQUOISE	56	SPSR2-10		108
60	8.41	522.84	2.23	2.16	27.01	11.38	I-WOB2 UP3 9.5 GREY	57	SPSR2-10		108
61	7.42	530.26	2.12	2.16	26.91	11.38	I-WOB2 UP3 9.5 GREY	58	SPSR2-10		114
62	7.42	537.68	2.30	2.39	26.84	11.36	I-WOB2 UP3 10 TURQUOISE	59	SPSR2-10		114
63	8.41	546.09	2.46	2.39	26.78	11.36	I-WOB2 UP3 10 TURQUOISE	60	SPSR2-10		114
64	8.29	554.38	2.57	2.63	26.75	11.34	I-WOB2 UP3 10.5 TURQUOISE	61	SPSR2-10		114
65	8.88	563.26	2.70	2.63	26.75	11.34	I-WOB2 UP3 10.5 TURQUOISE	62	SPSR2-10		114
66	8.88	572.14	2.65	2.63	26.78	11.34	I-WOB2 UP3 10.5 TURQUOISE	63	SPSR2-10		114
67	8.29	580.43	2.81	2.89	26.84	11.31	I-WOB2 UP3 11 YELLOW	64	SPSR2-10		108
68	9.66	590.09	2.85	2.89	26.94	11.31	I-WOB2 UP3 11 YELLOW	65	SPSR2-10		108
69	8.29	598.38	2.77	2.89	27.05	11.31	I-WOB2 UP3 11 YELLOW	66	SPSR2-10		102
70	8.88	607.26	2.91	2.89	27.20	11.31	I-WOB2 UP3 11 YELLOW	67	SPSR2-10		96
71	8.88	616.14	2.85	2.89	27.39	11.31	I-WOB2 UP3 11 YELLOW	68	SPSR2-10		90
72	8.29	624.43	3.53	3.44	27.52	11.26	I-WOB2 UP3 12 RED	69	SPSR2-10		84
TOWER 4	157.00	630.60									
73	12.66	637.09	3.59	3.73	27.48	11.23	I-WOB2 UP3 12.5 RED	70	SPSR2-10		84
74	8.29	645.38	2.99	2.89	27.26	11.31	I-WOB2 UP3 11 YELLOW	71	SPSR2-10		90
75	8.88	654.26	3.13	3.15	27.03	11.28	I-WOB2 UP3 11.5 YELLOW	72	SPSR2-10		96
76	8.88	663.14	3.07	3.15	26.84	11.28	I-WOB2 UP3 11.5 YELLOW	73	SPSR2-10		102
77	8.29	671.43	3.02	2.89	26.68	11.31	I-WOB2 UP3 11 YELLOW	74	SPSR2-10		108
78	8.41	679.84	2.90	2.89	26.56	11.31	I-WOB2 UP3 11 YELLOW	75	SPSR2-10		108
79	7.42	687.26	2.75	2.63	26.47	11.34	I-WOB2 UP3 10.5 TURQUOISE	76	SPSR2-10		114
80	7.42	694.68	2.97	2.89	26.40	11.31	I-WOB2 UP3 11 YELLOW	77	SPSR2-10		114
81	8.41	703.09	3.17	3.15	26.35	11.28	I-WOB2 UP3 11.5 YELLOW	78	SPSR2-10		114
82	8.29	711.38	3.30	3.16	26.32	11.28	I-WOB2 UP3 11.5 YELLOW	79	SPSR2-10		114
83	8.88	720.26	3.45	3.44	26.33	11.26	I-WOB2 UP3 12 RED	80	SPSR2-10		114
84	8.88	729.14	3.38	3.44	26.37	11.26	I-WOB2 UP3 12 RED	81	SPSR2-10		114
85	8.29	737.43	3.57	3.44	26.43	11.26	I-WOB2 UP3 12 RED	82	SPSR2-10		108
86	9.66	747.09	3.62	3.73	26.53	11.23	I-WOB2 UP3 12.5 RED	83	SPSR2-10		108
87	8.29	755.38	3.50	3.44	26.66	11.26	I-WOB2 UP3 12 RED	84	SPSR2-10		102
88	8.88	764.26	3.66	3.73	26.82	11.23	I-WOB2 UP3 12.5 RED	85	SPSR2-10		96
89	8.88	773.14	3.58	3.44	27.01	11.26	I-WOB2 UP3 12 RED	86	SPSR2-10		90
90	8.29	781.43	4.43	4.34	27.15	11.17	I-WOB2 UP3 13.5 WHITE	87	SPSR2-10		84
TOWER 5	157.00	787.60									
91	12.66	794.09	4.49	4.34	27.12	11.17	I-WOB2 UP3 13.5 WHITE	88	SPSR2-10		84

OUTLET NO.	LAST OUTLET	DISTANCE TO PIVOT	GPM NEED	GPM DEL.	PIPE PSI	NOZZLE PSI	SPRINKLER LABEL AND NOZZLE SIZE			SPRK NO.	REG SIZE	PLUG NO.	DROP LENGTH
92	8.29	802.38	3.72	3.73	26.90	11.23	I-WOB2	UP3	12.5 RED	89	SPSR2-10		90
93	8.88	811.26	3.89	4.03	26.69	11.20	I-WOB2	UP3	13 WHITE	90	SPSR2-10		96
94	8.88	820.14	3.80	3.73	26.50	11.23	I-WOB2	UP3	12.5 RED	91	SPSR2-10		102
95	8.29	828.43	3.74	3.73	26.35	11.23	I-WOB2	UP3	12.5 RED	92	SPSR2-10		108
96	8.41	836.84	3.58	3.44	26.23	11.26	I-WOB2	UP3	12 RED	93	SPSR2-10		108
97	7.42	844.26	3.39	3.44	26.15	11.26	I-WOB2	UP3	12 RED	94	SPSR2-10		114
98	7.42	851.68	3.65	3.73	26.08	11.23	I-WOB2	UP3	12.5 RED	95	SPSR2-10		114
99	8.41	860.09	3.88	4.03	26.04	11.20	I-WOB2	UP3	13 WHITE	96	SPSR2-10		114
100	8.29	868.38	4.03	4.03	26.02	11.20	I-WOB2	UP3	13 WHITE	97	SPSR2-10		114
101	8.88	877.26	4.21	4.34	26.04	11.17	I-WOB2	UP3	13.5 WHITE	98	SPSR2-10		114
102	8.88	886.14	4.11	4.03	26.08	11.20	I-WOB2	UP3	13 WHITE	99	SPSR2-10		114
103	8.29	894.43	4.34	4.34	26.15	11.17	I-WOB2	UP3	13.5 WHITE	100	SPSR2-10		108
104	9.66	904.09	4.38	4.34	26.27	11.17	I-WOB2	UP3	13.5 WHITE	101	SPSR2-10		108
105	8.29	912.38	4.23	4.34	26.39	11.17	I-WOB2	UP3	13.5 WHITE	102	SPSR2-10		102
106	8.88	921.26	4.42	4.34	26.56	11.17	I-WOB2	UP3	13.5 WHITE	103	SPSR2-10		96
107	8.88	930.14	4.31	4.34	26.76	11.17	I-WOB2	UP3	13.5 WHITE	104	SPSR2-10		90
108	8.29	938.43	5.31	5.34	26.91	11.04	I-WOB2	UP3	15 DK BROWN	105	SPSR2-10		84
TOWER 6	157.00	944.60											
109	12.66	951.09	5.37	5.34	26.89	11.04	I-WOB2	UP3	15 DK BROWN	106	SPSR2-10		84
110	8.29	959.38	4.45	4.34	26.68	11.17	I-WOB2	UP3	13.5 WHITE	107	SPSR2-10		90
111	8.88	968.26	4.64	4.66	26.47	11.13	I-WOB2	UP3	14 BLUE	108	SPSR2-10		96
112	8.88	977.14	4.53	4.66	26.29	11.13	I-WOB2	UP3	14 BLUE	109	SPSR2-10		102
113	8.29	985.43	4.44	4.34	26.15	11.17	I-WOB2	UP3	13.5 WHITE	110	SPSR2-10		108
114	8.41	993.84	4.25	4.34	26.04	11.17	I-WOB2	UP3	13.5 WHITE	111	SPSR2-10		108
115	7.42	1001.26	4.01	4.03	25.96	11.20	I-WOB2	UP3	13 WHITE	112	SPSR2-10		114
116	7.42	1008.68	4.31	4.34	25.90	11.17	I-WOB2	UP3	13.5 WHITE	113	SPSR2-10		114
117	8.41	1017.09	4.58	4.66	25.86	11.13	I-WOB2	UP3	14 BLUE	114	SPSR2-10		114
118	8.29	1025.38	4.75	4.66	25.85	11.13	I-WOB2	UP3	14 BLUE	115	SPSR2-10		114
119	8.88	1034.26	4.95	4.99	25.87	11.10	I-WOB2	UP3	14.5 BLUE	116	SPSR2-10		114
120	8.88	1043.14	4.83	4.99	25.93	11.10	I-WOB2	UP3	14.5 BLUE	117	SPSR2-10		114
121	8.29	1051.43	5.09	4.99	26.00	11.10	I-WOB2	UP3	14.5 BLUE	118	SPSR2-10		108
122	9.66	1061.09	5.13	4.99	26.12	11.10	I-WOB2	UP3	14.5 BLUE	119	SPSR2-10		108
123	8.29	1069.38	4.95	4.99	26.26	11.10	I-WOB2	UP3	14.5 BLUE	120	SPSR2-10		102
124	8.88	1078.26	5.17	4.99	26.43	11.10	I-WOB2	UP3	14.5 BLUE	121	SPSR2-10		96
125	8.88	1087.14	5.04	4.99	26.64	11.10	I-WOB2	UP3	14.5 BLUE	122	SPSR2-10		90
126	8.29	1095.43	6.21	6.04	26.79	10.91	I-WOB2	UP3	16 ORANGE	123	SPSR2-10		84
TOWER 7	157.00	1101.60											
127	12.66	1108.09	6.28	6.40	26.78	10.85	I-WOB2	UP3	16.5 ORANGE	124	SPSR2-10		84
128	8.29	1116.38	5.18	5.34	26.58	11.04	I-WOB2	UP3	15 DK BROWN	125	SPSR2-10		90
129	8.88	1125.26	5.39	5.34	26.37	11.04	I-WOB2	UP3	15 DK BROWN	126	SPSR2-10		96
130	8.88	1134.14	5.26	5.34	26.20	11.04	I-WOB2	UP3	15 DK BROWN	127	SPSR2-10		102
131	8.29	1142.43	5.15	4.99	26.06	11.10	I-WOB2	UP3	14.5 BLUE	128	SPSR2-10		108
132	8.41	1150.84	4.92	4.99	25.96	11.10	I-WOB2	UP3	14.5 BLUE	129	SPSR2-10		108
133	7.42	1158.26	4.64	4.66	25.88	11.13	I-WOB2	UP3	14 BLUE	130	SPSR2-10		114
134	7.42	1165.68	4.98	4.99	25.83	11.10	I-WOB2	UP3	14.5 BLUE	131	SPSR2-10		114
135	8.41	1174.09	5.29	5.34	25.80	11.04	I-WOB2	UP3	15 DK BROWN	132	SPSR2-10		114
136	8.29	1182.38	5.48	5.34	25.79	11.04	I-WOB2	UP3	15 DK BROWN	133	SPSR2-10		114
137	8.88	1191.26	5.72	5.68	25.82	10.98	I-WOB2	UP3	15.5 DK BROWN	134	SPSR2-10		114

OUTLET NO.	LAST OUTLET	DISTANCE TO PIVOT	GPM NEED	GPM DEL.	PIPE PSI	NOZZLE PSI	SPRINKLER LABEL AND NOZZLE SIZE	SPRK NO.	REG SIZE	PLUG NO.	DROP LENGTH
138	8.88	1200.14	5.57	5.68	25.87	10.98	I-WOB2 UP3 15.5 DK BROWN	135	SPSR2-10		114
139	8.29	1208.43	5.86	5.68	25.95	10.98	I-WOB2 UP3 15.5 DK BROWN	136	SPSR2-10		108
140	9.66	1218.09	5.92	6.04	26.08	10.91	I-WOB2 UP3 16 ORANGE	137	SPSR2-10		108
141	8.29	1226.38	5.69	5.68	26.22	10.98	I-WOB2 UP3 15.5 DK BROWN	138	SPSR2-10		102
142	8.88	1235.26	5.93	6.04	26.40	10.91	I-WOB2 UP3 16 ORANGE	139	SPSR2-10		96
143	8.88	1244.14	5.75	5.68	26.61	10.98	I-WOB2 UP3 15.5 DK BROWN	140	SPSR2-10		90
144	8.29	1252.43	6.40	6.41	26.76	10.85	I-WOB2 UP3 16.5 ORANGE	141	SPSR2-10		84
TOWER 8	157.00	1258.60	PIPE ID CHANGES FROM 6.395 TO 5.369								
145	10.62	1263.05	6.15	6.04	26.76	10.91	I-WOB2 UP3 16 ORANGE	142	SPSR2-10		84
146	7.42	1270.47	5.14	4.99	26.76	11.10	I-WOB2 UP3 14.5 BLUE	143	SPSR2-10		84
147	7.42	1277.89	3.92	4.03	26.76	11.20	I-WOB2 UP3 13 WHITE	144	SPSR2-10		84
148	3.58	1281.47	3.31	3.44	26.76	11.26	I-WOB2 UP3 12 RED	145	SPSR2-10		84
OVERHANG	22.87	1281.47									

TOTAL GPM = 450.98

GPA = 3.80

MINIMUM RECOMMENDED REGULATOR INLET PRESSURE IS 15.00 PSI

WITH GRADUATED ELEVATION OF 15.00 FT THE INLET PRESSURE IS 22.83 PSI FOR SPRINKLER 142

THIS POSITION IS THE CLOSEST TO THE MINIMUM RECOMMENDED INLET PRESSURE

#### HYDRAULICS SUMMARY

TOWER NUMBER	ACRES UNDER SPAN	GPM NEED	ACTUAL GPM	PERCENT DEVIATION	GPM PER ACRE	AVERAGE IN. PER HR	AVERAGE IN. DELIVERED		
						DELIVERED UNDER SPAN	FOR REVOLUTION TIME		
							36 HR	48 HR	60 HR
1	1.84	6.98	12.84	84%	6.99	0.015	0.56	0.74	0.93
2	5.39	20.49	20.04	-2%	3.72	0.008	0.30	0.39	0.49
3	8.95	34.00	33.54	-1%	3.75	0.008	0.30	0.40	0.50
4	12.50	47.51	46.89	-1%	3.75	0.008	0.30	0.40	0.50
5	16.06	61.01	59.46	-3%	3.70	0.008	0.29	0.39	0.49
6	19.61	74.52	73.65	-1%	3.75	0.008	0.30	0.40	0.50
7	23.17	88.03	86.47	-2%	3.73	0.008	0.30	0.40	0.49
8	26.72	101.54	100.01	-2%	3.74	0.008	0.30	0.40	0.50
OVERHANG	4.19	15.92	18.09	14%	4.32	0.010	0.34	0.46	0.57
TOTAL	118.43	450.00	450.98		3.81				

SUMMARY OF SPRINKLERS

21 I-WOB2 UP3 6 GOLD  
3 I-WOB2 UP3 6.5 GOLD  
3 I-WOB2 UP3 7 LIME  
5 I-WOB2 UP3 7.5 LIME  
6 I-WOB2 UP3 8 LAVENDER  
4 I-WOB2 UP3 8.5 LAVENDER  
3 I-WOB2 UP3 9 GREY  
8 I-WOB2 UP3 9.5 GREY  
5 I-WOB2 UP3 10 TURQUOISE  
6 I-WOB2 UP3 10.5 TURQUOISE  
9 I-WOB2 UP3 11 YELLOW  
4 I-WOB2 UP3 11.5 YELLOW  
9 I-WOB2 UP3 12 RED  
7 I-WOB2 UP3 12.5 RED  
6 I-WOB2 UP3 13 WHITE  
12 I-WOB2 UP3 13.5 WHITE  
5 I-WOB2 UP3 14 BLUE  
11 I-WOB2 UP3 14.5 BLUE  
7 I-WOB2 UP3 15 DK BROWN  
5 I-WOB2 UP3 15.5 DK BROWN  
4 I-WOB2 UP3 16 ORANGE  
2 I-WOB2 UP3 16.5 ORANGE

3 PLUGS

SUMMARY OF DROPS

19 84 IN DROP  
15 90 IN DROP  
15 96 IN DROP  
16 102 IN DROP  
32 108 IN DROP  
48 114 IN DROP

TOTAL OF 145 DROPS  
LENGTH OF HOSE: 1245.5 FT.

SUMMARY OF REGULATORS

145 SPSR2-10

TOTAL OF 145 REGULATORS



## NOZZLE POSITION CHART

I-WOB2 UP3 6 GOLD	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 18, 19, 20, 21, 22
I-WOB2 UP3 6.5 GOLD	16, 23, 24
I-WOB2 UP3 7 LIME	25, 26, 27
I-WOB2 UP3 7.5 LIME	28, 29, 30, 31, 32
I-WOB2 UP3 8 LAVENDER	35, 37, 38, 39, 40, 41
I-WOB2 UP3 8.5 LAVENDER	33, 34, 36, 42
I-WOB2 UP3 9 GREY	43, 44, 45
I-WOB2 UP3 9.5 GREY	46, 47, 48, 49, 50, 53, 57, 58
I-WOB2 UP3 10 TURQUOISE	54, 55, 56, 59, 60
I-WOB2 UP3 10.5 TURQUOISE	51, 52, 61, 62, 63, 76
I-WOB2 UP3 11 YELLOW	64, 65, 66, 67, 68, 71, 74, 75, 77
I-WOB2 UP3 11.5 YELLOW	72, 73, 78, 79
I-WOB2 UP3 12 RED	69, 80, 81, 82, 84, 86, 93, 94, 145
I-WOB2 UP3 12.5 RED	70, 83, 85, 89, 91, 92, 95
I-WOB2 UP3 13 WHITE	90, 96, 97, 99, 112, 144
I-WOB2 UP3 13.5 WHITE	87, 88, 98, 100, 101, 102, 103, 104, 107, 110, 111, 113
I-WOB2 UP3 14 BLUE	108, 109, 114, 115, 130
I-WOB2 UP3 14.5 BLUE	116, 117, 118, 119, 120, 121, 122, 128, 129, 131, 143
I-WOB2 UP3 15 DK BROWN	105, 106, 125, 126, 127, 132, 133
I-WOB2 UP3 15.5 DK BROWN	134, 135, 136, 138, 140
I-WOB2 UP3 16 ORANGE	123, 137, 139, 142
I-WOB2 UP3 16.5 ORANGE	124, 141

# HI PLAINS FARM EQUIPMENT

1509 SOUTH 2ND

DODGE CITY, KANSAS 67801

FEBRUARY 19, 2021

WISH-97875

MULL FARMS

EDWARD 1

450 GPM @ 30 PSI

LINDSAY GEN II  
SENNINGER UP3 I-WOB2  
SENNINGER 10 PSI REGULATORS  
.75 I.D. FLEXIBLE HOSE  
HEAD

Rotation time at 100% = 14.48 Hours Or 869 minutes

## Installation Chart

Page 1

Out #	Drop Len	Sprk #	Noz Size	Reg	Out #	Drop Len	Sprk #	Noz Size	Reg	Out #	Drop Len	Sprk #	Noz Size	Reg
1	PLUG				4	102	55	10	PSR210	7	114	112	13	PSR210
2	PLUG				5	108	56	10	PSR210	8	114	113	13.5	PSR210
3	PLUG				6	108	57	9.5	PSR210	9	114	114	14	PSR210
4	102	1	6	PSR210	7	114	58	9.5	PSR210	10	114	115	14	PSR210
5	108	2	6	PSR210	8	114	59	10	PSR210	11	114	116	14.5	PSR210
6	108	3	6	PSR210	9	114	60	10	PSR210	12	114	117	14.5	PSR210
7	114	4	6	PSR210	10	114	61	10.5	PSR210	13	108	118	14.5	PSR210
8	114	5	6	PSR210	11	114	62	10.5	PSR210	14	108	119	14.5	PSR210
9	114	6	6	PSR210	12	114	63	10.5	PSR210	15	102	120	14.5	PSR210
10	114	7	6	PSR210	13	108	64	11	PSR210	16	96	121	14.5	PSR210
11	114	8	6	PSR210	14	108	65	11	PSR210	17	90	122	14.5	PSR210
12	114	9	6	PSR210	15	102	66	11	PSR210	18	84	123	16	PSR210
13	108	10	6	PSR210	16	96	67	11	PSR210	TOWER 7				
14	108	11	6	PSR210	17	90	68	11	PSR210	1	84	124	16.5	PSR210
15	102	12	6	PSR210	18	84	69	12	PSR210	2	90	125	15	PSR210
16	96	13	6	PSR210	TOWER 4					3	96	126	15	PSR210
17	90	14	6	PSR210	1	84	70	12.5	PSR210	4	102	127	15	PSR210
18	84	15	6	PSR210	2	90	71	11	PSR210	5	108	128	14.5	PSR210
TOWER 1					3	96	72	11.5	PSR210	6	108	129	14.5	PSR210
1	84	16	6.5	PSR210	4	102	73	11.5	PSR210	7	114	130	14	PSR210
2	90	17	6	PSR210	5	108	74	11	PSR210	8	114	131	14.5	PSR210
3	96	18	6	PSR210	6	108	75	11	PSR210	9	114	132	15	PSR210
4	102	19	6	PSR210	7	114	76	10.5	PSR210	10	114	133	15	PSR210
5	108	20	6	PSR210	8	114	77	11	PSR210	11	114	134	15.5	PSR210
6	108	21	6	PSR210	9	114	78	11.5	PSR210	12	114	135	15.5	PSR210
7	114	22	6	PSR210	10	114	79	11.5	PSR210	13	108	136	15.5	PSR210
8	114	23	6.5	PSR210	11	114	80	12	PSR210	14	108	137	16	PSR210
9	114	24	6.5	PSR210	12	114	81	12	PSR210	15	102	138	15.5	PSR210
10	114	25	7	PSR210	13	108	82	12	PSR210	16	96	139	16	PSR210
11	114	26	7	PSR210	14	108	83	12.5	PSR210	17	90	140	15.5	PSR210
12	114	27	7	PSR210	15	102	84	12	PSR210	18	84	141	16.5	PSR210
13	108	28	7.5	PSR210	16	96	85	12.5	PSR210	TOWER 8				
14	108	29	7.5	PSR210	17	90	86	12	PSR210	1	84	142	16	PSR210
15	102	30	7.5	PSR210	18	84	87	13.5	PSR210	2	84	143	14.5	PSR210
16	96	31	7.5	PSR210	TOWER 5					3	84	144	13	PSR210
17	90	32	7.5	PSR210	1	84	88	13.5	PSR210	4	84	145	12	PSR210
18	84	33	8.5	PSR210	2	90	89	12.5	PSR210					
TOWER 2					3	96	90	13	PSR210					
1	84	34	8.5	PSR210	4	102	91	12.5	PSR210					
2	90	35	8	PSR210	5	108	92	12.5	PSR210					
3	96	36	8.5	PSR210	6	108	93	12	PSR210					
4	102	37	8	PSR210	7	114	94	12	PSR210					
5	108	38	8	PSR210	8	114	95	12.5	PSR210					
6	108	39	8	PSR210	9	114	96	13	PSR210					
7	114	40	8	PSR210	10	114	97	13	PSR210					
8	114	41	8	PSR210	11	114	98	13.5	PSR210					
9	114	42	8.5	PSR210	12	114	99	13	PSR210					
10	114	43	9	PSR210	13	108	100	13.5	PSR210					
11	114	44	9	PSR210	14	108	101	13.5	PSR210					
12	114	45	9	PSR210	15	102	102	13.5	PSR210					
13	108	46	9.5	PSR210	16	96	103	13.5	PSR210					
14	108	47	9.5	PSR210	17	90	104	13.5	PSR210					
15	102	48	9.5	PSR210	18	84	105	15	PSR210					
16	96	49	9.5	PSR210	TOWER 6									
17	90	50	9.5	PSR210	1	84	106	15	PSR210					
18	84	51	10.5	PSR210	2	90	107	13.5	PSR210					
TOWER 3					3	96	108	14	PSR210					
1	84	52	10.5	PSR210	4	102	109	14	PSR210					
2	90	53	9.5	PSR210	5	108	110	13.5	PSR210					
3	96	54	10	PSR210	6	108	111	13.5	PSR210					

# PRECIPITATION CHART FOR FULL CIRCLE

WISH-97875

FEBRUARY 19, 2021

DEALER - HI PLAINS FARM EQUIPMENT

IRRIGATOR - MULL FARMS

FIELD NO - EDWARD 1

TOTAL LENGTH PIPE = 1281.47    SYSTEM PRESSURE = 30 PSI

GPM UNDER PIPE = 450.98        TOTAL GPM = 450.98

ACRES UNDER PIPE = 118.43

RANGE OF ENDGUN = .00

GPM OF ENDGUN = .00

ACRES UNDER ENDGUN = .00

MOTOR SIZE (HP) = 3/4

LOADED MOTOR RPM = 1750

CENTER GEAR BOX RATIO = 40

WHEEL GEAR BOX RATIO = 50

TIRE SIZE = 11.2 X 24

LAST TOWER SPEED (FPM) = 9.10

## **PRECIPITATION BASED**

## **% TIMER BASED**

PRECIPITATION INCHES	% TIMER SETTING	TIME HOURS	% TIMER SETTING	PRECIPITATION INCHES	TIME HOURS
.12	100.00	14.48 - 869(min)	100.00	.12	14.48 - 869(min)
.20	60.93	23.77	90.00	.14	16.09
.25	48.74	29.71	80.00	.15	18.10
.30	40.62	35.66	70.00	.17	20.69
.40	30.47	47.54	60.00	.20	24.14
.50	24.37	59.43	50.00	.24	28.97
.60	20.31	71.31	45.00	.27	32.19
.70	17.41	83.20	40.00	.30	36.21
.75	16.25	89.14	35.00	.35	41.38
.80	15.23	95.08	30.00	.41	48.28
.90	13.54	106.97	25.00	.49	57.93
1.00	12.19	118.85	20.00	.61	72.42
1.25	9.75	148.57	15.00	.81	96.56
1.50	8.12	178.28	10.00	1.22	144.84
1.75	6.96	207.99	5.00	2.44	289.67

CAUTION: The relationship between precipitation rate, timer setting, and hours per revolution provided above are theoretical numbers based on the data list at the top of the page. Actual precipitation rates may vary due to the following field and machine conditions: wind drift; evaporation; tire slippage, tire loaded radius; drive train efficiency; elevation changes; soil type. Due to these varying field and machine conditions the above chart should be used as a guide only.

DEALER - HI PLAINS FARM EQUIPMENT

IRRIGATOR - MULL FARMS  
FIELD NO. - EDWARD 1

<u>SPAN 1</u> <u>POS/LEN</u>	<u>SPAN 2</u> <u>POS/LEN</u>	<u>SPAN 3</u> <u>POS/LEN</u>	<u>SPAN 4</u> <u>POS/LEN</u>	<u>SPAN 5</u> <u>POS/LEN</u>	<u>SPAN 6</u> <u>POS/LEN</u>	<u>SPAN 7</u> <u>POS/LEN</u>	<u>SPAN 8</u> <u>POS/LEN</u>	<u>ENDBOOM</u> <u>POS/LEN</u>
1 - 102	16 - 84	34 - 84	52 - 84	70 - 84	88 - 84	106 - 84	124 - 84	142 - 84
2 - 108	17 - 90	35 - 90	53 - 90	71 - 90	89 - 90	107 - 90	125 - 90	143 - 84
3 - 108	18 - 96	36 - 96	54 - 96	72 - 96	90 - 96	108 - 96	126 - 96	144 - 84
4 - 114	19 - 102	37 - 102	55 - 102	73 - 102	91 - 102	109 - 102	127 - 102	145 - 84
5 - 114	20 - 108	38 - 108	56 - 108	74 - 108	92 - 108	110 - 108	128 - 108	
6 - 114	21 - 108	39 - 108	57 - 108	75 - 108	93 - 108	111 - 108	129 - 108	
7 - 114	22 - 114	40 - 114	58 - 114	76 - 114	94 - 114	112 - 114	130 - 114	
8 - 114	23 - 114	41 - 114	59 - 114	77 - 114	95 - 114	113 - 114	131 - 114	
9 - 114	24 - 114	42 - 114	60 - 114	78 - 114	96 - 114	114 - 114	132 - 114	
10 - 108	25 - 114	43 - 114	61 - 114	79 - 114	97 - 114	115 - 114	133 - 114	
11 - 108	26 - 114	44 - 114	62 - 114	80 - 114	98 - 114	116 - 114	134 - 114	
12 - 102	27 - 114	45 - 114	63 - 114	81 - 114	99 - 114	117 - 114	135 - 114	
13 - 96	28 - 108	46 - 108	64 - 108	82 - 108	100 - 108	118 - 108	136 - 108	
14 - 90	29 - 108	47 - 108	65 - 108	83 - 108	101 - 108	119 - 108	137 - 108	
15 - 84	30 - 102	48 - 102	66 - 102	84 - 102	102 - 102	120 - 102	138 - 102	
	31 - 96	49 - 96	67 - 96	85 - 96	103 - 96	121 - 96	139 - 96	
	32 - 90	50 - 90	68 - 90	86 - 90	104 - 90	122 - 90	140 - 90	
	33 - 84	51 - 84	69 - 84	87 - 84	105 - 84	123 - 84	141 - 84	

## SUMMARY OF DROPS

19 - 84 IN DROP  
 15 - 90 IN DROP  
 15 - 96 IN DROP  
 16 - 102 IN DROP  
 32 - 108 IN DROP  
 48 - 114 IN DROP

TOTAL OF 145 DROPS