

willow competition experiment - Osbornes ponds, willow data

	Block	Elev. (m)	row within block	Willow stage	treatment	willow random #	willow ID #	Willow height (cm) 4 JUN 2010	Willow # leaves 4 JUN 2010	Willow stem diameter 4 JUN 2010
1	I	0	1	seedling	alone	79		5.5	10	1.0
2	I	0	8	tall cutting	alone	yellow 53		73.7	101	7.6
3	I	0	9	seedling	alone	56		5.4	9	1.4
4	I	0	10	tall cutting	alone	yellow 51		90.1	239	8.6
5	I	0	11	short cutting	alone	pink 69		45.5	169	9.5
6	I	0	12	short cutting	alone	yellow 60		52.9	56	12.8
7	I	0.25	1	tall cutting	high density sawgrass	pink 31		68.3	90	10.1
8	I	0.25	2	seedling	high density sawgrass	39		2.2	6	0.4
9	I	0.25	3	seedling	low density sawgrass	8		8.3	10	1.0
10	I	0.25	4	seedling	alone	41		2.2	5	1.1
11	I	0.25	5	short cutting	high density sawgrass	pink 65		36.5	49	10.8
12	I	0.25	6	seedling	alone	59		7.3	17	1.1
13	I	0.25	7	short cutting	low density sawgrass	yellow 14		55.0	84	9.0
14	I	0.25	8	tall cutting	alone	yellow 57		69.9	91	7.5
15	I	0.25	9	short cutting	alone	pink 27		64.0	48	13.9
16	I	0.25	10	short cutting	alone	yellow 57		53.1	50	4.0
17	I	0.25	11	tall cutting	low density sawgrass	pink 26		64.3	89	11.0
18	I	0.25	12	tall cutting	alone	pink 62		59.5	115	7.6
19	I	0.38	1	short cutting	low density sawgrass	yellow 8		41.1	90	12.2
20	I	0.38	2	tall cutting	low density sawgrass	pink 75		91.1	67	8.7
21	I	0.38	3	seedling	low density sawgrass	43		0.6	6	0.5
22	I	0.38	4	seedling	high density sawgrass	49		4.9	10	1.3
23	I	0.38	5	tall cutting	alone	yellow 20		71.4	93	11.8
24	I	0.38	6	short cutting	alone	pink 80		54.3	73	11.9

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	Block	Elev. (m)	row within block	Willow stage	treatment	willow random #	willow ID #	Willow height (cm) 4 JUN 2010	Willow # leaves 4 JUN 2010	Willow stem diameter 4 JUN 2010
25	I	0.38	7	tall cutting	high density sawgrass	yellow 59	.	56.6	65	7.4
26	I	0.38	8	short cutting	high density sawgrass	pink 70	.	36.6	38	9.7
27	I	0.38	9	short cutting	alone	pink 73	.	35.9	67	9.2
28	I	0.38	10	seedling	alone	19	.	4.9	12	1.1
29	I	0.38	11	seedling	alone	3	.	3.1	10	0.6
30	I	0.38	12	tall cutting	alone	pink 39	.	57.6	78	11.6
31	I	0.5	1	tall cutting	alone	pink 76	.	60.8	56	10.8
32	I	0.5	4	seedling	alone	78	.	2.5	8	0.6
33	I	0.5	6	short cutting	alone	pink 75	.	35.5	61	7.9
34	I	0.5	7	tall cutting	alone	yellow 46	.	69.6	66	10.6
35	I	0.5	9	short cutting	alone	pink 66	.	30.2	51	6.4
36	I	0.5	12	seedling	alone	27	.	1.5	8	0.7
37	II	0	1	short cutting	alone	yellow 1	.	57.5	95	11.5
38	II	0	2	tall cutting	alone	yellow 4	.	77.8	140	7.8
39	II	0	5	tall cutting	alone	yellow 42	.	76.7	132	7.9
40	II	0	10	seedling	alone	30	.	7.8	12	1.2
41	II	0	11	seedling	alone	65	.	5.2	11	0.8
42	II	0	12	short cutting	alone	pink 68	.	49.5	110	6.5
43	II	0.25	1	tall cutting	low density sawgrass	pink 68	.	66.0	83	8.7
44	II	0.25	2	short cutting	alone	yellow 41	.	47.4	69	12.6
45	II	0.25	3	seedling	low density sawgrass	69	.	5.2	10	0.9
46	II	0.25	4	tall cutting	high density sawgrass	pink 25	.	57.5	107	9.6
47	II	0.25	5	seedling	alone	22	.	6.6	14	1.7
48	II	0.25	6	seedling	alone	38	.	3.8	12	1.3

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49	II	0.25	7	short cutting	alone	pink 61		33.4	26	4.6
50	II	0.25	8	tall cutting	alone	yellow 2		68.5	159	12.9
51	II	0.25	9	seedling	high density sawgrass	37		3.9	8	0.6
52	II	0.25	10	tall cutting	alone	pink 22		65.9	75	14.3
53	II	0.25	11	short cutting	high density sawgrass	yellow 44		42.3	90	14.0
54	II	0.25	12	short cutting	low density sawgrass	pink 74		31.5	66	5.1
55	II	0.38	1	tall cutting	low density sawgrass	yellow 56		52.6	53	4.6
56	II	0.38	2	short cutting	alone	yellow 7		54.5	75	10.2
57	II	0.38	3	tall cutting	alone	yellow 19		71.1	81	11.0
58	II	0.38	4	short cutting	alone	pink 22		49.2	63	11.1
59	II	0.38	5	short cutting	low density sawgrass	pink 25		56.5	54	12.6
60	II	0.38	6	seedling	low density sawgrass	70		3.0	10	1.0
61	II	0.38	7	tall cutting	alone	yellow 12		57.6	63	7.5
62	II	0.38	8	seedling	high density sawgrass	68		5.2	14	0.4
63	II	0.38	9	seedling	alone	52		3.0	9	0.9
64	II	0.38	10	short cutting	high density sawgrass	yellow 2		50.7	61	11.1
65	II	0.38	11	tall cutting	high density sawgrass	pink 65		69.1	104	11.9
66	II	0.38	12	seedling	alone	35		4.1	9	2.0
67	II	0.5	2	seedling	alone	14		4.7	156	0.9
68	II	0.5	3	tall cutting	alone	pink 36		67.6	11	11.3
69	II	0.5	4	short cutting	alone	yellow 19		39.3	48	8.4
70	II	0.5	6	seedling	alone	62		3.4	13	1.5
71	II	0.5	7	short cutting	alone	yellow 47		49.5	45	10.2
72	II	0.5	12	tall cutting	alone	pink 23		60.2	53	11.5

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73	III	0	3	seedling	alone	51	.	2.6	8	0.5
74	III	0	7	tall cutting	alone	pink 37	.	74.6	291	11.3
75	III	0	8	tall cutting	alone	yellow 5	.	68.4	328	12.3
76	III	0	9	short cutting	alone	yellow 3	.	52.4	47	10.4
77	III	0	11	seedling	alone	17	.	35.6	43	3.2
78	III	0	12	short cutting	alone	33	.	67.9	228	13.0
79	III	0.25	1	tall cutting	alone	yellow 44	.	61.7	63	6.5
80	III	0.25	2	short cutting	low density sawgrass	yellow 56	.	39.2	38	4.6
81	III	0.25	3	seedling	low density sawgrass	71	.	3.2	10	1.2
82	III	0.25	4	seedling	alone	61	.	6.0	13	1.2
83	III	0.25	5	short cutting	high density sawgrass	pink 34	.	38.1	93	9.0
84	III	0.25	6	short cutting	alone	pink 23	.	51.7	48	12.0
85	III	0.25	7	seedling	high density sawgrass	28	.	7.2	19	1.6
86	III	0.25	8	tall cutting	low density sawgrass	yellow 16	.	59.3	73	8.1
87	III	0.25	9	tall cutting	high density sawgrass	pink 72	.	67.4	92	8.7
88	III	0.25	10	short cutting	alone	pink 35	.	46.4	104	12.0
89	III	0.25	11	tall cutting	alone	pink 24	.	72.9	94	12.2
90	III	0.25	12	seedling	alone	63	.	6.2	14	1.2
91	III	0.38	1	short cutting	low density sawgrass	yellow 17	.	65.6	81	16.4
92	III	0.38	2	tall cutting	high density sawgrass	pink 78	.	70.6	71	9.4
93	III	0.38	3	tall cutting	alone	pink 27	.	62.7	111	8.4
94	III	0.38	4	seedling	high density sawgrass	26	.	5.5	17	1.2
95	III	0.38	5	short cutting	high density sawgrass	yellow 42	.	54.1	51	8.4
96	III	0.38	6	short cutting	alone	yellow 48	.	49.9	83	9.7

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	Block	Elev. (m)	row within block	Willow stage	treatment	willow random #	willow ID #	Willow height (cm) 4 JUN 2010	Willow # leaves 4 JUN 2010	Willow stem diameter 4 JUN 2010
97	III	0.38	7	seedling	alone					
98	III	0.38	8	short cutting	alone			3.1	15	1.3
99	III	0.38	9	seedling	alone	pink	38	54.6	73	10.3
100	III	0.38	10	seedling	low density sawgrass		36	7.1	15	1.8
101	III	0.38	11	tall cutting	low density sawgrass		42	7.0	14	1.4
102	III	0.38	12	tall cutting	alone	yellow	58	88.9	176	11.0
103	III	0.5	1	tall cutting	alone	yellow	13	78.4	104	12.7
104	III	0.5	3	seedling	alone		79			
105	III	0.5	5	seedling	alone		55			
106	III	0.5	7	short cutting	alone		6			
107	III	0.5	8	short cutting	alone					
108	III	0.5	10	tall cutting	alone	pink	64			
109	IV	0	1	seedling	alone	pink	78	47.2	58	8.9
110	IV	0	5	short cutting	alone	pink	66	33.9	46	4.8
111	IV	0	8	tall cutting	alone		13	54.5	173	10.3
112	IV	0	9	short cutting	alone	pink	63	43.2	62	5.4
113	IV	0	10	tall cutting	alone	pink	63	39.8	261	9.6
114	IV	0	11	seedling	alone	yellow	58	109.4	356	8.3
115	IV	0.25	1	tall cutting	alone	pink	80	49.5	374	8.4
116	IV	0.25	2	tall cutting	high density sawgrass		10	61.3	147	8.9
117	IV	0.25	3	seedling	alone	pink	30	29.4	69	3.9
118	IV	0.25	4	short cutting	alone	pink	38	51.5	49	8.3
119	IV	0.25	5	short cutting	alone		64	69.1	53	9.7
120	IV	0.25	6	seedling	high density sawgrass	pink	77	6.7	12	1.6
						yellow	20	38.8	58	6.6
							74	47.3	38	10.9
								6.2	7	0.8

DEAD - uprooted by armadillo ear
 No seedlings

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121	IV	0.25	7	tall cutting	low density sawgrass	yellow 8	.	52.3	46	8.1
122	IV	0.25	8	seedling	low density sawgrass	54	.	6.1	12	1.1
123	IV	0.25	9	short cutting	low density sawgrass	yellow 43	.	34.2	44	3.7
124	IV	0.25	10	seedling	alone	66	.	8.2	15	1.1
125	IV	0.25	11	short cutting	high density sawgrass	pink 31	.	51.1	116	13.9
126	IV	0.25	12	tall cutting	alone	pink 35	.	71.0	160	13.6
127	IV	0.38	1	tall cutting	low density sawgrass	yellow 18	.	72.8	90	11.8
128	IV	0.38	2	short cutting	alone	yellow 15	.	63.2	36	8.9
129	IV	0.38	3	seedling	alone	23	.	6.3	11	0.9
130	IV	0.38	4	tall cutting	high density sawgrass	pink 70	.	62.1	65	6.6
131	IV	0.38	5	tall cutting	alone	pink 69	.	65.5	90	12.4
132	IV	0.38	6	seedling	high density sawgrass	33	.	4.6	10	1.7
133	IV	0.38	7	tall cutting	alone	pink 73	.	69.1	66	8.7
134	IV	0.38	8	short cutting	alone	yellow 46	.	70.4	57	10.9
135	IV	0.38	9	short cutting	high density sawgrass	yellow 5	.	48.1	33	10.7
136	IV	0.38	10	seedling	alone	9	.	8.3	17	1.3
137	IV	0.38	11	short cutting	low density sawgrass	pink 29	.	49.5	81	12.8
138	IV	0.38	12	seedling	low density sawgrass	31	.	6.9	12	1.5
139	IV	0.5	2	seedling	alone	50	.	No seedlings		
140	IV	0.5	3	short cutting	alone	pink 62	.	30.4	132	8.6
141	IV	0.5	4	short cutting	alone	yellow 4	.	41	22	7.3
142	IV	0.5	5	tall cutting	alone	pink 77	.	70.5	53	9.9
143	IV	0.5	8	seedling	alone	4	.	All dead		
144	IV	0.5	11	tall cutting	alone	yellow 50	.	83.6	56	11.9

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	Block	Elev. (m)	row within block	Willow stage	treatment	willow random #	willow ID #	Willow height (cm) 4 JUN 2010	Willow # leaves 4 JUN 2010	(mm) Willow stem diameter 4 JUN 2010
145	V	0	2	short cutting	alone	yellow 10	.	84.4	45	13.0
146	V	0	3	seedling	alone	48	.	21.3	17	2.0
147	V	0	4	tall cutting	alone	pink 33	.	54.6	86	8.6
148	V	0	5	tall cutting	alone	pink 34	.	57.9	322	11.1
149	V	0	6	seedling	alone	58	.	28.4	38	4.0
150	V	0	8	short cutting	alone	59	.	56.1	86	7.1
151	V	0.25	1	short cutting	alone	pink 67	.	36.1	34	7.0
152	V	0.25	2	seedling	high density sawgrass	21	.	4.2	8	1.0
153	V	0.25	3	seedling	alone	32	.	7.9	14	1.8
154	V	0.25	4	tall cutting	low density sawgrass	pink 40	.	69.2	144	15.5
155	V	0.25	5	short cutting	high density sawgrass	yellow 18	.	61.6	78	11.0
156	V	0.25	6	tall cutting	alone	pink 21	.	80.6	62	11.8
157	V	0.25	7	short cutting	alone	yellow 55	.	48.5	45	6.8
158	V	0.25	8	tall cutting	high density sawgrass	yellow 3	.	76.1	103	9.6
159	V	0.25	9	tall cutting	alone	pink 71	.	72.7	46	11.5
160	V	0.25	10	seedling	alone	24	.	8.1	11	1.3
161	V	0.25	11	seedling	low density sawgrass	11	.	7.4	10	1.3
162	V	0.25	12	short cutting	low density sawgrass	yellow 13	.	72.3	46	14.3
163	V	0.38	1	short cutting	alone	yellow 9	.	52.8	38	9.1
164	V	0.38	2	short cutting	alone	yellow 50	.	46.1	58	7.5
165	V	0.38	3	tall cutting	high density sawgrass	pink 32	.	57.8	126	10.3
166	V	0.38	4	tall cutting	alone	pink 67	.	47.7	59	7.3
167	V	0.38	5	short cutting	low density sawgrass	pink 76	.	34.9	35	6.0
168	V	0.38	6	seedling	low density sawgrass	45	.	4.6	12	0.8

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169	V	0.38	7	seedling	alone					
170	V	0.38	8	tall cutting	low density sawgrass	12		4.7	12	1.2
171	V	0.38	9	seedling	alone	yellow 60		79.1	53	9.2
172	V	0.38	10	short cutting	high density sawgrass	7		4.8	12	1.3
173	V	0.38	11	tall cutting	alone	pink 24		69.1	47	12.3
174	V	0.38	12	seedling	high density sawgrass	pink 28		71.2	107	11.3
175	V	0.5	2	short cutting	alone	75		1.4	7	1.2
176	V	0.5	3	seedling	alone	pink 79		4.8	42	1.4
177	V	0.5	4	tall cutting	alone	16		5.2	10	1.1
178	V	0.5	7	tall cutting	alone	yellow 6		69.2	62	9.4
179	V	0.5	8	seedling	alone	yellow 48		61.5	50	8.1
180	V	0.5	9	short cutting	alone	18		6.2	12	1.6
181	VI	0	1	seedling	alone	yellow 49		44.4	33	8.1
182	VI	0	3	tall cutting	alone	47		32.4	74	4.4
183	VI	0	4	short cutting	alone	yellow 7		62.1	139	12.4
184	VI	0	10	short cutting	alone	pink 71		44.8	95	6.9
185	VI	0	11	seedling	alone	16		67.7	342	11.7
186	VI	0	12	tall cutting	alone	1		32.7	63	4.9
187	VI	0.25	1	short cutting	alone	47		79.5	158	10.8
188	VI	0.25	2	tall cutting	alone	yellow 51		42.7	60	9.8
189	VI	0.25	3	seedling	alone	pink 61		50.4	76	4.4
190	VI	0.25	4	short cutting	low density sawgrass	57		9.0	18	2.1
191	VI	0.25	5	tall cutting	low density sawgrass	pink 30		64.9	62	12.3
192	VI	0.25	6	short cutting	high density sawgrass	yellow 45		74.5	85	9.5
						pink 40		60.9	100	15.1

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	Block	Elev. (m)	row within block	Willow stage	treatment	willow random #	willow ID #	Willow height (cm) 4 JUN 2010	Willow # leaves 4 JUN 2010	Willow stem diameter 4 JUN 2010
193	VI	0.25	7	seedling	alone	25	.	11.3	12	1.6
194	VI	0.25	8	seedling	low density sawgrass	2	.	11.6	16	1.8
195	VI	0.25	9	short cutting	alone	pink 37	.	46.4	92	12.3
196	VI	0.25	10	seedling	high density sawgrass	60	.	7.2	15	2.1
197	VI	0.25	11	tall cutting	alone	pink 64	.	47.6	81	8.2
198	VI	0.25	12	tall cutting	high density sawgrass	yellow 41	.	79.6	94	11.9
199	VI	0.38	1	seedling	alone	67	.	7.4	12	1.1
200	VI	0.38	2	tall cutting	high density sawgrass	yellow 54	.	74.2	55	9.0
201	VI	0.38	3	tall cutting	alone	yellow 17	.	63.7	88	7.6
202	VI	0.38	4	seedling	low density sawgrass	77	.	4.4	8	1.2
203	VI	0.38	5	seedling	high density sawgrass	80	.	3.1	10	0.6
204	VI	0.38	6	tall cutting	low density sawgrass	pink 29	.	59.3	74	10.8
205	VI	0.38	7	short cutting	alone	yellow 53	.	59.5	52	9.5
206	VI	0.38	8	seedling	alone	72	.	5.4	9	1.4
207	VI	0.38	9	tall cutting	alone	yellow 19	.	70.2	101	10.0
208	VI	0.38	10	short cutting	high density sawgrass	pink 39	.	59.5	51	9.7
209	VI	0.38	11	short cutting	alone	pink 28	.	41.7	85	13.2
210	VI	0.38	12	short cutting	low density sawgrass	pink 21	.	52.5	73	10.1
211	VI	0.5	2	seedling	alone	15	.	Dead		
212	VI	0.5	5	tall cutting	alone	yellow 14	.	66.8	39	11.9
213	VI	0.5	7	seedling	alone	44	.	No survivors		
214	VI	0.5	8	tall cutting	alone	yellow 49	.	76.6	66	9.0
215	VI	0.5	10	short cutting	alone	pink 36	.	46.2	58	10.8
216	VI	0.5	12	short cutting	alone	yellow 11	.	40.8	45	10.8

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