

Goldenrod Analysis

Fall 2006

Oneway

Descriptives

		N	Mean	Std. Deviation
Length (mm)	Normal	25	1357.16	218.377
	Ball	25	1426.60	230.626
	Rosette	25	1608.88	352.074
	Total	75	1464.21	290.411
Stem Weight (g)	Normal	25	7.5056	2.93752
	Ball	25	9.4440	3.87189
	Rosette	25	10.6937	4.03546
	Total	75	9.2144	3.83222
Leaf Weight (g)	Normal	25	3.7744	1.11292
	Ball	25	3.7144	1.67442
	Rosette	25	5.1832	2.03066
	Total	75	4.2240	1.76501
Flower Weight (g)	Normal	25	1.6832	.69574
	Ball	25	1.5244	.97504
	Rosette	25	.9048	1.30364
	Total	75	1.3708	1.06340

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Length (mm)	Between Groups	845090.6	2	422545.293	5.638	.005
	Within Groups	5395982	72	74944.194		
	Total	6241073	74			
Stem Weight (g)	Between Groups	129.028	2	64.514	4.850	.011
	Within Groups	957.732	72	13.302		
	Total	1086.760	74			
Leaf Weight (g)	Between Groups	34.547	2	17.274	6.346	.003
	Within Groups	195.981	72	2.722		
	Total	230.528	74			
Flower Weight (g)	Between Groups	8.459	2	4.229	4.048	.022
	Within Groups	75.221	72	1.045		
	Total	83.680	74			

Post Hoc Tests

Multiple Comparisons

Tukey HSD

Dependent Variable	(I) Type of Goldenrod	(J) Type of Goldenrod	Mean Difference (I-J)	Std. Error	Sig.
Length (mm)	Normal	Ball	-69.440	77.431	.644
		Rosette	-251.720*	77.431	.005
	Ball	Normal	69.440	77.431	.644
		Rosette	-182.280	77.431	.055
	Rosette	Normal	251.720*	77.431	.005
		Ball	182.280	77.431	.055
Stem Weight (g)	Normal	Ball	-1.93840	1.03157	.152
		Rosette	-3.18812*	1.03157	.008
	Ball	Normal	1.93840	1.03157	.152
		Rosette	-1.24972	1.03157	.450
	Rosette	Normal	3.18812*	1.03157	.008
		Ball	1.24972	1.03157	.450
Leaf Weight (g)	Normal	Ball	.06000	.46664	.991
		Rosette	-1.40880*	.46664	.010
	Ball	Normal	-.06000	.46664	.991
		Rosette	-1.46880*	.46664	.007
	Rosette	Normal	1.40880*	.46664	.010
		Ball	1.46880*	.46664	.007
Flower Weight (g)	Normal	Ball	.15880	.28910	.847
		Rosette	.77840*	.28910	.024
	Ball	Normal	-.15880	.28910	.847
		Rosette	.61960	.28910	.088
	Rosette	Normal	-.77840*	.28910	.024
		Ball	-.61960	.28910	.088

*. The mean difference is significant at the .05 level.

Goldenrod Raw Data

	Type	Height	Stems	Leaves	Flowers
1	Normal	1145	4.74	2.86	.40
2	Normal	1300	6.52	2.04	1.88
3	Normal	1359	7.36	3.86	.88
4	Normal	1385	8.92	5.98	2.10
5	Normal	1282	6.20	3.50	1.26
6	Normal	1052	3.02	2.18	.68
7	Normal	1287	6.64	5.00	2.00
8	Normal	1284	6.80	3.84	1.28
9	Normal	1027	3.60	3.06	.88
10	Normal	1724	12.94	5.52	2.80
11	Normal	1426	8.54	3.98	2.00
12	Normal	1574	11.20	5.36	2.44
13	Normal	1558	13.10	4.80	1.86
14	Normal	1710	11.94	5.20	2.90
15	Normal	1553	8.48	3.50	1.38
16	Normal	1642	10.06	4.40	1.90
17	Normal	1587	10.56	3.70	2.08
18	Normal	1614	7.84	3.06	.86
19	Normal	1463	8.16	3.62	1.84
20	Normal	1073	4.16	2.60	1.26
21	Normal	1147	5.10	3.36	2.20
22	Normal	1183	4.96	3.98	1.42
23	Normal	1184	5.94	3.72	1.74
24	Normal	1058	3.08	1.52	1.06
25	Normal	1312	7.78	3.72	2.98
26	Ball	1640	12.00	4.78	1.84
27	Ball	1475	15.98	5.56	3.00
28	Ball	1512	8.54	4.88	2.38
29	Ball	1316	5.94	2.28	.82
30	Ball	1440	9.64	3.18	2.40
31	Ball	1342	7.96	3.88	1.86
32	Ball	942	3.76	2.10	.14
33	Ball	1343	6.86	3.52	1.24
34	Ball	732	3.24	1.58	.00
35	Ball	1629	10.18	2.90	1.12
36	Ball	1284	5.42	2.54	.46
37	Ball	1460	9.70	4.34	2.00
38	Ball	1522	12.06	4.32	1.22
39	Ball	1331	6.40	2.18	.18
40	Ball	1764	18.52	9.56	3.98

Goldenrod Raw Data

	Type	Height	Stems	Leaves	Flowers
41	Ball	1630	15.64	5.42	2.36
42	Ball	1605	9.56	3.04	1.13
43	Ball	1533	9.14	2.84	.62
44	Ball	1609	13.04	4.04	2.80
45	Ball	1300	6.66	2.86	1.78
46	Ball	1696	12.94	5.58	1.88
47	Ball	1552	9.68	3.34	1.04
48	Ball	1312	7.00	3.14	1.40
49	Ball	1215	4.84	1.94	.62
50	Ball	1481	11.40	3.06	1.84
51	Rosette	1311	6.66	3.22	.01
52	Rosette	1172	8.42	7.58	.98
53	Rosette	1775	8.42	.62	.52
54	Rosette	1189	5.70	3.56	.36
55	Rosette	1422	9.48	4.28	1.00
56	Rosette	1824	13.52	5.16	.26
57	Rosette	1433	8.86	3.40	.00
58	Rosette	1416	9.20	5.20	.96
59	Rosette	1475	10.06	5.56	2.76
60	Rosette	2021	14.00	11.50	.26
61	Rosette	1952	16.50	5.06	.24
62	Rosette	1637	10.40	4.88	.22
63	Rosette	1921	14.44	4.76	.01
64	Rosette	1931	11.02	4.82	.10
65	Rosette	1860	13.50	4.52	.00
66	Rosette	1861	7.92	4.26	.08
67	Rosette	1784	10.68	4.28	.02
68	Rosette	2226	22.42	8.44	.64
69	Rosette	1974	13.42	4.82	.32
70	Rosette	943	4.42	4.44	5.24
71	Rosette	1174	6.74	6.42	2.78
72	Rosette	1279	8.14	4.96	.64
73	Rosette	1098	6.62	7.72	3.38
74	Rosette	1540	10.98	5.12	1.58
75	Rosette	2004	15.82	5.00	.26