



SIMPSON
FARM ENTERPRISES, INC.

P.O. Box 70
Ransom, KS 67572
(800) 235-5359

603 MacArthur Rd.
Great Bend, KS 67530
(866) 379-1426

1036B E. Highway 40 Bypass
Hays, KS 67601
(888) 228-3611

2027 N. Independence
Beloit, KS 67420
(785) 738-2299

Weight of Solution	Specific Gravity	Conversion Factors
7.0 lbs. per gallon	.84	.92
8.0 lbs. per gallon	.96	.98
8.34 lbs. per gallon — WATER	1.00	1.00
9.0 lbs. per gallon	1.08	1.04
10.0 lbs. per gallon	1.20	1.10
10.65 lbs. per gallon — 28% nitrogen	1.28	1.13
11.0 lbs. per gallon	1.32	1.15
12.0 lbs. per gallon	1.44	1.20
14.0 lbs. per gallon	1.68	1.30

To find the GPA rate for spacings other than 20", multiply the rate in the table by the conversion factor for that spacing.

Conversion Factors Based on 20" Spacing								
Other Spacing	8"	10"	12"	14"	16"	18"	22"	30"
Conversion Factors	2.5	2.0	1.67	1.43	1.25	1.11	0.91	0.83



NOTE: Always insert Orifice Plate with side marked with number facing the outlet of the nozzle body.

MATERIAL: Stainless Steel

Orifice Plate No.	Pressure in psi	Capacity 1 Nozzle in GPM	Gallons Per Acre*				
			20" Row Spacing				
			3 mph	4 mph	5 mph	6 mph	8 mph
4916-8	5	.003	.30	.22	.18	.15	.11
	10	.004	.40	.30	.24	.20	.15
	20	.006	.59	.45	.36	.30	.22
	30	.007	.69	.52	.42	.35	.26
4916-10	5	.005	.50	.37	.30	.25	.19
	10	.006	.59	.45	.36	.30	.22
	20	.009	.89	.67	.53	.45	.33
	30	.011	1.1	.82	.65	.54	.41
4916-12	5	.007	.69	.52	.42	.35	.26
	10	.009	.89	.67	.53	.45	.33
	20	.013	1.3	.97	.77	.64	.48
	30	.016	1.6	1.2	.95	.79	.59
4916-14	5	.009	.89	.67	.53	.45	.33
	10	.013	1.3	.97	.77	.64	.48
	20	.018	1.8	1.3	1.1	.89	.67
	30	.022	2.2	1.6	1.3	1.1	.82
4916-15	5	.010	.99	.74	.59	.50	.37
	10	.014	1.4	1.0	.89	.69	.52
	20	.020	2.0	1.5	1.2	.99	.74
	30	.025	2.5	1.9	1.5	1.2	.93
4916-16	5	.012	1.2	.89	.71	.59	.45
	10	.016	1.6	1.2	.95	.79	.59
	20	.023	2.3	1.7	1.4	1.1	.85
	30	.028	2.8	2.1	1.7	1.4	1.0
4916-18	5	.015	1.5	1.1	.89	.74	.56
	10	.021	2.1	1.6	1.2	1.0	.78
	20	.030	3.0	2.2	1.8	1.5	1.1
	30	.036	3.6	2.7	2.1	1.8	1.3
4916-20	5	.018	1.8	1.3	1.1	.89	.67
	10	.026	2.6	1.9	1.5	1.3	.97
	20	.037	3.7	2.7	2.2	1.8	1.4
	30	.045	4.5	3.3	2.7	2.2	1.7
4916-22	5	.022	2.2	1.6	1.3	1.1	.82
	10	.031	3.1	2.3	1.8	1.5	1.2
	20	.043	4.3	3.2	2.6	2.1	1.6
	30	.053	5.2	3.9	3.1	2.6	2.0
4916-24	5	.026	2.6	1.9	1.5	1.3	.97
	10	.037	3.7	2.7	2.2	1.8	1.4
	20	.052	5.1	3.9	3.1	2.6	1.9
	30	.064	6.3	4.8	3.8	3.2	2.4
4916-25	5	.028	2.8	2.1	1.7	1.4	1.0
	10	.040	4.0	3.0	2.4	2.0	1.5
	20	.056	5.5	4.2	3.3	2.8	2.1
	30	.068	6.7	5.0	4.0	3.4	2.5

Orifice Plate No.	Pressure in psi	Capacity 1 Nozzle in GPM	Gallons Per Acre*				
			20" Row Spacing				
			3 mph	4 mph	5 mph	6 mph	8 mph
4916-26	5	.030	3.0	2.2	1.8	1.5	1.1
	10	.043	4.3	3.2	2.6	2.1	1.6
	20	.060	5.9	4.5	3.6	3.0	2.2
	30	.074	7.3	5.5	4.4	3.7	2.7
4916-27	5	.032	3.2	2.4	1.9	1.6	1.2
	10	.045	4.5	3.3	2.7	2.2	1.7
	20	.064	6.3	4.8	3.8	3.2	2.4
	30	.078	7.7	5.8	4.6	3.9	2.9
4916-28	5	.035	3.5	2.6	2.1	1.7	1.3
	10	.049	4.9	3.6	2.9	2.4	1.8
	20	.069	6.8	5.1	4.1	3.4	2.6
	30	.085	8.4	6.3	5.0	4.2	3.2
4916-29	5	.038	3.8	2.8	2.3	1.9	1.4
	10	.054	5.3	4.0	3.2	2.7	2.0
	20	.076	7.5	5.6	4.5	3.8	2.8
	30	.093	9.2	6.9	5.5	4.6	3.5
4916-30	5	.040	4.0	3.0	2.4	2.0	1.5
	10	.057	5.6	4.2	3.4	2.8	2.1
	20	.081	8.0	6.0	4.8	4.0	3.0
	30	.099	9.8	7.4	5.9	4.9	3.7
4916-31	5	.043	4.3	3.2	2.6	2.1	1.6
	10	.061	6.0	4.5	3.6	3.0	2.3
	20	.087	8.6	6.5	5.2	4.3	3.2
	30	.106	10.5	7.9	6.3	5.2	3.9
4916-32	5	.048	4.8	3.6	2.9	2.4	1.8
	10	.067	6.6	5.0	4.0	3.3	2.5
	20	.095	9.4	7.1	5.6	4.7	3.5
	30	.116	11.5	8.6	6.9	5.7	4.3
4916-34	5	.052	5.1	3.9	3.1	2.6	1.9
	10	.074	7.3	5.5	4.4	3.7	2.7
	20	.104	10.3	7.7	6.2	5.1	3.9
	30	.127	12.6	9.4	7.5	6.3	4.7
4916-35	5	.056	5.5	4.2	3.3	2.8	2.1
	10	.079	7.8	5.9	4.7	3.9	2.9
	20	.111	11.0	8.2	6.6	5.5	4.1
	30	.136	13.5	10.1	8.1	6.7	5.0
4916-37	5	.061	6.0	4.5	3.6	3.0	2.3
	10	.086	8.5	6.4	5.1	4.3	3.2
	20	.121	12.0	9.0	7.2	6.0	4.5
	30	.149	14.8	11.1	8.9	7.4	5.5
4916-39	5	.067	6.6	5.0	4.0	3.3	2.5
	10	.095	9.4	7.1	5.6	4.7	3.5
	20	.135	13.4	10.0	8.0	6.7	5.0
	30	.165	16.3	12.3	9.8	8.2	6.1

Orifice Plate No.	Pressure in psi	Capacity 1 Nozzle in GPM	Gallons Per Acre*				
			20" Row Spacing				
			3 mph	4 mph	5 mph	6 mph	8 mph
4916-40	5	.072	7.1	5.3	4.3	3.6	2.7
	10	.102	10.1	7.6	6.1	5.0	3.8
	20	.144	14.3	10.7	8.6	7.1	5.3
	30	.177	17.5	13.1	10.5	8.8	6.6
4916-41	5	.074	7.3	5.5	4.4	3.7	2.7
	10	.105	10.4	7.8	6.2	5.2	3.9
	20	.149	14.8	11.1	8.9	7.4	5.5
	30	.182	18.0	13.5	10.8	9.0	6.8
4916-43	5	.081	8.0	6.0	4.8	4.0	3.0
	10	.115	11.4	8.5	6.8	5.7	4.3
	20	.163	16.1	12.1	9.7	8.1	6.1
	30	.200	19.8	14.9	11.9	9.9	7.4
4916-45	5	.088	8.7	6.5	5.2	4.4	3.3
	10	.125	12.4	9.3	7.4	6.2	4.6
	20	.176	17.4	13.1	10.5	8.7	6.5
	30	.216	21	16.0	12.8	10.7	8.0
4916-46	5	.095	9.4	7.1	5.6	4.7	3.5
	10	.135	13.4	10.0	8.0	6.7	5.0
	20	.191	18.9	14.2	11.3	9.5	7.1
	30	.233	23	17.3	13.8	11.5	8.7
4916-47	5	.097	9.6	7.2	5.8	4.8	3.6
	10	.137	13.6	10.2	8.1	6.8	5.1
	20	.194	19.2	14.4	11.5	9.6	7.2
	30	.238	24	17.7	14.1	11.8	8.8
4916-48	5	.101	10.0	7.5	6.0	5.0	3.7
	10	.143	14.2	10.6	8.5	7.1	5.3
	20	.202	20	15.0	12.0	10.0	7.5
	30	.247	24	18.3	14.7	12.2	9.2
4916-49	5	.104	10.3	7.7	6.2	5.1	3.9
	10	.147	14.6	10.9	8.7	7.3	5.5
	20	.208	21	15.4	12.4	10.3	7.7
	30	.255	25	18.9	15.1	12.6	9.5
4916-51	5	.116	11.5	8.6	6.9	5.7	4.3
	10	.164	16.2	12.2	9.7	8.1	6.1
	20	.232	23	17.2	13.8	11.5	8.6
	30	.284	29	21	16.9	14.1	10.5
4916-52	5	.118	11.7	8.8	7.0	5.8	4.4
	10	.167	16.5	12.4	9.9	8.3	6.2
	20	.237	23	17.6	14.1	11.7	8.8
	30	.290	29	22	17.2	14.4	10.8
4916-54	5	.127	12.6	9.4	7.5	6.3	4.7
	10	.180	17.8	13.4	10.7	8.9	6.7
	20	.255	25	18.9	15.1	12.6	9.5
	30	.312	31	23	18.5	15.4	11.6

Flow Regulators – Continued

Orifice Plate No.	Pressure in psi	Capacity 1 Nozzle in GPM	Gallons Per Acre*				
			20" Row Spacing				
			3 mph	4 mph	5 mph	6 mph	8 mph
4916-55	5	.133	13.2	9.9	7.9	6.6	4.9
	10	.188	18.6	14.0	11.2	9.3	7.0
	20	.266	26.3	19.8	15.8	13.2	9.9
	30	.326	32.3	24.2	19.4	16.1	12.1
4916-57	5	.141	14.0	10.5	8.4	7.0	5.2
	10	.200	19.8	14.9	11.9	9.9	7.4
	20	.283	28.0	21.0	16.8	14.0	10.5
	30	.346	34.3	25.7	20.6	17.1	12.8
4916-59	5	.152	15.0	11.3	9.0	7.5	5.6
	10	.215	21.3	16.0	12.8	10.6	8.0
	20	.304	30.1	22.6	18.1	15.0	11.3
	30	.372	36.8	27.6	22.1	18.4	13.8
4916-61	5	.166	16.3	12.3	9.8	8.2	6.1
	10	.233	23.1	17.3	13.8	11.5	8.7
	20	.330	32.7	24.5	19.6	16.3	12.3
	30	.404	40.0	30.0	24.0	20.0	15.0
4916-63	5	.174	17.2	12.9	10.3	8.6	6.5
	10	.246	24.4	18.3	14.6	12.2	9.1
	20	.347	34.4	25.8	20.6	17.2	12.9
	30	.425	41.1	31.6	25.2	21.0	15.8
4916-65	5	.185	18.3	13.7	11.0	9.2	6.9
	10	.261	25.8	19.4	15.5	12.9	9.7
	20	.369	36.5	27.4	21.9	18.3	13.7
	30	.452	44.7	33.6	26.8	22.4	16.8
4916-67	5	.196	19.4	14.6	11.6	9.7	7.3
	10	.278	27.5	20.6	16.5	13.8	10.3
	20	.392	38.8	29.1	23.3	19.4	14.6
	30	.481	47.6	35.7	28.6	23.8	17.9
4916-68	5	.203	20.1	15.1	12.1	10.0	7.5
	10	.287	28.4	21.3	17.0	14.2	10.7
	20	.405	40.1	30.1	24.1	20.0	15.0
	30	.496	49.1	36.8	29.5	24.6	18.4
4916-70	5	.216	21.4	16.0	12.8	10.7	8.0
	10	.306	30.3	22.7	18.2	15.1	11.4
	20	.433	42.9	32.2	25.7	21.4	16.1
	30	.530	52.5	39.4	31.5	26.2	19.7
4916-72	5	.226	22.4	16.8	13.4	11.2	8.4
	10	.320	31.7	23.8	19.0	15.8	11.9
	20	.453	44.8	33.6	26.9	22.4	16.8
	30	.554	54.8	41.1	32.9	27.4	20.6
4916-73	5	.233	23.1	17.3	13.8	11.5	8.7
	10	.330	32.7	24.5	19.6	16.3	12.3
	20	.467	46.2	34.7	27.7	23.1	17.3
	30	.572	56.6	42.5	34.0	28.3	21.1
4916-75	5	.245	24.3	18.2	14.6	12.1	9.1
	10	.347	34.4	25.8	20.6	17.2	12.9
	20	.491	48.6	36.5	29.2	24.3	18.2
	30	.601	59.5	44.6	35.7	29.7	22.3
4916-78	5	.272	26.9	20.2	16.2	13.5	10.1
	10	.385	37.1	28.6	22.9	19.1	14.3
	20	.544	53.9	40.4	32.3	26.9	20.2
	30	.667	66.0	49.5	39.6	33.0	24.8
4916-80	5	.280	27.7	20.8	16.6	13.9	10.4
	10	.397	39.3	29.5	23.6	19.7	14.7
	20	.561	55.5	41.7	33.3	27.8	20.8
	30	.687	68.0	51.0	40.8	34.0	25.5
4916-81	5	.290	28.7	21.5	17.2	14.4	10.8
	10	.411	40.7	30.5	24.4	20.3	15.3
	20	.581	57.5	43.1	34.5	28.8	21.6
	30	.711	70.4	52.8	42.2	35.2	26.4
4916-83	5	.317	31.4	23.5	18.8	15.7	11.8
	10	.449	44.5	33.3	26.7	22.2	16.7
	20	.634	62.8	47.1	37.7	31.4	23.5
	30	.777	76.9	57.7	46.2	38.5	28.8

Orifice Plate No.	Pressure in psi	Capacity 1 Nozzle in GPM	Gallons Per Acre*				
			20" Row Spacing				
			3 mph	4 mph	5 mph	6 mph	8 mph
4916-86	5	.332	33	25	19.7	16.4	12.3
	10	.470	47	35	28	23	17.4
	20	.664	66	49	39	33	25
	30	.813	80	60	48	40	30
4916-89	5	.346	34	26	21	17.1	12.8
	10	.490	49	36	29	24	18.2
	20	.693	69	51	41	34	26
	30	.849	84	63	50	42	32
4916-91	5	.369	37	27	22	18.3	13.7
	10	.523	52	39	31	26	19.4
	20	.739	73	55	44	37	27
	30	.905	90	67	54	45	34
4916-93	5	.387	38	29	23	19.2	14.4
	10	.547	54	41	32	27	20
	20	.774	77	57	46	38	29
	30	.947	94	70	56	47	35
4916-95	5	.404	40	30	24	20	15.0
	10	.572	57	42	34	28	21
	20	.808	80	60	48	40	30
	30	.990	98	74	59	49	37
4916-98	5	.442	44	33	26	22	16.4
	10	.625	62	46	37	31	23
	20	.884	88	66	53	44	33
	30	1.08	107	80	64	53	40
4916-103	5	.461	46	34	27	23	17.1
	10	.653	65	48	39	32	24
	20	.923	91	69	55	46	34
	30	1.13	112	84	67	56	42
4916-107	5	.518	51	38	31	26	19.2
	10	.733	73	54	44	36	27
	20	1.04	103	77	62	51	39
	30	1.27	126	94	75	63	47
4916-110	5	.548	54	41	33	27	20
	10	.775	77	58	46	38	29
	20	1.10	109	82	65	54	41
	30	1.34	133	99	80	66	50
4916-115	5	.605	60	45	36	30	22
	10	.855	85	63	51	42	32
	20	1.21	120	90	72	60	45
	30	1.48	147	110	88	73	55
4916-120	5	.629	62	47	37	31	23
	10	.890	88	66	53	44	33
	20	1.26	125	94	75	62	47
	30	1.54	152	114	91	76	57
4916-125	5	.693	69	51	41	34	26
	10	.980	97	73	58	49	36
	20	1.39	138	103	83	69	51
	30	1.70	168	126	101	84	63
4916-128	5	.721	71	54	43	34	27
	10	1.02	101	76	61	49	38
	20	1.44	143	107	86	71	53
	30	1.77	175	131	105	88	66
4916-132	5	.774	77	57	46	38	29
	10	1.10	109	82	65	54	41
	20	1.55	153	115	92	77	58
	30	1.90	188	141	113	94	71
4916-136	5	.840	83	62	50	42	31
	10	1.19	118	88	71	59	44
	20	1.68	166	125	100	83	62
	30	2.06	204	153	122	102	76
4916-140	5	.894	89	66	53	44	33
	10	1.27	126	94	75	63	47
	20	1.79	177	133	106	89	66
	30	2.19	217	163	130	108	81

Orifice Plate No.	Pressure in psi	Capacity 1 Nozzle in GPM	Gallons Per Acre*				
			20" Row Spacing				
			3 mph	4 mph	5 mph	6 mph	8 mph
4916-144	5	.926	92	69	55	46	34
	10	1.31	130	97	78	65	49
	20	1.85	183	137	110	92	69
	30	2.27	225	169	135	112	84
4916-147	5	.953	94	71	57	47	35
	10	1.35	134	100	80	67	50
	20	1.91	189	142	113	95	71
	30	2.33	231	173	138	115	87
4916-151	5	1.04	103	77	62	51	39
	10	1.47	146	109	87	73	55
	20	2.08	206	154	124	103	77
	30	2.55	252	189	151	126	95
4916-156	5	1.10	109	82	65	54	41
	10	1.55	153	115	92	77	58
	20	2.20	218	163	131	109	82
	30	2.69	266	200	160	133	100
4916-161	5	1.15	114	85	68	57	43
	10	1.63	161	121	97	81	61
	20	2.31	229	172	137	114	86
	30	2.83	280	210	168	140	105
4916-166	5	1.21	120	90	71	60	45
	10	1.72	170	128	102	85	64
	20	2.43	241	180	144	120	90
	30	2.97	294	221	176	147	110
4916-170	5	1.30	129	97	77	64	48
	10	1.84	182	137	109	91	68
	20	2.61	258	194	155	129	97
	30	3.19	316	237	189	158	118
4916-172	5	1.36	135	101	81	67	50
	10	1.92	190	143	114	95	71
	20	2.71	268	201	161	134	101
	30	3.32	329	247	197	164	123
4916-177	5	1.41	140	105	84	70	52
	10	2.00	198	149	119	99	74
	20	2.83	280	210	168	140	105
	30	3.46	343	257	206	171	128
4916-182	5	1.47	146	109	87	73	55
	10	2.08	206	154	124	103	77
	20	2.95	292	219	175	146	110
	30	3.61	357	268	214	179	134
4916-187	5	1.56	154	116	93	77	58
	10	2.21	219	164	131	109	82
	20	3.12	309	232	185	154	116
	30	3.82	378	284	227	189	142
4916-196	5	1.73	171	128	103	86	64
	10	2.45	243	182	146	121	91
	20	3.46	343	257	206	171	128
	30	4.24	420	315	252	210	157
4916-205	5	1.83	186	140	112	93	70
	10	2.65	262	197	157	131	98
	20	3.75	371	278	223	186	139
	30	4.59	454	341	273	227	170
4916-218	5	2.11	209	157	125	104	78
	10	2.98	295	221	177	148	111
	20	4.21	417	313	250	208	156
	30	5.16	511	383	307	255	192
4916-234	5	2.45	243	182	146	121	91
	10	3.47	344	258	206	172	129
	20	4.91	486	365	292	243	182
	30	6.01	595	446	357	297	223
4916-250	5	2.83	280	210	168	140	105
	10	4.00	396	297	238	198	149
	20	5.66	560	420	336	280	210
	30	6.93	686	515	412	343	257