

willow competition experiment - Osbornes ponds, willow data

	Block	Elev (m)	row within block	Willow stage	treatment	willow random #	willow ID #	Willow height (cm) 2 JUL 2010	Willow # leaves 2 JUL 2010	Willow stem diameter 2 JUL 2010
1	I	0	1	seedling	alone	79	.	6.1	5	1.0*
2	I	0	8	tall cutting	alone	53	.	86.8	265	8.3
3	I	0	9	seedling	alone	56	.	2.1	3	1.5
4	I	0	10	tall cutting	alone	51	.	95.0	288	9.1
5	I	0	11	short cutting	alone	69	.	48.7	113	10.0
6	I	0	12	short cutting	alone	60	.	59.2	58	12.4
7	I	0.25	1	tall cutting	high density sawgrass	31	.	75.3	151	12.6
8	I	0.25	2	seedling	high density sawgrass	39	.	6.7	5	1.3
9	I	0.25	3	seedling	low density sawgrass	8	.	13.3	9	1.0*
10	I	0.25	4	seedling	alone	41	.	4.7	5	1.4
11	I	0.25	5	short cutting	high density sawgrass	65	.	63.4	102	8.8
12	I	0.25	6	seedling	alone	59	.	10.8	20	2.4
13	I	0.25	7	short cutting	low density sawgrass	14	.	71.0	136	9.1
14	I	0.25	8	tall cutting	alone	57	.	76.3	179	8.9
15	I	0.25	9	short cutting	alone	27	.	73.6	259	13.5
16	I	0.25	10	short cutting	alone	57	.	49.8	67	4.6
17	I	0.25	11	tall cutting	low density sawgrass	26	.	66.4	69	10.0
18	I	0.25	12	tall cutting	alone	62	.	67.5	120	7.5
19	I	0.38	1	short cutting	low density sawgrass	8	.	43.7	123	13.9
20	I	0.38	2	tall cutting	low density sawgrass	75	.	93.1	85	8.0
21	I	0.38	3	seedling	low density sawgrass	43	.	No plant		
22	I	0.38	4	seedling	high density sawgrass	49	.	15.0	14	2.7
23	I	0.38	5	tall cutting	alone	20	.	71.5	91	11.9
24	I	0.38	6	short cutting	alone	80	.	59.9	121	10.5

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	Block	Elev (m)	row within block	Willow stage	treatment	willow random #	willow ID #	Willow height (cm) ²⁹ JUL 2010	Willow # leaves ²⁹ JUL 2010	Willow stem diameter ²⁹ JUL 2010
25	I	0.38	7	tall cutting	high density sawgrass	59	.	59.8	134	7.3
26	I	0.38	8	short cutting	high density sawgrass	70	.	38.7	62	11.1
27	I	0.38	9	short cutting	alone	73	.	45.6	100	8.6
28	I	0.38	10	seedling	alone	19	.	No plant		
29	I	0.38	11	seedling	alone	3	.	4.0	11	1.0*
30	I	0.38	12	tall cutting	alone	39	.	57.4	109	11.6
31	I	0.5	1	tall cutting	alone	76	.	57.4	65	11.5
32	I	0.5	4	seedling	alone	78	.	9.5	17	2.0
33	I	0.5	6	short cutting	alone	75	.	52.4	88	8.2
34	I	0.5	7	tall cutting	alone	46	.	81.3	118	9.8
35	I	0.5	9	short cutting	alone	66	.	31.4	112	6.4
36	I	0.5	12	seedling	alone	27	.	13.9	24	2.7
37	II	0	1	short cutting	alone	1	.	58.0	375	10.7
38	II	0	2	tall cutting	alone	4	.	82.9	267	8.3
39	II	0	5	tall cutting	alone	42	.	96.7	167	9.9
40	II	0	10	seedling	alone	30	.	9.2	8	1.0*
41	II	0	11	seedling	alone	65	.	10.1	6	1.0*
42	II	0	12	short cutting	alone	68	.	55.3	82	11.0
43	II	0.25	1	tall cutting	low density sawgrass	68	.	59.1	219	9.6
44	II	0.25	2	short cutting	alone	41	.	68.6	148	11.1
45	II	0.25	3	seedling	low density sawgrass	69	.	3.0	1	1.0*
46	II	0.25	4	tall cutting	high density sawgrass	25	.	64.7	104	11.1
47	II	0.25	5	seedling	alone	22	.	8.4	8	1.0*
48	II	0.25	6	seedling	alone	38	.	4.6	6	1.0*

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49	II	0.25	7	short cutting	alone	61	.	34.7	17	4.6
50	II	0.25	8	tall cutting	alone	2	.	69.8	142	13.1
51	II	0.25	9	seedling	high density sawgrass	37	.	6.5	7	1.0*
52	II	0.25	10	tall cutting	alone	22	.	71.2	80	11.7
53	II	0.25	11	short cutting	high density sawgrass	44	.	60.1	144	14.4
54	II	0.25	12	short cutting	low density sawgrass	74	.	63.2	67	6.2
55	II	0.38	1	tall cutting	low density sawgrass	56	.	54.4	41	5.0
56	II	0.38	2	short cutting	alone	7	.	73.6	121	10.6
57	II	0.38	3	tall cutting	alone	11	9	70.4	49	12.9
58	II	0.38	4	short cutting	alone	22	.	53.9	114	12.9
59	II	0.38	5	short cutting	low density sawgrass	25	.	58.4	72	12.6
60	II	0.38	6	seedling	low density sawgrass	70	.	4.8	7	1.0*
61	II	0.38	7	tall cutting	alone	12	.	57.0	57	7.9
62	II	0.38	8	seedling	high density sawgrass	68	only stem alive	5.1	0	1.3
63	II	0.38	9	seedling	alone	52	.	5.8	6	1.6
64	II	0.38	10	short cutting	high density sawgrass	2	.	51.7	58	11.7
65	II	0.38	11	tall cutting	high density sawgrass	65	.	20.4	71	10.3
66	II	0.38	12	seedling	alone	35	.	6.1	7	1.2
67	II	0.5	2	seedling	alone	14	.	14.4	17	2.5
68	II	0.5	3	tall cutting	alone	36	.	80.2	187	11.3
69	II	0.5	4	short cutting	alone	19	.	46.4	160	9.0
70	II	0.5	6	seedling	alone	62	.	9.9	16	2.3
71	II	0.5	7	short cutting	alone	47	.	50.3	39	10.2
72	II	0.5	12	tall cutting	alone	23	.	57.8	119	12.0

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73	III	0	3	seedling	alone	51	No plant			
74	III	0	7	tall cutting	alone	37		115.7	216	13.0
75	III	0	8	tall cutting	alone	5		81.4	278	12.2
76	III	0	9	short cutting	alone	3		76.4	125	10.1
77	III	0	11	seedling	alone	17		60.1	46	4.2
78	III	0	12	short cutting	alone stem broken	33		121.6	496	13.4
79	III	0.25	1	tall cutting	alone	44		74.3	89	7.0
80	III	0.25	2	short cutting	low density sawgrass	56		59.4	87	5.3
81	III	0.25	3	seedling	low density sawgrass	71		8.4	6	1.0*
82	III	0.25	4	seedling	alone	61		10.1	8	1.6
83	III	0.25	5	short cutting	high density sawgrass	34		53.8	87	9.8
84	III	0.25	6	short cutting	alone	23		61.9	90	11.6
85	III	0.25	7	seedling	high density sawgrass	28		14.9	12	2.7
86	III	0.25	8	tall cutting	low density sawgrass	16		59.2	72	8.8
87	III	0.25	9	tall cutting	high density sawgrass	72		78.7	72	9.4
88	III	0.25	10	short cutting	alone	35		66.3	102	11.7
89	III	0.25	11	tall cutting	alone	24		72.6	101	12.6
90	III	0.25	12	seedling	alone	63		8.4	7	2.0
91	III	0.38	1	short cutting	low density sawgrass	17		70.3	208	16.4
92	III	0.38	2	tall cutting	high density sawgrass	78		70.2	211	11.1
93	III	0.38	3	tall cutting	alone	27		72.4	154	8.9
94	III	0.38	4	seedling	high density sawgrass	26		5.4	10	1.0*
95	III	0.38	5	short cutting	high density sawgrass	42		78.5	77	8.0
96	III	0.38	6	short cutting	alone	48		76.2	246	10.1

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	Block	Elev (m)	row within block	Willow stage	treatment	willow random #	willow ID #	Willow height (cm) ²⁹ JUL 2010	Willow # leaves ²⁹ JUL 2010	Willow stem diameter ²⁹ (mm) JUL 2010
97	III	0.38	7	seedling	alone	covered in algae 40		5.4	7	1.6
98	III	0.38	8	short cutting	alone			76.3	108	9.9
99	III	0.38	9	seedling	alone			21.8	16	2.7
100	III	0.38	10	seedling	low density sawgrass	covered in algae 42		13.6	7	2.4
101	III	0.38	11	tall cutting	low density sawgrass			96.0	189	12.4
102	III	0.38	12	tall cutting	alone			80.3	158	13.4
103	III	0.5	1	tall cutting	alone	Uprooted by arms at 1/10 - at beginning of exp.	No plant			
104	III	0.5	3	seedling	alone			3.1	6	1.0*
105	III	0.5	5	seedling	alone		No plant			
106	III	0.5	7	short cutting	alone			66.4	177	11.0
107	III	0.5	8	short cutting	alone			49.2	68	7.2
108	III	0.5	10	tall cutting	alone			59.3	242	12.4
109	IV	0	1	seedling	alone			73.6	88	5.2
110	IV	0	5	short cutting	alone			35.6	134	9.8
111	IV	0	8	tall cutting	alone			129.5	690	11.8
112	IV	0	9	short cutting	alone			48.3	69	8.8
113	IV	0	10	tall cutting	alone			78.0	211	10.2
114	IV	0	11	seedling	alone			43.9	75	6.8
115	IV	0.25	1	tall cutting	alone			69.7	78	8.4
116	IV	0.25	2	tall cutting	high density sawgrass			77.5	85	9.8
117	IV	0.25	3	seedling	alone			9.7	10	1.0*
118	IV	0.25	4	short cutting	alone	covered in algae		32.0	15	7.6
119	IV	0.25	5	short cutting	alone			73.2	94	11.0
120	IV	0.25	6	seedling	high density sawgrass			9.2	9	1.0*

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	Block	Elev (m)	row within block	Willow stage	treatment	willow random #	willow ID #	Willow height (cm) ^{2/9} JUL 2010	Willow # leaves ^{2/9} JUL 2010	Willow stem diameter ^{2/9} JUL 2010
121	IV	0.25	7	tall cutting	low density sawgrass	8	.	57.8	71	8.5
122	IV	0.25	8	seedling	low density sawgrass	54	.	11.3	15	2.2
123	IV	0.25	9	short cutting	low density sawgrass	43	.	53.7	36	5.0
124	IV	0.25	10	seedling	alone	66	.	16.2	14	1.0*
125	IV	0.25	11	short cutting	high density sawgrass	31	.	76.8	132	14.4
126	IV	0.25	12	tall cutting	alone	35	.	92.8	169	12.7
127	IV	0.38	1	tall cutting	low density sawgrass	18	.	72.7	161	12.1
128	IV	0.38	2	short cutting	alone	15	.	78.9	87	10.0
129	IV	0.38	3	seedling	alone	23	No plant	.	.	.
130	IV	0.38	4	tall cutting	high density sawgrass	70	.	72.6	50	7.0
131	IV	0.38	5	tall cutting	alone	69	.	81.7	193	11.8
132	IV	0.38	6	seedling	high density sawgrass	33	.	11.2	8	1.0*
133	IV	0.38	7	tall cutting	alone	73	.	44.3	79	10.5
134	IV	0.38	8	short cutting	alone	46	.	76.0	43	10.3
135	IV	0.38	9	short cutting	high density sawgrass	5	.	53.6	122	11.7
136	IV	0.38	10	seedling	alone	9	.	13.0	9	1.0*
137	IV	0.38	11	short cutting	low density sawgrass	29	.	61.6	86	14.5
138	IV	0.38	12	seedling	low density sawgrass	31	.	15.1	12	2.2
139	IV	0.5	2	seedling	alone	50	No plant	.	.	.
140	IV	0.5	3	short cutting	alone	62	.	46.0	271	10.1
141	IV	0.5	4	short cutting	alone	4	.	42.8	49	9.1
142	IV	0.5	5	tall cutting	alone	77	.	63.9	141	11.1
143	IV	0.5	8	seedling	alone	4	No plant	.	.	.
144	IV	0.5	11	tall cutting	alone	50	.	87.9	169	14.4

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	Block	Elev (m)	row within block	Willow stage	treatment	willow random #	willow ID #	Willow height (cm) ²⁹ JUL 2010	Willow # leaves ²⁹ JUL 2010	Willow stem diameter ²⁹ JUL 2010
145	V	0	2	short cutting	alone	10		123.3	281	13.3
146	V	0	3	seedling	alone	48		28.2	14	2.4
147	V	0	4	tall cutting	alone	33		57.9	85	9.1
148	V	0	5	tall cutting	alone	34		68.7	183	11.6
149	V	0	6	seedling	alone	58		40.2	24	5.5
150	V	0	8	short cutting	alone	59		87.8	146	9.0
151	V	0.25	1	short cutting	alone	67	Bottom 2/3 covered in algal mat	46.3	31	7.8
152	V	0.25	2	seedling	high density sawgrass	21		8.2	5	1.0*
153	V	0.25	3	seedling	alone	32		12.6	8	1.8
154	V	0.25	4	tall cutting	low density sawgrass	40		78.2	92	18.1
155	V	0.25	5	short cutting	high density sawgrass	18		77.4	80	10.5
156	V	0.25	6	tall cutting	alone	21		84.9	52	13.1
157	V	0.25	7	short cutting	alone	55		58.7	51	6.3
158	V	0.25	8	tall cutting	high density sawgrass	3		80.3	73	10.0
159	V	0.25	9	tall cutting	alone	71		82.2	48	11.9
160	V	0.25	10	seedling	alone	24		11.9	10	1.0*
161	V	0.25	11	seedling	low density sawgrass	11		12.9	9	1.0*
162	V	0.25	12	short cutting	low density sawgrass	13		106.4	156	14.6
163	V	0.38	1	short cutting	alone	9		58.2	32	8.1
164	V	0.38	2	short cutting	alone	50		50.7	71	8.3
165	V	0.38	3	tall cutting	high density sawgrass	32		73.0	109	10.7
166	V	0.38	4	tall cutting	alone	67		62.1	90	7.8
167	V	0.38	5	short cutting	low density sawgrass	76		42.3	26	5.5
168	V	0.38	6	seedling	low density sawgrass	45		9.0	6	1.0*

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	Block	Elev (m)	row within block	Willow stage	treatment	willow random #	willow ID #	Willow height (cm) ²⁹ JUL 2010	Willow # leaves ²⁹ JUL 2010	Willow stem diameter ²⁹ JUL 2010
169	V	0.38	7	seedling	alone	12	.	2.6	10	1.0*
170	V	0.38	8	tall cutting	low density sawgrass	60	.	84.9	51	9.1
171	V	0.38	9	seedling	alone	7	.	8.1	7	1.0*
172	V	0.38	10	short cutting	high density sawgrass	24	.	83.4	83	11.4
173	V	0.38	11	tall cutting	alone	28	.	78.3	96	11.0
174	V	0.38	12	seedling	high density sawgrass	75	.	2.8	3	1.0*
175	V	0.5	2	short cutting	alone	79	.	70.0	123	10.0
176	V	0.5	3	seedling	alone	16	.	14.5	19	1.0*
177	V	0.5	4	tall cutting	alone	6	.	76.7	76	10.0
178	V	0.5	7	tall cutting	alone	48	.	59.9	61	9.3
179	V	0.5	8	seedling	alone	18	.	11.4	14	1.0*
180	V	0.5	9	short cutting	alone	49	.	44.8	89	9.2
181	VI	0	1	seedling	alone	47	.	51.2	59	4.9
182	VI	0	3	tall cutting	alone	7	.	108.0	433	11.0
183	VI	0	4	short cutting	alone	71	.	63.4	112	7.3
184	VI	0	10	short cutting	alone	16	.	94.6	516	10.2
185	VI	0	11	seedling	alone	1	.	43.3	74	2.0
186	VI	0	12	tall cutting	alone	47	.	80.2	131	11.1
187	VI	0.25	1	short cutting	alone	51	.	55.7	93	11.5
188	VI	0.25	2	tall cutting	alone	61	.	56.0	88	5.0
189	VI	0.25	3	seedling	alone	57	.	17	11	2.6
190	VI	0.25	4	short cutting	low density sawgrass	30	.	83.6	57	12.0
191	VI	0.25	5	tall cutting	low density sawgrass	45	.	71.5	39	9.5
192	VI	0.25	6	short cutting	high density sawgrass	40	.	70.2	54	19.1

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9 July 2010

	Block	Elev (m)	row within block	Willow stage	treatment	willow random #	willow ID #	Willow height (cm) ^{2/9} JUL 2010	Willow # leaves ^{2/9} JUL 2010	Willow stem diameter ^{2/9} JUL 2010
193	VI	0.25	7	seedling	alone	25	.	15.3	12	1.8
194	VI	0.25	8	seedling	low density sawgrass	2	.	14.8	13	2.3
195	VI	0.25	9	short cutting	alone	37	.	54.3	101	12.3
196	VI	0.25	10	seedling	high density sawgrass	60	.	10.3	12	1.6
197	VI	0.25	11	tall cutting	alone	64	.	65.5	153	9.0
198	VI	0.25	12	tall cutting	high density sawgrass	41	.	89.6	171	12.6
199	VI	0.38	1	seedling	alone	67	No plant	.	.	.
200	VI	0.38	2	tall cutting	high density sawgrass	54	.	75.0	69	9.0
201	VI	0.38	3	tall cutting	alone	17	.	63.5	47	2.1
202	VI	0.38	4	seedling	low density sawgrass	77	Fallen over	10.1	6	1.0*
203	VI	0.38	5	seedling	high density sawgrass	80	.	8.2	9	1.0 <i>gestimate</i>
204	VI	0.38	6	tall cutting	low density sawgrass	29	.	60.2	100	10.6
205	VI	0.38	7	short cutting	alone	53	Fallen over	57.0	24	12.0
206	VI	0.38	8	seedling	alone	72	covered w/ algal mat	9.5	11	2.3
207	VI	0.38	9	tall cutting	alone	19	.	68.9	66	10.4
208	VI	0.38	10	short cutting	high density sawgrass	39	.	58.2	29	9.0
209	VI	0.38	11	short cutting	alone	28	.	54.3	131	16.0
210	VI	0.38	12	short cutting	low density sawgrass	21	.	69.5	79	10.5
211	VI	0.5	2	seedling	alone	15	No plant	.	.	.
212	VI	0.5	5	tall cutting	alone	14	.	63.4	96	11.9
213	VI	0.5	7	seedling	alone	44	No plant	.	.	.
214	VI	0.5	8	tall cutting	alone	49	.	76.3	52	9.8
215	VI	0.5	10	short cutting	alone	36	.	44.9	114	10.3
216	VI	0.5	12	short cutting	alone	11	.	42.5	133	10.6

Block VI is nearest to woods

* Did not want to damage plant by measuring it.

L.C.