

9-13-96

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DATA EVALUATION RECORD
S 71-4 -- AVIAN REPRODUCTION TEST

1. **CHEMICAL:** PIRATE™

PC Code No.: 129093

4-bromo-2-(4-chlorophenyl)-1-(ethoxymethyl)-
5-(trifluoromethyl)-1H-pyrrole-3-carbonitrile

2. **TEST MATERIAL:** AC 303,630 Technical

Purity: 94.5%

3. **CITATION**

Authors: Helsten, Brian R., Solatycki, Ann M., and
Sullivan, Joseph P., PhD

Title: Reproduction Study with AC 303,630
Technical in the Mallard Duck (*Anas
platyrhynchos*)

Study Completion Date: October 28, 1994

Laboratory: Bio-Life Associates, Ltd.

Sponsor: American Cyanimid Company, Princeton, NJ

Laboratory Report ID: BLAL No. 105-026-08

MRID No.: 434928-13

DP Barcode: B211863
D220808

4. **REVIEWED BY:** John D. Eisemann, Wildlife Biologist, EEB, EFED

Signature: *John D. Eisemann*

Date: 7/27/95

5. **APPROVED BY:** Ann Stavola, Head of Section (5), EEB, EFED

Signature: *Ann Stavola*

Date: 9/13/96

6. **STUDY PARAMETERS**

Scientific Name of Test Organism: *Anas platyrhynchos*

Age of Test Organisms at Test Initiation: 23 weeks

Definitive Study Duration: 22 weeks

7. **CONCLUSIONS:**

This study is scientifically sound but does not fulfill the guideline requirements for the avian reproduction test. With an NOEL of 0.5 ppm and a LOEL of 1.5 ppm, the primary effects are reduced egg production, weight loss of the adults, and increased food consumption.

Results Synopsis

Most sensitive endpoints:

NOEC: 0.5 ppm ai

LOEC: 1.5 ppm ai

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8. ADEQUACY OF THE STUDY

- A. Classification: Supplemental
- B. Rationale: Raw data required for review was absent.
- C. Repairability: Submit temperature and humidity data for the incubator, hatcher and room monitors for the areas the equipment was housed.

9. GUIDELINE DEVIATIONS

1. Reported - Malfunctioning temperature and humidity recorder
 - 4pm to 8am - 7/16/93 to 7/17/93
 - 4pm to 8am - 7/17/93 to 7/18/93
 - 8pm to 8am - 7/30/93 to 7/31/93
 - 4pm to 8am - 7/31/93 to 8/1/93
 - 7:30pm to 8am - 8/5/93 to 8/6/93
 - 4pm to 8am - 8/14/93 to 8/15/93
 - 6pm to 8am - 8/15/93 to 8/16/93
 - 11pm to 8am - 8/16/93 to 8/17/93
 - 3pm to 8am - 8/19/93 to 8/20/93
 2. Reported - The birds in pen 8 (2.5 ppm treatment group) were not weighed as scheduled on 9/10/93. Weights were recorded 3 days later.
 3. Reported - Feed was not offered ad libitum (feed bins found empty) in the following pens:
 - Week 10 - Control, pen 4
 - Week 12 - Control, pen 13, 14
 - 0.5 ppm, pen 4, 6, 8, 12, 14
 - 1.5 ppm, pen 7, 9, 11, 12, 13
 - 2.5 ppm, pen 1, 5, 6, 7, 9, 15
 4. Not reported - No temperature or humidity data were submitted for the incubator, hatcher or the rooms housing the equipment.
 5. Not reported - No description of ventilation method for the facility was reported.
10. SUBMISSION PURPOSE: To support registration for use on cotton.

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11. MATERIALS AND METHODS

A. Test Organisms

Guideline Criteria	Reported Information
<u>Species</u> A wild waterfowl species, preferably the mallard (<i>Anas platyrhynchos</i>), or an upland game species, preferably the northern bobwhite (<i>Colinus virginianus</i>)	Mallard (<i>Anas platyrhynchos</i>)
<u>Age at beginning of test</u> Birds should be approaching their first breeding season.	23 weeks old
<u>Supplier</u> All birds should be from the same source.	Whistling Wings, Inc. Hanover, Il 61401
Were birds pen-reared?	Yes
Were birds phenotypically indistinguishable from wild birds?	Yes
<u>Health observation period</u> 2 to 6 weeks.	10 weeks
Were birds healthy and without excessive mortality prior to the test?	Yes

B. Test System

Guideline Criteria	Reported Information
Were pens for adult birds of adequate size and designed to conform to good husbandry practices?	Yes
Were pens for chicks of adequate size and designed to conform to good husbandry practices?	Yes

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Guideline Criteria	Reported Information
Where pens constructed of a nonbinding material such as galvanized or stainless steel?	Cage construction was reported as 1" wire mesh.
Was adequate ventilation provided?	Not reported
<u>Temperature</u> Approx. 21°C (70°F)	Mean: 23°C SD: °C (Not Reported)
<u>Relative humidity</u> Approx. 55%	Mean: 60% SD: % (Not Reported)
<u>Lighting</u> First 8 weeks: 7 h per day. Thereafter: 16-17 h per day. At least 6 footcandles at bird level.	First 9 weeks: 7 h per day. Thereafter: 17 h per day.
<u>Diet</u> A commercial breeder feed (or its equivalent) that is appropriate for the test species.	Purina Custom Game Bird Layena 28%
<u>Preparation of test diet</u> A premix containing the test substance should be mechanically mixed with basal diet. If an evaporative vehicle is used, it must be completely evaporated prior to feeding.	AI dissolved in acetone 5 min. Diet hammermilled prior to mixing with AI. 40 kg of feed was mixed weekly, 24 hours prior to feeding. Week 12 and beyond, the volume mixed was increased to 50 kg. They did not mention evaporation of the vehicle prior to feeding.
Was the premix stored under conditions which maintain stability?	Yes. The feed was stored in the same area as the study animals.
Was the diet analyzed to verify homogeneity and stability of the test substance?	Yes. Periodic sampling of food stocks was conducted and diets were found to be stable up to 2 weeks.
<u>Replenishment of feed</u>	They stated the diet available ad libitum, but did not report how feeding was conducted.

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C. Test Design

Guideline Criteria	Reported Information
<u>Nominal concentrations</u> At least two concentrations other than the control are required; three or more are strongly recommended. The highest test concentrations should show a significant effect or be at or above the maximum field residue level.	Nominal concentrations: 0, 0.5, 1.5, and 2.5 ppm Max. residue level: 76.8 ppm
<u>Control</u> Vehicle control.	The vehicle control was 40 or 50 kg basal diet mixed with 400 and 500 g acetone, respectively.
<u>Vehicle</u> Corn oil or other appropriate vehicle.	Acetone
<u>Vehicle amount (% of diet by weight)</u> Not more than 2%.	1.0 %
<u>Number of birds per pen</u> One male and 1 female per pen is strongly recommended. For quail, 1 male and 2 females may be acceptable. For ducks, 2 males and 5 females may be acceptable.	1 male(s) and 1 female(s) per pen.
<u>Number of pens per group</u> At least 5 replicate pens are required for mallards housed in groups of 7. For other arrangements, at least 12 pens are required, but considerably more may be needed if birds are kept in pairs.	16 pens per group.
<u>Pre-laying exposure duration</u> At least 10 weeks prior to the onset of egg-laying.	10 weeks
<u>Exposure duration with egg-laying</u> At least 10 weeks.	12 weeks

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Guideline Criteria	Reported Information
<u>Withdrawal period</u> If reduced reproduction is evident, a withdrawal period of up to 3 weeks may be added to the test phase.	N/A

D. Egg Collection and Incubation

Guideline Criteria	Reported Information
Were eggs collected daily?	Yes
<u>Egg storage temperature</u> Approximately 16°C (61°F)	Average max 19°C; min 17°C
<u>Egg storage humidity</u> Approximately 65%	63%
Were eggs set weekly?	Yes
Were eggs candled for cracks prior to being set for incubation on Day 0?	Yes
<u>Candling for fertility</u> Quail: approx. Day 11 Ducks: approx. Day 14	Eggs were candled on Day 14.
<u>Transfer of eggs to hatcher</u> Bobwhite: Day 21 Mallard: Day 23	Eggs were transfered on Day 23.
<u>Hatching temperature</u> 39°C (102°F) is recommended	36°C
<u>Hatching humidity</u> 70% is recommended	38%
<u>Day after egg set that chicks were removed and counted</u> Bobwhite: Day 24 Mallard: Day 27	Chicks were removed and counted on Day 27.

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E. Eggshell Thickness Measurement

Guideline Criteria	Reported Information
Collection Schedule At least once every two weeks (Week 1, 3, 5, 7 and 9).	Eggs were collected during weeks 1, 3, 5, 7, 9, 11, and 13.
Were shells opened, washed, and air dry for at least 48 hours before measuring?	Yes
Measurement 3-4 measurements per eggs to the nearest 0.01 mm.	Measurements were made at 3 equitorial locations to the nearest 0.01mm.

12. REPORTED RESULTS

Guideline Criteria	Reported Information
Quality assurance and GLP compliance statements were included in the report?	Yes
Did diet analysis verify the concentrations of test material?	Yes. AI concentrations in the diet were lower than nominal values. The average concentration and standard deviation of AI in the feed was: 0.5ppm = 0.44 ppm (± 0.22); 1.5ppm = (1.52ppm ± 0.22 ppm); 2.5ppm = (2.41ppm ± 0.22 ppm).
Did diet analysis show that the test substance was stable and homogeneous?	Yes.
Were body weights of adults reported for test initiation and biweekly up to week 8 or the onset of egg laying?	Yes
Was average food consumption of adults reported at least biweekly?	Yes

Guideline Criteria	Reported Information
<u>Reproductive Endpoints</u> The following endpoints should be reported: ● Eggs laid ● Eggs cracked ● Eggs set ● Viable embryos ● Live 3-week embryos ● Normal hatchlings ● 14-day-old survivors ● Weights of 14-day-old survivors ● Egg shell thickness ● Total food consumption ● Initial and final body weights, by sex	The following endpoints were measured: Eggs laid Eggs cracked Eggs set Viable embryos Live 3-week embryos Normal hatchlings 14-day-old survivors Weights of 14 day old survivors Egg shell thickness Total food consumption Initial and final body weights, by sex
Were data reported by pen for all endpoints?	Yes

Significant Results:

Statistical analysis, consisting of Levene's test for homogeneity of variance and non-parametric or parametric Dunnett's test, conducted by the lab found 3 significant differences. At week 22, statistically significant differences were observed between the controls and the 2.5 ppm treatment groups in the weights of both male and female birds. Differences were also found in weekly food consumption between controls and birds receiving 1.5 and 2.5 ppm in the diet. Finally, the total number of eggs laid was significantly lower at the 2.5 ppm dose level as compared to the controls. It was noted that egg production in the 1.5 ppm treatment group dropped to numbers slightly higher than the 2.5 ppm group, but was not significantly lower than the controls.

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13. VERIFIED STATISTICAL RESULTS

Means of Endpoints

Endpoint	Control	0.5 ppm	1.5 ppm	2.5 ppm
Eggs laid (EL)	50.75 (21.21)	49.25 (22.11)	35.28 (27.53)	30.13 (22.72)
Eggs cracked (EC)	0.75 (0.87)	1.44 (1.67)	1.13 (1.06)	1.00 (1.10)
Eggs set (ES)	47.31 (19.70)	44.75 (20.85)	31.86 (25.95)	27.38 (21.01)
Viable embryos (VE)	39.56 (21.94)	40.38 (19.03)	27.21 (23.43)	22.18 (19.85)
Live 3-wk embryos (LE)	30.06 (21.50)	38.75 (18.56)	26.21 (22.95)	20.00 (18.52)
Normal hatchlings (NH)	33.00 (18.69)	31.88 (17.80)	21.14 (19.86)	14.50 (15.34)
14-day-old survivors (HS)	32.88 (18.71)	31.75 (17.86)	21.07 (19.78)	14.43 (15.25)
Egg shell thick- ness (THICK)	0.39 (0.02)	0.388 (0.03)	0.38 (0.03)	0.38 (0.02)
Hatchling weight (HATWT)	36.49 (2.80)	38.27 (2.13)	36.36 (3.76)	36.69 (3.60)
14-day-old survivor weight (SURVWT)	310.28 (18.33)	317.29 (24.46)	316.24 (20.14)	304.80 (21.67)
Mean food con- sumption (FOOD)	44878.13 (3425.74)	46127 (2338.74)	46537.88 (5602.71)	48689.75 (2098.42)
Final weight of males (POSTM)	1251.00 (129.76)	1207.44 (138.37)	1144.81 (166.03)	1072.06 (167.32)
Final weight of females (POSTF)	1155.75 (114.94)	1124.13 (180.14)	977.64 (181.51)	983.4 (121.52)

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Statistically Significant Endpoints

Endpoint	Statistical Method	Levels at which Effect Was Observed
	(e.g. Dunnett's/ Bonferroni/ Williams)	(list all concentra- tions that were significant) (ppm)
Eggs Laid	Least Square Means	CO vs 2.5 (p=0.015) 0.5 vs 2.5 (p=0.024)
Eggs Laid	One-tailed Dunnett	CO vs 2.5 (p<0.05)
Eggs Set	Least Square Means	CO vs 1.5 (p=0.012) 0.5 vs 2.5 (p=0.028)
Eggs Set	One-tailed Dunnett	CO vs 2.5 (p<0.05)
Viable Embryos	Least Square Means	CO vs 2.5 (p=0.023) 0.5 vs 2.5 (p=0.176)
Viable Embryos	One-tailed Dunnett	CO vs 2.5 (p<0.05)
Live 3-Week Embryos	Least Square Means	CO vs 2.5 (p=0.015) 0.5 vs 2.5 (p=0.012)
Live 3-Week Embryos	One-tailed Dunnett	CO vs 2.5 (p<0.05)
Normal Hatchlings	Least Square Means	CO vs 2.5 (p=0.005) 0.5 vs 2.5 (p=0.008)
Normal Hatchlings	Tukey's	CO vs 2.5 (p<0.05) 0.5 vs 2.5 (p<0.05)
Normal Hatchlings	One-tailed Dunnett	CO vs 2.5 (p<0.05)
14-day Old Survivor Wt.	Least Square Means	CO vs 2.5 (p=0.005) 0.5 vs 2.5 (p=0.008)
14-day Old Survivor Wt.	Tukey's	CO vs 2.5 (p<0.05) 0.5 vs 2.5 (p<0.05)
14-day Old Survivors Wt.	One-tailed Dunnett	CO vs 2.5 (p<0.05)
Food Consumption	Least Square Means	CO vs 2.5 (p=0.004) 0.5 vs 2.5 (p=0.051)
Food Consumption	Tukey's	CO vs 2.5 (p<0.05)

Endpoint	Statistical Method	Levels at which Effect Was Observed
Final Male Body Wt.	Least Square Means	CO vs 2.5 (p=0.001) CO vs 1.5 (p=0.034) 0.5 vs 2.5 (p=0.008)
Final Male Body Wt.	Tukey's	CO vs 2.5 (p<0.05)
Final Male Body Wt.	One-tailed Dunnett	CO vs 2.5 (p<0.05)
Final Female Body Wt.	Least Square Means	CO vs 2.5 (p=0.001) CO vs 1.5 (p=0.002) 0.5 vs 2.5 (p=0.011) 0.5 vs 1.5 (p=0.035)
Final Female body Wt.	Tukey's	CO vs 2.5 (p<0.05) CO vs 1.5 (p<0.05) 0.5 vs 2.5 (p<0.05) 0.5 vs 1.5 (p<0.05)
Final Female Body Wt.	One-tailed Dunnett	CO vs 2.5 (p<0.05) CO vs 1.5 (p<0.05)

In addition to the differences noted by the laboratory, our analysis revealed numerous other significant effects caused by the two highest dose levels (see Table 'Statistically Significant Endpoints' when using Dunnett's test. Additional differences were observed when analyzed by LSM, but are not discussed here due to the inflated experimentwise error caused by repeated LSM comparisons. Total food consumption increased significantly at a dose of 2.5 ppm. Whereas, significant decreases were observed in post-test weights of both males and females. Both male and female post-test weights in the 2.5 ppm treated birds were more than 14% lower than that of controls. Finally, significant differences were observed at the highest dose in the number of eggs set, viable embryos at 14 days, viable embryos at 21 days, total number of normal hatchlings, and the number of chicks surviving to 14 days.

No effects were observed in the number of eggs cracked, egg shell thickness, hatchling weight or the total number of hatchlings surviving to 14 days of age. Additionally, no significant results were observed when examining reproductive parameters as a ratio of total number of eggs set.

14. REVIEWER'S COMMENTS

The lab reported 3 deviations from the recommended test protocol. First, a temperature and humidity recorder reportedly malfunctioned 9 nights during the first 5 weeks of the study, totaling 131.5 hours, or 16% of the first 5 weeks. No statement was made by the lab as to which monitor failed, ie. the room, incubator, brooder or hatcher. Examination of the survival records indicate the event was not significant enough to invalidate the study. No eggs were placed in the incubator until week nine and hatching success was no different than that reported in past studies.

The lab also failed to report the temperature and humidity in the rooms housing the incubator, hatcher and the temperature of the equipment itself. The average relative humidity reported for the brooder was 38%. This value is roughly 50% of what is recommended in the SEP and the lab's own protocol. Comparison of embryo survival and hatching success of control groups shows no major deviation from values observed in previous mallard reproduction studies.

The second deviation reported by the lab concerned weighing the birds. One pair of mallards were weighed 3 days late during week 8. Handling birds during egg production could potentially damage eggs yet to be laid. No evidence was observed in the data indicating increased egg damage following late weighing as no eggs were laid until week 10. This deviation should not impact this study because only pre-study and post-study weights are used by EEB for statistical comparisons and no impact on egg production was noted.

Finally, feed was not offered ad libitum on two occasions. Once during week 10 a food bin in a control pen was discovered empty. During week 12 a similar occurrence was reported in 2 control pens, and 6 pens in each of the 3 active ingredient dose groups. This could impact the study by reducing the amount of test substance to which the animal is exposed and by denying the animal adequate caloric and nutritional intake. The report does not indicate the period of time the birds were without feed or if this event occurred more than one time during the reported weeks. Examination of the raw data indicates the birds were not off feed long enough to impact weight loss or egg production.

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
15:53 Thursday, July 27, 1995

OBS	LEVEL	EL	EC	ES	VE	LE	NH	HS	THICK	HAIR
1	CONTROL	87	1	79	75	72	63	63	0.399	37.6
2	CONTROL	66	1	62	1	1	0	0	0.380	
3	CONTROL	84	0	78	72	71	63	63	0.402	36.4
4	CONTROL	22	0	22	21	20	17	17		31.6
5	CONTROL	52	1	48	46	46	38	37	0.409	34.8
6	CONTROL	58	0	54	52	49	42	42	0.388	38.3
7	CONTROL	39	0	36	33	33	32	32	0.376	35.9
8	CONTROL	72	1	68	62	61	48	48	0.399	39.1
9	CONTROL	37	2	30	9	6	3	3	0.337	39.2
10	CONTROL	40	1	37	33	32	32	32	0.400	43.2
11	CONTROL	26	0	25	25	25	25	25	0.352	34.2
12	CONTROL	29	1	28	26	25	19	19		35.5
13	CONTROL	61	0	59	56	54	45	45	0.400	34.8
14	CONTROL	32	0	31	28	27	23	23	0.437	33.4
15	CONTROL	34	1	31	31	29	27	27	0.395	37.1
16	CONTROL	73	1	69	61	58	51	51	0.382	36.2
17	TRT1	68	4	59	40	39	38	37	0.359	40.5
18	TRT1	41	1	39	36	35	31	31	0.437	34.6
19	TRT1	68	1	62	58	55	40	40	0.397	39.7
20	TRT1	28	1	25	25	25	25	25	0.403	37.7
21	TRT1	59	1	54	53	49	41	41	0.380	38.0
22	TRT1	68	1	64	59	58	53	53	0.388	42.7
23	TRT1	60	2	56	55	52	52	52	0.402	39.3
24	TRT1	46	0	44	41	36	9	9	0.395	36.6
25	TRT1	55	2	49	45	42	31	31	0.388	38.6
26	TRT1	3	0	2	1	1	1	1	0.423	38.6
27	TRT1	72	0	67	56	55	45	45	0.392	36.4
28	TRT1	78	1	72	68	68	63	63	0.370	36.7
29	TRT1	26	6	17	14	13	10	9	0.288	35.1
30	TRT1	53	0	49	42	41	33	33	0.395	40.9
OBS	SURVWT	FOOD	PREM	POSTM	PREP	POSTP				
1	321.5	41692	1099	1319	1001	1319				
2	332.0	45654	1074	1194	1085	1286				
3	330.1	43664	1170	1223	1083	1310				
4	303.0	50568	1158	1046	1013	968				
5	332.2	42904	1235	1440	1087	1190				
6	332.2	45147	1249	1417	1208	1176				
7	308.5	45100	1254	1494	960	978				
8	323.1	42631	1143	1274	939	1131				
9	323.1	43002	1106	1217	1206	1284				
10	310.6	44730	1194	1005	1172	1130				
11	308.0	49283	1213	1186	1133	1154				
12	307.4	49178	1066	1164	1297	875				
13	303.3	37164	1164	1297	875	1059				
14	286.6	48039	1164	1282	969	1047				
15	340.1	46982	1136	1179	1083	1247				
16	314.1	42262	1076	1182	956	1188				
17	314.1	42909	954	1091	1133	1333				
18	299.2	43110	1279	1245	1077	1150				
19	298.4	43055	1157	1260	1201	1213				
20	298.8	46619	1221	1246	1033	1065				
21	300.3	46085	1082	1075	998	1074				
22	320.7	45083	1035	1067	1044	1168				
23	356.2	42950	1385	1283	1218	1442				
24	272.4	46952	1163	1283	1080	1107				
25	325.3	46026	1140	1335	1113	1232				
26	376.4	49513	1275	1197	911	818				
27	307.6	47108	1183	1101	1226	1005				
28	306.8	47288	1162	1134	960	1096				
29	313.8	48654	1078	1128	989	1061				
30	319.9	48764	1109	1281	1075	1219				

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
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OBS	LEVEL	EL	EC	ES	VE	LE	NH	HS	THICK	HAIR
31	TRT1	52	3	46	42	41	28	28	0.383	38.7
32	TRT1	11	0	11	11	10	9	9		38.0
33	TRT2									
34	TRT2	74	0	68	65	62	26	26	0.449	36.5
35	TRT2	21	2	17	16	15	15	15	0.392	33.4
36	TRT2	69	0	64	63	61	52	52	0.388	35.5
37	TRT2	71	2	64	54	54	53	53	0.358	34.9
38	TRT2	50	1	45	35	35	33	33	0.400	38.2
39	TRT2	1	1	0	0	0	0	0		
40	TRT2	4	0	3	2	2	2	2	0.370	31.7
41	TRT2	0	0	0	0	0	0	0		
42	TRT2	66	0	63	48	47	47	46	0.376	43.9
43	TRT2	8	1	6	5	5	1	1	0.387	42.4
44	TRT2	17	2	13	12	10	7	7	0.343	31.7
45	TRT2	45	1	43	37	36	34	34	0.343	34.5
46	TRT2	32	1	30	29	27	21	21	0.385	36.6
47	TRT2	35	3	30	15	12	5	5	0.412	37.0
48	TRT2									
49	TRT3	18	3	14	14	13	11	11	0.390	37.1
50	TRT3	63	1	59	56	46	41	41	0.353	35.0
51	TRT3	46	0	44	41	39	36	35	0.357	34.4
52	TRT3	54	3	46	41	41	39	39	0.379	42.0
53	TRT3	9	2	6	1	1	1	1		31.2
54	TRT3	1	1	1	1	1	1	1		39.6
55	TRT3	17	0	16	10	9	8	8	0.380	32.1
56	TRT3	25	0	25	0	0	0	0		
57	TRT3	1	0	1	1	1	1	1	0.375	41.2
58	TRT3	23	1	20	13	6	1	1	0.377	38.6
59	TRT3	38	2	34	30	23	14	14		
60	TRT3	44	1	39	39	37	28	28	0.373	30.6
OBS	SURVWT	FOOD	PREM	POSTM	PREP	POSTP				
31	333.2	44457	1270	1400	1194	1286				
32	323.6	49463	1116	892	927	717				
33		38633	1121	1054						
34	299.1	40659	1070	1236	1020	1089				
35	305.8	49159	1298	1103	1013	843				
36	327.5	48292	1136	1185	929	1035				
37	306.6	48523	1333	1369	968	1002				
38	326.4	48353	1231	1123	1025	1063				
39		49547	1149	893	992	664				
40	328.5	49030	946	758	817	615				
41		50073	1280	1213	1303	981				
42	330.0	46686	1109	1098	1160	1272				
43	354.7	50195	1172	1210	1059	1092				
44	309.4	50212	1240	909	984	866				
45	314.0	49987	1152	1266	997	1026				
46	273.2	49795	1216	1122	957	957				
47	319.7	48346	1116	1182	1038	1182				
48		29816	1092	1139	850					
49	314.4	50235	1034	1113	992	981				
50	287.3	48317	1119	1149	1035	1061				
51	301.3	47716	1347	1180	1116	1048				
52	320.4	47451	1075	1335	1066	1087				
53	272.1	50387	1101	890	1141	825				
54	327.3	50612	1168	1108	1111	1015				
55	293.1	50491	1186	1133	887	887				
56		48626	1234	779	1148	893				
57	353.8	49621	1284	1086	1047	868				
58	300.1	49440	1245	1182	1113	1069				
59	274.5	46815	1223	1272	973	985				
60	302.8	50093	1207	1093	1082	970				

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

15:53 Thursday, July 27, 1995

OBS LEVEL

EL	EC	ES	VE	LE	NH	HS	THICK	HALWT
61	66	1	60	44	40	34	0.389	40.1
62	5	0	4	4	2	2	0.400	38.8
63	13	0	13	12	11	5	5	35.6
64	59	2	54	48	46	40	0.418	38.9

OBS SURVWT FOOD PREM POSTM PREP POSTY

61	322.1	45786	1007	1017	977	1245
62	286.8	49940	1110	1276	885	
63	318.5	50414	1181	703	950	764
64	297.8	43092	1173	1232	943	1053

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
15:53 Thursday, July 27, 1995

OBS LEVEL	LEVEL					
	CONTROL	TRT1	TRT2	TRT3	TRT4	TRT5
	MEAN	MEAN	MEAN	MEAN	MEAN	MEAN
EL	50.75	49.25	35.29	30.12		
EC	0.75	1.44	1.00	1.00		
ES	47.31	44.75	31.86	27.37		
VE	39.56	40.38	27.21	22.19		
LE	38.06	38.75	26.21	20.00		
NH	33.00	31.87	21.14	14.50		
HS	32.88	31.75	21.07	14.44		
ES/EL (%)	93.46	89.02	79.99	90.27		
(EL-EC)/EL (%)	98.50	96.65	88.27	96.07		
VE/ES (%)	84.32	88.41	83.46	78.78		
LE/VE (%)	94.97	95.83	95.32	90.69		
NH/EL (%)	66.47	62.75	50.07	49.36		
NH/ES (%)	70.63	69.92	61.78	54.01		
NH/LE (%)	80.05	82.79	76.44	73.46		
HS/ES (%)	70.25	69.45	61.65	53.87		
HS/NH (%)	99.56	99.21	99.82	99.81		
THICK	0.39	0.39	0.38	0.38		
HALWT	36.49	36.27	36.36	36.69		
SURVWT	310.25	317.29	316.24	304.80		
FOOD	44678.12	46127.25	46537.87	48689.75		
POSTM	1251.00	1207.44	1144.81	1072.06		

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

15:53 Thursday, July 27, 1995

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

15:53 Thursday, July 27, 1995

LEVEL-CONTROL

N Obs Variable Label	N	Mean	Std Dev
EL	16	50.750	21.205
EC	16	0.750	0.856
ES	16	47.313	19.697
VE	16	39.563	21.942
LE	16	38.063	21.499
NH	16	33.000	18.694
HS	16	32.875	18.708
THICK	14	0.390	0.024
HALWT	15	36.487	2.802
SURVWT	15	310.247	18.330
FOOD	16	44678.125	3425.739
POSTM	16	1156.313	61.674
PREM	16	1251.000	129.758
POSTY	16	1043.063	104.067
ES/EL (%)	16	93.459	4.113
(EL-EC)/EL (%)	16	96.475	25.426
VE/ES (%)	16	84.321	1.671
NH/ES (%)	16	70.627	26.823
LE/VE (%)	16	70.247	26.817
NH/LE (%)	16	94.974	7.815
HS/NH (%)	15	99.558	1.135

N Obs Variable Label

16	BL
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EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

15:53 Thursday, July 27, 1995

N Obs Variable Label	N	Mean	Std Dev
16 BL	16	49.250	22.116
16 RC	16	1.437	1.672
16 ES	16	44.750	20.847
16 VE	16	40.375	19.026
16 LH	16	38.750	18.585
16 NH	16	31.875	17.795
16 HS	16	31.750	17.857
16 THICK	15	0.388	0.033
16 HALWT	16	28.269	2.128
16 SURVWT	16	317.294	24.462
16 FOOD	16	46137.250	2338.739
16 PREM	16	1163.063	106.470
16 POSTM	16	1207.438	136.371
16 PREP	16	1071.188	106.685
16 POSTV	16	1124.125	180.137
16 ES/BL (%)	16	89.025	9.522
16 NH/BL (%)	16	62.751	19.850
16 (BL-RC)/BL (%)	16	96.648	5.613
16 VE/ES (%)	16	88.414	13.070
16 NH/ES (%)	16	69.921	18.861
16 HS/ES (%)	16	69.448	19.182
16 LH/VE (%)	16	95.826	3.586
16 NH/LH (%)	16	82.786	16.498
16 HS/NH (%)	16	99.211	2.542

N Obs Variable Label

CV

16 BL	44.906
16 RC	116.318
16 ES	46.586
16 VE	47.123
16 LH	47.961
16 NH	55.826
16 HS	56.242
16 THICK	8.439
16 HALWT	5.561
16 SURVWT	7.710
16 FOOD	5.070
16 PREM	9.154
16 POSTM	11.460
16 PREP	9.960
16 POSTV	16.025
16 ES/BL (%)	10.636
16 NH/BL (%)	31.632
16 (BL-RC)/BL (%)	5.808
16 VE/ES (%)	14.783
16 NH/ES (%)	26.975
16 HS/ES (%)	27.621
16 LH/VE (%)	3.742
16 NH/LH (%)	22.344
16 HS/NH (%)	2.563

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALARDS

15:53 Thursday, July 27, 1995

LEVEL=TRT2

N Obs Variable Label	N	Mean	Std Dev
16 BL	14	35.286	27.530
16 RC	14	1.000	0.961

16 BL	31.887
16 RC	27.214
16 ES	26.214
16 VE	22.143
16 LH	21.071
16 NH	0.364
16 HS	36.358
16 THICK	316.242
16 HALWT	46537.875
16 SURVWT	1166.313
16 FOOD	1244.813
16 PREM	1010.437
16 POSTM	977.643
16 PREP	79.988
16 POSTV	50.072
16 ES/BL (%)	88.275
16 NH/BL (%)	83.459
16 (BL-RC)/BL (%)	61.782
16 VE/ES (%)	61.650
16 NH/ES (%)	95.322
16 HS/ES (%)	76.438
16 LH/VE (%)	99.823
16 NH/LH (%)	27.352
16 HS/NH (%)	0.614

N Obs Variable Label

CV

16 BL	78.021
16 RC	96.077
16 ES	81.455
16 VE	86.081
16 LH	87.556
16 NH	93.953
16 HS	93.804
16 THICK	7.056
16 HALWT	10.349
16 SURVWT	6.368
16 FOOD	12.039
16 PREM	8.366
16 POSTM	14.502
16 PREP	11.105
16 POSTV	18.566
16 ES/BL (%)	31.466
16 NH/BL (%)	53.893
16 (BL-RC)/BL (%)	30.498
16 VE/ES (%)	17.068
16 NH/ES (%)	40.531
16 HS/ES (%)	40.504
16 LH/VE (%)	7.113
16 NH/LH (%)	35.784
16 HS/NH (%)	0.615

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALARDS

15:53 Thursday, July 27, 1995

LEVEL=TRT3

N Obs Variable Label	N	Mean	Std Dev
16 BL	16	30.135	22.718
16 RC	16	1.000	1.095
16 ES	16	27.375	21.014
16 VE	16	22.187	19.850
16 LH	16	20.000	18.522
16 NH	16	14.500	15.336
16 HS	16	14.438	15.245
16 THICK	11	0.381	0.018
16 HALWT	15	36.693	3.601

SURVIV	15	306.800	21.673
FOOD	16	48689.750	2098.417
PREM	16	1174.625	95.402
POSTM	16	1072.063	167.319
PREP	16	1043.375	80.860
POSTV	15	983.400	121.517
ES/BL (%)	16	30.266	31.075
NH/BL (%)	16	49.364	6.449
(BL-EC)/BL (%)	16	96.074	30.207
VE/BS (%)	16	76.776	52.122
NH/BS (%)	16	56.008	31.996
HS/BS (%)	16	53.866	14.184
LE/VE (%)	15	50.651	27.658
NH/LE (%)	15	73.456	0.717
HS/NH (%)	15	59.815	

N Obs	Variable	Label	CV
16	BL		75.413
	EC		109.545
	ES		76.763
	VE		89.466
	LE		92.610
	NH		105.767
	HS		105.590
	THICK		4.808
	HATWT		9.815
	SURVIV		7.110
	FOOD		4.310
	PREM		8.122
	POSTM		15.607
	PREP		7.750
	POSTV		12.357
	ES/BL (%)		10.157
	NH/BL (%)		62.950
	(BL-EC)/BL (%)		6.713
	VE/BS (%)		36.344
	NH/BS (%)		83.477
	HS/BS (%)		53.399
	LE/VE (%)		15.639
	NH/LE (%)		37.652
	HS/NH (%)		0.719

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

1. ANALYSIS OF EGGS LAID

15:53 Thursday, July 27, 1995

General Linear Model's Procedure Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3
Number of observations in data set = 64		

NOTE: Due to missing values, only 62 observations can be used in this analysis.

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

1. ANALYSIS OF EGGS LAID

15:53 Thursday, July 27, 1995

General Linear Model's Procedure Type I Sum of Squares for LEVEL

Effect	Coefficients
INTERCEPT	0
LEVEL	
CONTROL	L2
TRT1	L3
TRT2	L4
TRT3	-L2-L3-L4

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

1. ANALYSIS OF EGGS LAID

15:53 Thursday, July 27, 1995

General Linear Model's Procedure

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	4940.7477	1646.9159	3.02	0.0371
Error	58	31676.6071	546.1464		
Corrected Total	61	36617.3548			
R-Square		0.134929	56.24723	23.370	41.54839
C.V.					
Root MSE					
EL Mean					
Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	4940.7477	1646.9159	3.02	0.0371

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

1. ANALYSIS OF EGGS LAID

15:53 Thursday, July 27, 1995

General Linear Model's Procedure Least Squares Means

LEVEL	BL	Pr > T	H0: LSMEAN(1)=LSMEAN(3)
	LSMEAN 1/3	2	3
CONTROL	50.7500000	1	0.8566 0.0758 0.0154
TRT1	49.2500000	2	0.8566 0.1079 0.0242
TRT2	35.2857143	3	0.0758 0.1079 0.5486
TRT3	30.1250000	4	0.0154 0.0242 0.5486

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

1. ANALYSIS OF EGGS LAID

15:53 Thursday, July 27, 1995

Tukey's Studentized Range (HSD) Test for variable: EL

NOTE: This test controls the type I experimentwise error rate.

Alpha=0.05 Confidence=0.95 df= 58 MSB= 546.1464
Critical Value of Studentized Range=3.741

Comparisons significant at the 0.05 level are indicated by '***'.

LEVEL Comparison	Simultaneous		Simultaneous	
	Lower Confidence Limit	Difference Between Means	Upper Confidence Limit	
CONTROL - TRT1	-20.355	1.500	23.355	
CONTROL - TRT2	-7.158	15.464	38.086	
CONTROL - TRT3	-1.210	20.625	42.480	
TRT1 - CONTROL	-23.355	-1.500	20.355	
TRT1 - TRT2	-8.558	13.564	36.586	
TRT1 - TRT3	-2.730	19.125	40.980	
TRT2 - CONTROL	-38.086	-15.464	7.158	
TRT2 - TRT1	-36.586	-13.564	8.658	
TRT2 - TRT3	-17.461	5.161	27.763	
TRT3 - CONTROL	-42.480	-20.625	1.230	
TRT3 - TRT1	-40.980	-19.125	2.730	
TRT3 - TRT2	-27.783	-5.161	17.461	

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

1. ANALYSIS OF EGGS LAYED

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Dunnnett's One-tailed T tests for variable: EL

NOTE: This test controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha=0.05 Confidence=0.95 df= 58 MSB= 546.1464
Critical Value of Dunnnett's T= 2.108

Comparisons significant at the 0.05 level are indicated by '***'.

LEVEL Comparison	Simultaneous		Simultaneous	
	Lower Confidence Limit	Difference Between Means	Upper Confidence Limit	
TRT1 - CONTROL	-18.919	-1.500	15.919	
TRT2 - CONTROL	-33.494	-15.464	2.566	
TRT3 - CONTROL	-38.044	-20.625	-3.206	***

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

2. ANALYSIS OF EGGS CRACKED

15:53 Thursday, July 27, 1995

General Linear Models Procedure Class Level Information

Class Levels Value
LEVEL 4 CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 63 observations can be used in this analysis.

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

2. ANALYSIS OF EGGS CRACKED

15:53 Thursday, July 27, 1995

General Linear Models Procedure Type I Estimable Functions for: LEVEL

Effect Coefficients

INTERCEPT	0
LEVEL	
CONTROL	L2
TRT1	L3
TRT2	L4
TRT3	-L2-L3-L4

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

2. ANALYSIS OF EGGS CRACKED

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Dependent Variable: EC

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	3.9173387	1.3057796	0.91	0.4403
Error	58	82.9375000	1.4295569		
Corrected Total	61	86.8548387			

R-Square 0.045102 C.V. 114.0617 Root MSE 1.1958 EC Mean 1.048387

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	3.9173387	1.3057796	0.91	0.4403

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

2. ANALYSIS OF EGGS CRACKED

15:53 Thursday, July 27, 1995

General Linear Models Procedure Least Squares Means

EC Pr > |T| HO: LEMEAN(1)=LEMEAN(2)

LEVEL	1	2	3	4
CONTROL	0.75000000	0.1093	0.5700	0.5566
TRT1	1.43750000	2	0.1093	0.3051
TRT2	1.00000000	3	0.5700	0.3051
TRT3	1.00000000	4	0.5566	0.3051

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

2. ANALYSIS OF EGGS CRACKED

15:53 Thursday, July 27, 1995

General Linear Model Procedure

Tukey's Studentized Range (HSD) Test for variable: BC

NOTE: This test controls the type I experimentwise error rate.

Alpha=0.05 Confidence=0.95 df= 58 MSB= 1.429957
Critical Value of Studentized Range= 3.741

Comparisons significant at the 0.05 level are indicated by '***'.

LEVEL	Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT1	- TRT2	-0.720	0.438	1.595
TRT1	- TRT3	-0.681	0.438	1.556
TRT1	- CONTROL	-0.431	0.687	1.806
TRT2	- TRT1	-1.595	-0.438	0.720
TRT2	- TRT3	-1.158	0.000	1.158
TRT2	- CONTROL	-0.908	0.250	1.408
TRT3	- TRT1	-1.556	-0.438	0.681
TRT3	- TRT2	-1.158	0.000	1.158
TRT3	- CONTROL	-0.868	0.250	1.368
CONTROL	- TRT1	-1.806	-0.687	0.431
CONTROL	- TRT2	-1.408	-0.250	0.908
CONTROL	- TRT3	-1.368	-0.250	0.868

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

2. ANALYSIS OF EGGS CRACKED

15:53 Thursday, July 27, 1995

General Linear Model Procedure

Dunnnett's One-tailed T tests for variable: BC

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence=0.95 df= 58 MSB= 1.429957
Critical Value of Dunnnett's T= 2.108

Comparisons significant at the 0.05 level are indicated by '***'.

Simultaneous Simultaneous

LEVEL	Comparison	Lower Confidence Limit	Difference Between Means	Upper Confidence Limit
TRT1	- CONTROL	-0.204	0.687	1.579
TRT2	- CONTROL	-0.673	0.250	1.173
TRT3	- CONTROL	-0.641	0.250	1.141

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

3. ANALYSIS OF EGGS SET

15:53 Thursday, July 27, 1995

General Linear Model Procedure

Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 62 observations can be used in this analysis.

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

3. ANALYSIS OF EGGS SET

15:53 Thursday, July 27, 1995

General Linear Model Procedure

Type I Estimable Functions for: LEVEL

Effect	Coefficients
INTERCEPT	0
LEVEL	
CONTROL	L2
TRT1	L3
TRT2	L4
TRT3	-L2-L3-L4

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

3. ANALYSIS OF EGGS SET

15:53 Thursday, July 27, 1995

General Linear Model Procedure

Dependent Variable: BS

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	4451.0821	1483.6940	3.10	0.0334
Error	58	27715.9018	477.8604		
Corrected Total	61	32166.9839			

R-Square	0.128374	C.V.	57.50196	Root MSE	21.860	BS Mean	38.01613
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Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	4451.0821	1483.6940	3.10	0.0334

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

3. ANALYSIS OF EGGS SET

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Least Squares Means

LEVEL	LSMEAN	MS Pr > T H0: LSMEAN(1)=LSMEAN(2)			
		1/2	1/3	2/3	1/4
CONTROL	47.3125000	1	0.7414	0.0583	0.0124
TRT1	44.7500000	2	0.7414	0.1125	0.0284
TRT2	31.8571429	3	0.0583	0.1125	0.5775
TRT3	27.3750000	4	0.0124	0.0284	0.5775

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

EFFECTS OF PIRATE ON THE REPRODUCTION BY MALLARDS

3. ANALYSIS OF EGGS SET

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: EG

NOTE: This test controls the type I experimentwise error rate.

Alpha=0.05 Confidence=0.95 df= 58 MSB= 477.8604

Critical Value of Studentized Range= 3.741

Comparisons significant at the 0.05 level are indicated by '***'.

LEVEL	Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
CONTROL - TRT1		-17.881	2.563	23.006
CONTROL - TRT2		-5.705	15.455	36.616
CONTROL - TRT3		-0.506	19.937	40.361
TRT1 - CONTROL		-21.006	-2.563	17.881
TRT1 - TRT2		-8.268	12.893	34.054
TRT1 - TRT3		-3.068	17.375	37.818
TRT2 - CONTROL		-36.616	-15.455	5.705
TRT2 - TRT1		-34.054	-12.893	8.268
TRT2 - TRT3		-16.679	4.462	25.643
TRT3 - CONTROL		-40.361	-19.937	0.506
TRT3 - TRT1		-37.818	-17.375	3.068
TRT3 - TRT2		-25.643	-4.462	16.679

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

3. ANALYSIS OF EGGS SET

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Dunnnett's One-tailed T-tests for variable: EG

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha=0.05 Confidence=0.95 df= 58 MSB= 477.8604

Critical Value of Dunnnett's T= 2.106

Comparisons significant at the 0.05 level are indicated by '***'.

LEVEL	Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT1 - CONTROL		-18.856	-2.563	13.731
TRT2 - CONTROL		-32.321	-15.455	1.410
TRT3 - CONTROL		-36.616	-19.937	-3.664

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

4. ANALYSIS OF VIABLE EMBRYOS

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 63 observations can be used in this analysis.

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

4. ANALYSIS OF VIABLE EMBRYOS

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Type I Estimable Functions for: LEVEL

Coefficients

INTERCEPT	0
LEVEL	
CONTROL	L2
TRT1	L3
TRT2	L4
TRT3	-L2-L3-L4

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

4. ANALYSIS OF VIABLE EMBRYOS

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Dependent Variable: VG

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	3883.0179	1294.3393	2.92	0.0415
Error	58	25696.4821	443.0428		
Corrected Total	61	29579.5000			

R-Square 0.131374 C.V. Root MSE 21.049 VG Mean 32.50000

Source	DF	Type III Sum of Squares	F Value	Pr > F
LEVEL	3	3883.0179	1294.3393	2.92 0.0415

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

4. ANALYSIS OF VIABLE EMBRYOS

15:53 Thursday, July 27, 1995

General Linear Models Procedure
Least Squares Means

LEVEL	VB	Pr > T	H0: LSMEAN(1)=LSMEAN(3)	LSMEAN	1/3	1	2	3	4
CONTROL	39.5635000	1	0.9134	0.1144	0.0230				
TRT1	40.3750000	2	0.9134	0.0929	0.0176				
TRT2	27.2142857	3	0.1144	0.0929	0.5166				
TRT3	23.1875000	4	0.0230	0.0176	0.5166				

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

4. ANALYSIS OF VIABLE EMBRYOS

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: VG

NOTE: This test controls the type I experimentwise error rate.

Alpha=0.05 Confidence=0.95 df= 58 MSB= 443.0428
Critical Value of Studentized Range= 3.741

Comparisons significant at the 0.05 level are indicated by ****.

LEVEL	Simultaneous Lower Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT1 - CONTROL	-18.872	0.812	20.497
TRT1 - TRT2	-7.215	13.161	33.536

TRT1 - TRT3

CONTROL - TRT1	-20.497	-0.812	18.872
CONTROL - TRT2	-8.027	12.348	22.723
CONTROL - TRT3	-2.309	17.375	37.059
TRT1 - TRT1	-33.536	-13.161	7.215
TRT1 - CONTROL	-32.723	-12.348	8.027
TRT2 - TRT3	-15.348	5.027	25.402
TRT3 - TRT1	-37.872	-18.187	1.497
TRT3 - CONTROL	-37.059	-17.375	2.309
TRT3 - TRT2	-25.402	-5.027	15.348

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

4. ANALYSIS OF VIABLE EMBRYOS

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Dunnnett's One-tailed T tests for variable: VG

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha=0.05 Confidence=0.95 df= 58 MSB= 443.0428
Critical Value of Dunnnett's T= 2.108

Comparisons significant at the 0.05 level are indicated by ****.

LEVEL	Simultaneous Lower Limit	Difference Between Means	Simultaneous Upper Confidence Limit
CONTROL	-14.876	0.812	16.501
TRT1 - CONTROL	-28.588	-12.348	3.891
TRT3 - CONTROL	-33.064	-17.375	-1.686

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

5. ANALYSIS OF LIVE 3-WEEK EMBRYOS

15:53 Thursday, July 27, 1995

General Linear Models Procedure
Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 62 observations can be used in this analysis.

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

5. ANALYSIS OF LIVE 3-WEEK EMBRYOS

15:53 Thursday, July 27, 1995

General Linear Models Procedure
Type I Estimable Functions for: LEVEL

Effect Coefficients

INTERCEPT 0

LEVEL
CONTROL L2
TRT1 L3
TRT2 L4
TRT3 L2-L3-L4

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
5. ANALYSIS OF LIVE 3-WEEK EMBRYOS

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Dependent Variable: LR

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	4015.1247	1338.3749	3.22	0.0292
Error	58	24108.2946	415.6603		
Corrected Total	61	28123.4194			
R-Square			C.V.	Root MSE	LE Mean
		0.142768	65.97288	20.188	30.90323

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	4015.1247	1338.3749	3.22	0.0292

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

5. ANALYSIS OF LIVE 3-WEEK EMBRYOS

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Least Squares Means

LEVEL	LR	Pr > T	HO: LSMEAN(1)=LSMEAN(5)
	LSMEAN	1/3	1
CONTROL	38.0625000	1	0.9243
TRT1	38.7500000	2	0.1177
TRT2	26.2142857	3	0.0983
TRT3	20.0000000	4	0.0150

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

5. ANALYSIS OF LIVE 3-WEEK EMBRYOS

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: LR

NOTE: This test controls the type I experimentwise error rate.

Alpha=0.05 Confidence=0.95 df= 58 MSB= 415.6603
Critical Value of Studentized Range= 3.741

Comparisons significant at the 0.05 level are indicated by '***'.

LEVEL	Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT1	- CONTROL	-18.379	0.687	19.754
TRT1	- TRT2	-7.200	12.536	32.271
TRT1	- TRT3	-0.316	18.750	37.816
CONTROL	- TRT1	-19.754	-0.687	18.379
CONTROL	- TRT2	-7.887	11.848	31.584
CONTROL	- TRT3	-1.004	18.062	37.129
TRT2	- TRT1	-32.271	-12.536	7.200
TRT2	- CONTROL	-31.584	-11.848	7.887
TRT2	- TRT3	-13.521	6.214	25.950
TRT3	- TRT1	-37.816	-18.750	0.316
TRT3	- CONTROL	-37.129	-18.062	1.004
TRT3	- TRT2	-25.950	-6.214	13.521

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

5. ANALYSIS OF LIVE 3-WEEK EMBRYOS

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Dunnnett's One-tailed T tests for variable: LR

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha=0.05 Confidence=0.95 df= 58 MSB= 415.6603
Critical Value of Dunnnett's T= 2.108

Comparisons significant at the 0.05 level are indicated by '***'.

LEVEL	Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT1	- CONTROL	-14.509	0.687	15.884
TRT2	- CONTROL	-27.578	-11.848	3.881
TRT3	- CONTROL	-33.259	-18.062	-2.866

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

5. ANALYSIS OF NORMAL HATCHLINGS

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Class Level Information

LEVEL 4 CONTROL TRT1 TRT2 TRT3
Number of observations in data set = 64

NOTE: Due to missing values, only 62 observations can be used in this analysis.

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS 6. ANALYSIS OF NORMAL HATCHLINGS

15:53 Thursday, July 27, 1995

General Linear Models Procedure
Type I Estimable Functions for: LEVEL

Effect Coefficients

INTERCEPT 0
LEVEL
CONTROL L2
TRT1 L3
TRT2 L4
TRT3 L2-L3-L4

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS 6. ANALYSIS OF NORMAL HATCHLINGS

General Linear Models Procedure

15:53 Thursday, July 27, 1995

Dependent Variable: NH

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	3748.4067	1249.4589	3.89	0.0134
Error	58	18649.4643	321.5425		
Corrected Total	61	22397.8710			

R-Square	C.V.	Root MSE	NH Mean
0.167355	70.99359	17.932	25.25806

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	3748.4067	1249.4589	3.89	0.0134

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS 6. ANALYSIS OF NORMAL HATCHLINGS

General Linear Models Procedure

15:53 Thursday, July 27, 1995

Least Squares Means

LEVEL NH Pr > |T| HO: LSMEAN(1)=LSMEAN(4)
LSMEAN 1/3 1 2 3 4

CONTROL	TRT1	TRT2	TRT3
33.000000	31.875000	21.142857	14.500000
1	2	3	4
0.8598	0.0760	0.1074	0.0081
0.0050	0.0081	0.3186	

NOTE: To assure overall protection level, only probabilities associated with pre-planned comparisons should be used.

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS 6. ANALYSIS OF NORMAL HATCHLINGS

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: NH

Alpha=0.05 Confidence=0.95 df= 58 MSB= 321.5425

Critical Value of Studentized Range= 3.741

Comparisons significant at the 0.05 level are indicated by '***'.

LEVEL	Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
CONTROL - TRT1	-15.644	1.125	17.894	
CONTROL - TRT2	-5.501	11.857	29.215	
CONTROL - TRT3	1.731	18.500	35.269	***
TRT1 - CONTROL	-17.894	-1.125	15.644	
TRT1 - TRT2	-6.626	10.722	28.090	
TRT1 - TRT3	0.606	17.375	34.144	***
TRT2 - CONTROL	-29.215	-11.857	5.501	
TRT2 - TRT1	-28.090	-10.722	6.626	
TRT2 - TRT3	-10.715	6.643	24.001	
TRT3 - CONTROL	-35.269	-18.500	-1.731	***
TRT3 - TRT1	-34.144	-17.375	-0.606	
TRT3 - TRT2	-24.001	-6.643	10.715	

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS 6. ANALYSIS OF NORMAL HATCHLINGS

General Linear Models Procedure

15:53 Thursday, July 27, 1995

Dunnnett's One-tailed T tests for variable: NH

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha=0.05 Confidence=0.95 df= 58 MSB= 321.5425

Critical Value of Dunnnett's T= 2.108

Comparisons significant at the 0.05 level are indicated by '***'.

Simultaneous Lower Difference Upper

LEVEL	Comparison	Confidence Limit	Between Means	Confidence Limit
TRT1	- CONTROL	-14.490	-1.125	12.240
TRT2	- CONTROL	-25.692	-11.857	1.977
TRT3	- CONTROL	-31.865	-18.500	-5.135 ***

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
7. ANALYSIS OF 14-DAY-OLD SURVIVORS

15:53 Thursday, July 27, 1995

General Linear Models Procedure
Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 63 observations can be used in this analysis.

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
7. ANALYSIS OF 14-DAY-OLD SURVIVORS

15:53 Thursday, July 27, 1995

General Linear Models Procedure
Type I Sum of Squares Functions for: LEVEL

Coefficients

Effect

INTERCEPT

0

LEVEL	CONTROL	L2	TRT1	L3	TRT2	L4	TRT3	L2-L3-L4
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EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
7. ANALYSIS OF 14-DAY-OLD SURVIVORS

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Dependent Variable: HS

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	3720.7710	1240.2570	3.87	0.0137
Error	58	18597.6161	320.5486		
Corrected Total	61	22318.3871			
R-Square			C.V.	Root MSE	HS Mean
	0.166713		71.16750	17.907	25.16129

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	3720.7710	1240.2570	3.87	0.0137

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
7. ANALYSIS OF 14-DAY-OLD SURVIVORS

15:53 Thursday, July 27, 1995

General Linear Models Procedure
Least Squares Means

LEVEL	HS	Pr > T	HO: LSMEAN(1)=LSMEAN(5)
CONTROL	32.8750000	1	0.8596
TRT1	31.7500000	2	0.8596
TRT2	21.0714286	3	0.0769
TRT3	14.4375000	4	0.0051

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
7. ANALYSIS OF 14-DAY-OLD SURVIVORS

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: HS

NOTE: This test controls the type I experimentwise error rate.

Alpha=0.05 Confidence=0.95 df= 58 MSB= 320.6466

Critical Value of Studentized Range= 3.741

Comparisons significant at the 0.05 level are indicated by ***.

LEVEL	Comparison	Simultaneous Lower Confidence Limit	Simultaneous Difference Between Means	Simultaneous Upper Confidence Limit
CONTROL	- TRT1	-15.621	1.125	17.872
CONTROL	- TRT2	-5.530	11.896	23.117
CONTROL	- TRT3	1.691	18.437	35.184 ***
TRT1	- CONTROL	-17.871	-1.125	15.621
TRT1	- TRT2	-6.655	10.679	28.032
TRT1	- TRT3	0.566	17.312	34.059 ***
TRT2	- CONTROL	-29.137	-11.804	5.530
TRT2	- TRT1	-28.012	-10.679	6.655
TRT2	- TRT3	-10.709	6.634	23.968
TRT3	- CONTROL	-35.184	-18.437	-1.691 ***
TRT3	- TRT1	-34.059	-17.312	-0.566 ***
TRT3	- TRT2	-23.968	-6.634	10.700

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
7. ANALYSIS OF 14-DAY-OLD SURVIVORS

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Dunnett's One-tailed T tests for variable: NS

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha=0.05 Confidence=0.95 df= 58 MSB= 320.6466

Critical Value of Dunnett's T= 2.108

Comparisons significant at the 0.05 level are indicated by '***'.

LEVEL	Simultaneous		Simultaneous	
	Lower Confidence Limit	Difference Between Means	Upper Confidence Limit	
TR#1 - CONTROL	-14.472	-1.135	12.222	
TR#2 - CONTROL	-25.619	-11.804	2.012	
TR#3 - CONTROL	-31.784	-18.437	-5.091	***

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

8. ANALYSIS OF EGGS SET/EGGS LAID

15:53 Thursday, July 27, 1995

General Linear Models Procedure
Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3
Number of observations in data set = 64		

NOTE: Due to missing values, only 61 observations can be used in this analysis.

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

8. ANALYSIS OF EGGS SET/EGGS LAID

15:53 Thursday, July 27, 1995

General Linear Models Procedure
Type I Estimable Functions for: LEVEL

Effect	Coefficients
INTERCEPT	0
LEVEL	
CONTROL	L2
TRT1	L3
TRT2	L4
TRT3	-L2-L3-L4

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

8. ANALYSIS OF EGGS SET/EGGS LAID

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Dependent Variable: RESPONSE

Weight:

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	3758.7566	1252.9189	1.06	0.3714
Error	57	67084.0220	1176.9127		
Corrected Total	60	70842.7786			

Source	DF	Type III Sum of Squares	Mean Square	F Value	Pr > F
R-Square	0.05058	46.55556	34.306	73.68864	
C.V.					
Root MSB					
RESPONSE Mean					
LEVEL	3	3758.7566	1252.9189	1.06	0.3714

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

8. ANALYSIS OF EGGS SET/EGGS LAID

15:53 Thursday, July 27, 1995

General Linear Models Procedure
Least Squares Means

LEVEL	RESPONSE	Pr > T	HO: LSMEAN(1)=LSMEAN(J)
	LSMEAN	1/J	1
CONTROL	75.3877689	1	0.1579
TRT1	72.9329953	2	0.1211
TRT2	72.3069478	3	0.1211
TRT3	73.4776773	4	0.3370

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

8. ANALYSIS OF EGGS SET/EGGS LAID

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: RESPONSE

NOTE: This test controls the type I experimentwise error rate.

Alpha=0.05 Confidence=0.95 df= 57 MSB= 1176.913

Critical Value of Studentized Range= 3.743

Comparisons significant at the 0.05 level are indicated by '***'.

LEVEL	Simultaneous		Simultaneous	
	Lower Confidence Limit	Difference Between Means	Upper Confidence Limit	
CONTROL - TRT3	-30.189	1.910	34.009	
CONTROL - TRT1	-29.644	2.455	34.554	

CONTROL - TRT2	-30.820	3.081	36.981
TRT2 - CONTROL	-34.009	-1.910	30.189
TRT2 - TRT1	-31.555	0.545	32.644
TRT2 - TRT2	-32.730	1.171	35.071
TRT1 - CONTROL	-34.554	-2.455	29.644
TRT1 - TRT2	-32.644	-0.545	31.555
TRT1 - TRT1	-33.274	0.626	34.527
TRT2 - CONTROL	-36.981	-3.081	30.820
TRT2 - TRT2	-35.071	-1.171	32.730
TRT2 - TRT1	-34.527	-0.626	33.274

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
9. ANALYSIS OF VIABLE EMBRYOS/EGGS LAID

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Dunnnett's One-tailed T tests for variable: RESPONSE

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha=0.05 Confidence=0.95 df= 57 MSE= 1176.913
Critical Value of Dunnnett's T= 1.111

Comparisons significant at the 0.05 level are indicated by '***'.

LEVEL	Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT2	- CONTROL	-27.509	-1.910	23.689
TRT1	- CONTROL	-28.054	-2.455	23.145
TRT2	- CONTROL	-30.117	-3.081	23.955

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
9. ANALYSIS OF VIABLE EMBRYOS/EGGS SETS

15:53 Thursday, July 27, 1995

General Linear Models Procedure
Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3
Number of observations in data set = 64		

NOTE: Due to missing values, only 60 observations can be used in this analysis.

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
9. ANALYSIS OF VIABLE EMBRYOS/EGGS SETS

15:53 Thursday, July 27, 1995

General Linear Models Procedure
Type I Setttable Functions for LEVEL

Effect	Coefficients
INTERCEPT	0
LEVEL	CONTROL L2 TRT1 L3 TRT2 L4 TRT3 -L2-L3-L4

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
9. ANALYSIS OF VIABLE EMBRYOS/EGGS SETS

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Dependent Variable: RESPONSE
Weight: 1

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	13844.653	4614.884	0.42	0.7363
Error	56	608995.736	10874.924		
Corrected Total	59	622840.389			

R-Square	0.022226	C.V.	104.28	Root MSE	RESPONSE Mean
					70.02346

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	13844.653	4614.884	0.42	0.7363

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
9. ANALYSIS OF VIABLE EMBRYOS/EGGS SETS

15:53 Thursday, July 27, 1995

General Linear Models Procedure
Least Squares Means

LEVEL	RESPONSE	Pr > T NO: LSMEAN(1)-LSMEAN(1)
	LSMEAN 1/3	1 2 3
CONTROL	69.3481744	1 0.4683 0.9968 0.6471
TRT1	73.3178543	2 0.4683 0.5332 0.2834
TRT2	69.3736237	3 0.9968 0.5332 0.6802
TRT3	66.4668914	4 0.6471 0.2834 0.6802

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
9. ANALYSIS OF VIABLE EMBRYOS/EGGS SETS

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: RESPONSE

NOTE: This test controls the type I experimentwise error rate.

Alpha=0.05 Confidence=0.95 df= 56 MSB=10874.92
Critical Value of Studentized Range=3.745

Comparisons significant at the 0.05 level are indicated by '***'.

LEVEL	Comparison	Simultaneous		Difference Between Means	Simultaneous	
		Lower Limit	Upper Limit		Lower Limit	Upper Limit
TRT1	- TRT2	-101.504	3.944	105.448	105.448	105.448
TRT1	- CONTROL	-93.657	3.970	101.596	101.596	101.596
TRT1	- TRT3	-90.775	6.851	104.477	104.477	104.477
TRT2	- TRT1	-109.393	-3.944	101.504	101.504	101.504
TRT2	- CONTROL	-105.423	0.025	105.474	105.474	105.474
TRT2	- TRT3	-102.542	2.907	109.385	109.385	109.385
CONTROL	- TRT1	-101.596	-3.970	93.657	93.657	93.657
CONTROL	- TRT2	-105.474	-0.025	105.423	105.423	105.423
CONTROL	- TRT3	-94.745	2.881	100.508	100.508	100.508
TRT3	- TRT1	-104.477	-6.851	90.775	90.775	90.775
TRT3	- TRT2	-108.355	-2.907	102.542	102.542	102.542
TRT3	- CONTROL	-100.508	-2.881	94.745	94.745	94.745

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

9. ANALYSIS OF LIVE 3-WEEK EMBRYOS/VIALS EMBRYOS

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Dunnnett's One-tailed T tests for variable: RESPONSE

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha=0.05 Confidence=0.95 df= 56 MSB=10874.92
Critical Value of Dunnnett's T=2.113

Comparisons significant at the 0.05 level are indicated by '***'.

LEVEL	Comparison	Simultaneous		Difference Between Means	Simultaneous	
		Lower Limit	Upper Limit		Lower Limit	Upper Limit
TRT1	- CONTROL	-73.942	3.970	81.882	81.882	81.882
TRT2	- CONTROL	-84.129	0.025	84.180	84.180	84.180
TRT3	- CONTROL	-80.793	-2.881	75.031	75.031	75.031

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

10. ANALYSIS OF LIVE 3-WEEK EMBRYOS/VIALS EMBRYOS

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Class Level Information

Class Levels Values

LEVEL 4 CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 59 observations can be used in this analysis.

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

10. ANALYSIS OF LIVE 3-WEEK EMBRYOS/VIALS EMBRYOS

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Type I Estimable Functions for: LEVEL

Effect	Coefficients
INTERCEPT	0
LEVEL	
CONTROL	L2
TRT1	L3
TRT2	L4
TRT3	-L2-L3-L4

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

10. ANALYSIS OF LIVE 3-WEEK EMBRYOS/VIALS EMBRYOS

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Dependent Variable: RESPONSE

Weight:

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	8017.5223	2672.5074	1.46	0.2364
Error	55	100504.0635	1824.6193		
Corrected Total	58	108921.5858			

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	8017.5223	2672.5074	1.46	0.2364

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

10. ANALYSIS OF LIVE 3-WEEK EMBRYOS/VIALS EMBRYOS

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Least Squares Means

FILE: \\malpro\chicks.out
 RESPONSE Pr > |T| NO: LSMEAN(1)-LSMEAN(5)
 15:53 Thursday, July 27, 1995

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
 10. ANALYSIS OF LIVE 3-WEEK EMBRYOS/VIALBE EMBRYOS
 15:53 Thursday, July 27, 1995

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: RESPONSE

NOTE: This test controls the type I experimentwise error rate.

Alpha=0.05 Confidence=0.95 df= 55 MSB= 1834.619
 Critical Value of Studentized Range= 3.747

Comparisons significant at the 0.05 level are indicated by '***'.

LEVEL	Comparison	Simultaneous		Simultaneous	
		Lower	Difference	Upper	Confidence
		Limit	Between	Limit	Limit
TRT2	- CONTROL	-41.884	1.452	44.787	
TRT2	- TRT1	-41.864	1.472	44.807	
TRT2	- TRT3	-37.797	6.153	50.103	
CONTROL	- TRT2	-44.787	-1.452	41.884	
CONTROL	- TRT1	-40.101	0.020	40.141	
CONTROL	- TRT3	-36.082	4.701	45.485	
TRT1	- TRT2	-44.807	-1.472	41.864	
TRT1	- CONTROL	-40.141	-0.020	40.101	
TRT1	- TRT3	-36.102	4.682	45.465	
TRT3	- TRT2	-50.103	-6.153	37.797	
TRT3	- CONTROL	-45.485	-4.701	36.082	
TRT3	- TRT1	-45.465	-4.682	36.102	

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
 10. ANALYSIS OF LIVE 3-WEEK EMBRYOS/VIALBE EMBRYOS
 15:53 Thursday, July 27, 1995

General Linear Models Procedure

Dunnnett's One-tailed t tests for variable: RESPONSE

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha=0.05 Confidence=0.95 df= 55 MSB= 1834.619
 Critical Value of Dunnnett's T= 2.115

Comparisons significant at the 0.05 level are indicated by '***'.

FILE: \\malpro\chicks.out
 RESPONSE Pr > |T| NO: LSMEAN(1)-LSMEAN(5)
 15:53 Thursday, July 27, 1995

NOTE: Due to missing values, only 59 observations can be used in this analysis.

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
 11. ANALYSIS OF NORMAL HATCHLINGS/3-WEEK LIVE EMBRYOS
 15:53 Thursday, July 27, 1995

General Linear Models Procedure

Class Level Information

Class Levels Values
 LEVEL 4 CONTROL TRT1 TRT2 TRT3
 Number of observations in data set = 64

NOTE: Due to missing values, only 59 observations can be used in this analysis.

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
 11. ANALYSIS OF NORMAL HATCHLINGS/3-WEEK LIVE EMBRYOS
 15:53 Thursday, July 27, 1995

General Linear Models Procedure

Type I Estimable Functions for: LEVEL

Coefficients

INTERCEPT	0
LEVEL	
CONTROL	L2
TRT1	L3
TRT2	L4
TRT3	-L2-L3-L4

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
 11. ANALYSIS OF NORMAL HATCHLINGS/3-WEEK LIVE EMBRYOS
 15:53 Thursday, July 27, 1995

General Linear Models Procedure

Dependent Variable: RESPONSE

Weight: 1

Source DF Sum of Squares Mean Square F Value Pr > F

Model 3 21224.372 7074.791 1.10 0.3555

Error 55 352581.306 6410.569

Corrected Total 58 373805.676

R-Square C.V. Root MSE RESPONSE Mean

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	21224.172	7074.791	1.10	0.3555

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
11. ANALYSIS OF NORMAL HATCHLINGS/3-WEEK LIVE EMBRYOS

15:53 Thursday, July 27, 1995

General Linear Models Procedure
Least Squares Means

LEVEL	RESPONSE	Pr > T	H0: LSMEAN(1)=LSMEAN(2)	1	2	3	4
CONTROL	69.9469584	1	0.6238	10.7041	0.0794		
TRT1	67.6936990	2	0.6228		0.9649	0.1720	
TRT2	67.9271358	3	0.7041	0.9649		0.2046	
TRT3	60.0663337	4	0.0794	0.1720	0.2046		

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
11. ANALYSIS OF NORMAL HATCHLINGS/3-WEEK LIVE EMBRYOS

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: RESPONSE

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 55 MSB= 6410.569
Critical Value of Studentized Range= 3.747

Comparisons significant at the 0.05 level are indicated by '****'.

LEVEL	Comparison	Simultaneous		Simultaneous
		Lower Confidence Limit	Upper Confidence Limit	
CONTROL - TRT2		-78.986	2.020	83.026
CONTROL - TRT1		-72.744	2.253	77.250
CONTROL - TRT3		-66.356	9.881	86.117
TRT2 - CONTROL		-83.026	-2.020	78.986
TRT2 - TRT1		-80.772	0.233	81.239
TRT2 - TRT3		-74.294	7.861	90.016
TRT1 - CONTROL		-77.250	-2.253	72.744
TRT1 - TRT2		-81.239	-0.233	80.772
TRT1 - TRT3		-68.609	7.827	83.864
TRT3 - CONTROL		-86.117	-9.881	66.356
TRT3 - TRT2		-90.016	-7.861	74.294
TRT3 - TRT1		-83.864	-7.627	68.609

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
11. ANALYSIS OF NORMAL HATCHLINGS/3-WEEK LIVE EMBRYOS

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Dunnnett's One-tailed T tests for variable: RESPONSE

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 55 MSB= 6410.569
Critical Value of Dunnnett's T= 2.115

Comparisons significant at the 0.05 level are indicated by '****'.

LEVEL	Comparison	Simultaneous		Simultaneous
		Lower Confidence Limit	Upper Confidence Limit	
TRT2 - CONTROL		-66.692	-2.020	62.652
TRT1 - CONTROL		-63.128	-2.253	57.621
TRT3 - CONTROL		-70.745	-9.881	50.984

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
12. ANALYSIS OF NORMAL HATCHLINGS/EGGS LAID

15:53 Thursday, July 27, 1995

General Linear Models Procedure
Class Level Information

Class	Level	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 61 observations can be used in this analysis.

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
12. ANALYSIS OF NORMAL HATCHLINGS/EGGS LAID

15:53 Thursday, July 27, 1995

General Linear Models Procedure
Type I Estimable Functions for: LEVEL

Effect	Coefficients
INTERCEPT	0
LEVEL	
CONTROL	L2
TRT1	L3
TRT2	L4
TRT3	-L2-L3-L4

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
12. ANALYSIS OF NORMAL HATCHLINGS/EGGS LAID

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Dependent Variable: RESPONSE
Weight: EL

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	42590.007	14196.669	1.38	0.2588
Error	57	586703.353	10293.041		
Corrected Total	60	629293.360			
R-Square		C.V.	Root MSE	RESPONSE Mean	
	0.067612	199.7570	101.63	50.87550	

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	42590.007	14196.669	1.38	0.2588

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
12. ANALYSIS OF NORMAL HATCHINGS/EGGS LAID

15:53 Thursday, July 27, 1995

General Linear Models Procedure
Least Squares Means

LEVEL	RESPONSE	Pr > T	HO: LSMEAN(1)=LSMEAN(3)
	LSMEAN	1/3	1 2 3 4
CONTROL	52.7964346	1	0.8183 0.7255 0.0897
TRT1	53.9694876	2	0.8183 0.5831 0.0604
TRT2	50.7504704	3	0.7255 0.5831 0.2216
TRT3	42.7093470	4	0.0897 0.0604 0.2216

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

12. ANALYSIS OF NORMAL HATCHINGS/EGGS LAID

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: RESPONSE

NOTE: This test controls the type I experimentwise error rate.

Alpha=0.05 Confidence=0.95 df=57 MSE=10328.13
Critical Value of Studentized Range=3.743

Comparisons significant at the 0.05 level are indicated by '***'.

LEVEL	Comparison	Simultaneous Lower Confidence Limit	Simultaneous Difference Between Means	Simultaneous Upper Confidence Limit
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TRT1	- CONTROL	-93.92	1.17	96.26
TRT1	- TRT2	-97.31	3.22	103.64
TRT1	- TRT3	-83.83	11.26	106.35
CONTROL	- TRT1	-96.26	-1.17	93.92
CONTROL	- TRT2	-98.38	2.05	102.47
CONTROL	- TRT3	-85.00	10.09	105.18
TRT2	- TRT1	-103.64	-3.22	97.21
TRT2	- CONTROL	-102.47	-2.05	98.38
TRT2	- TRT3	-92.38	8.04	108.47
TRT3	- TRT1	-106.35	-11.26	83.83
TRT3	- CONTROL	-105.18	-10.09	85.00
TRT3	- TRT2	-108.47	-8.04	92.38

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
12. ANALYSIS OF NORMAL HATCHINGS/EGGS LAID

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Dunnnett's One-tailed T tests for variable: RESPONSE

NOTE: This test controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha=0.05 Confidence=0.95 df=57 MSE=10328.13
Critical Value of Dunnnett's T=2.111

Comparisons significant at the 0.05 level are indicated by '***'.

LEVEL	Comparison	Simultaneous Lower Confidence Limit	Simultaneous Difference Between Means	Simultaneous Upper Confidence Limit
TRT1	- CONTROL	-74.66	1.17	77.01
TRT2	- CONTROL	-82.14	-2.05	78.04
TRT3	- CONTROL	-85.92	-10.09	65.75

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

13. ANALYSIS OF 14-DAY HATCHING SURVIVORS/NORMAL HATCHINGS

15:53 Thursday, July 27, 1995

General Linear Models Procedure
Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 58 observations can be used in this analysis.

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
13. ANALYSIS OF 14-DAY HATCHING SURVIVORS/NORMAL HATCHINGS

15:53 Thursday, July 27, 1995

General Linear Models Procedure
Type I Estimable Functions for: LEVEL

Effect Coefficients

INTERCEPT 0

LEVEL
CONTROL L2
TRT1 L3
TRT2 L4
TRT3 -L2-L3-L4

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
13. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/NORMAL HATCHLINGS

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Dependent Variable: RESPONSE

Weight: NH

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	33.881418	11.293806	0.03	0.9912
Error	54	17563.34085	325.247053		
Corrected Total	57	17597.22227			

R-Square	0.001925	C.V.	20.32366	Root MSE	18.035	RESPONSE Mean	88.73702
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Source	DF	Type III SS	Mean Square	F Value	Pr > F
LEVEL	3	33.881418	11.293806	0.03	0.9912

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
13. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/NORMAL HATCHLINGS

15:53 Thursday, July 27, 1995

General Linear Models Procedure
Least Squares Means

LEVEL	RESPONSE	Pr > T H0: LSMEAN(I) = LSMEAN(J)
	LSMEAN 1/J	1 2 3 4
CONTROL	88.7461233	1 0.8862 0.9312 0.8497
TRT1	88.9071323	2 0.8862 0.8357 0.7637
TRT2	88.6325468	3 0.9312 0.8357 0.9213
TRT3	88.4756539	4 0.8497 0.7637 0.9213

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
13. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/NORMAL HATCHLINGS

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: RESPONSE

NOTE: This test controls the type I experimentwise error rate.

Alpha=0.05 Confidence=0.95 df= 54 MSB= 325.2471
Critical Value of Studentized Range= 3.749

Comparisons significant at the 0.05 level are indicated by ****.

LEVEL	Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT1	- CONTROL	-17.021	0.161	17.343
TRT1	- TRT2	-17.982	0.275	18.531
TRT1	- TRT3	-16.750	0.431	17.613
CONTROL	- TRT1	-17.343	-0.161	17.021
CONTROL	- TRT2	-18.402	0.114	18.629
CONTROL	- TRT3	-17.186	0.270	17.727
TRT2	- TRT1	-18.531	-0.275	17.982
TRT2	- CONTROL	-18.629	-0.114	18.402
TRT2	- TRT3	-18.359	0.257	18.673
TRT3	- TRT1	-17.613	-0.431	16.750
TRT3	- CONTROL	-17.727	-0.270	17.186
TRT3	- TRT2	-16.673	-0.157	18.359

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
13. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/NORMAL HATCHLINGS

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Dunnnett's One-tailed T tests for variable: RESPONSE

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha=0.05 Confidence=0.95 df= 54 MSB= 325.2471
Critical Value of Dunnnett's T= 2.112

Comparisons significant at the 0.05 level are indicated by ****.

LEVEL	Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT1	- CONTROL	-13.530	0.161	13.852
TRT2	- CONTROL	-14.866	-0.114	14.640
TRT3	- CONTROL	-14.181	-0.270	13.640

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
14. ANALYSIS OF EGGS NOT CRACKED/EGGS LAIN

15:53 Thursday, July 27, 1995

General Linear Models Procedure
Class Level Information

Class Levels Values
LEVEL 4 CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 61 observations can be used in this analysis.

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
14. ANALYSIS OF EGGS NOT CRACKED/EGGS LAID

15:53 Thursday, July 27, 1995

General Linear Models Procedure
Type I Estimable Functions for: LEVEL

Effect Coefficients

INTERCEPT 0

LEVEL CONTROL L3
TRT1 L3
TRT2 L4
TRT3 L2-L3-L4

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
14. ANALYSIS OF EGGS NOT CRACKED/EGGS LAID

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Dependent Variable: RESPONSE
Weight: EL

Source DF Sum of Squares Mean Square F Value Pr > F

Model 3 4218.8174 1406.2725 0.86 0.4671

Error 57 93191.0268 1634.9303

Corrected Total 60 97409.8441

R-Square 0.043310 C.V. Root MSE RESPONSE Mean

0.043310 48.73723 40.434 82.96382

Source DF Type I SS Mean Square F Value Pr > F
LEVEL 3 4218.8174 1406.2725 0.86 0.4671

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
14. ANALYSIS OF EGGS NOT CRACKED/EGGS LAID

15:53 Thursday, July 27, 1995

General Linear Models Procedure
Least Squares Means

LEVEL	RESPONSE	Pr > T	HO: L3=MEAN(1)-L3=MEAN(3)
	L3=MEAN 1/3	1	2
CONTROL	84.6733196	1	0.2019 0.5052 0.1634
TRT1	82.0626918	2	0.2019 0.5052 0.1634
TRT2	83.1262747	3	0.5052 0.6484 0.7748
TRT3	81.3906272	4	0.1634 0.7748 0.5052

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
14. ANALYSIS OF EGGS NOT CRACKED/EGGS LAID

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Tukey's Studentized Range (MSD) Test for variable: RESPONSE

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 57 MSB= 1634.93

Critical Value of Studentized Range= 3.743

Comparisons significant at the 0.05 level are indicated by '***'.

LEVEL	Comparison	Simultaneous		Simultaneous
		Lower Confidence Limit	Difference Between Means	
CONTROL - TRT3		-38.409	1.847	41.503
CONTROL - TRT1		-35.222	2.611	40.444
CONTROL - TRT2		-34.550	3.283	41.116
TRT2 - CONTROL		-41.503	-1.847	38.409
TRT2 - TRT1		-38.893	1.064	41.020
TRT2 - TRT3		-38.221	1.736	41.692
TRT1 - CONTROL		-40.444	-2.611	35.222
TRT1 - TRT2		-41.020	-1.064	38.893
TRT1 - TRT3		-37.161	0.672	38.505
TRT3 - CONTROL		-41.116	-3.283	34.550
TRT3 - TRT2		-41.692	-1.736	38.221
TRT3 - TRT1		-38.505	-0.672	37.161

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
14. ANALYSIS OF EGGS NOT CRACKED/EGGS LAID

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Dunnnett's One-tailed T tests for variable: RESPONSE

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 57 MSB= 1634.93
Critical Value of Dunnnett's T= 2.111

Comparisons significant at the 0.05 level are indicated by '***'.

LEVEL	Comparison	Simultaneous		Simultaneous	
		Lower Confidence Limit	Difference Between Means	Upper Confidence Limit	
TRT2	- CONTROL	-33.412	-1.547	30.318	
TRT1	- CONTROL	-32.783	-2.611	27.561	
TRT3	- CONTROL	-33.455	-3.283	26.689	

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

15. ANALYSIS OF NORMAL HATCHLINGS/EGGS SET

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Class Level Information

Class Levels Values

LEVEL 4 CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 60 observations can be used in this analysis.

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

15. ANALYSIS OF NORMAL HATCHLINGS/EGGS SET

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Type I Estimable Functions for: LEVEL

Coefficients

INTERCEPT

0

LEVEL

CONTROL

L2

TRT1

L3

TRT2

L4

TRT3

-L2-L3-L4

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

15. ANALYSIS OF NORMAL HATCHLINGS/EGGS SET

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Dependent Variable: RESPONSE

Weight:

RS

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
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Model 3 48303.969 16101.323 1.41 0.2503

Error 56 640817.568 11443.171

Corrected Total 59 689121.537

R-Square 0.070095 C.V. 195.0519 Root MSE 106.97 RESPONSE Mean 54.84323

Source	DF	Type III Sum of Squares	Mean Square	F Value	Pr > F
LEVEL	3	48303.969	16101.323	1.41	0.2503

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

15. ANALYSIS OF NORMAL HATCHLINGS/EGGS SET

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Least Squares Means

LEVEL

RESPONSE

Pr > |T|/df0

LSMEAN(1)-LSMEAN(5)

1/5 1 2 3 4

CONTROL

56.3512214 1

0.6786

0.8385

0.1080

0.0516

0.2028

TRT1

58.6743825 2

0.6786

0.8385

0.1080

0.0516

0.2028

TRT2

55.0434415 3

0.8385

0.5759

0.0516

0.2028

TRT3

45.7702906 4

0.1050

0.0516

0.2028

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

15. ANALYSIS OF NORMAL HATCHLINGS/EGGS SET

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: RESPONSE

NOTE: This test controls the type I experimentwise error rate.

Alpha=0.05 Confidence=0.95 df= 56 MSB= 11443.17

Critical Value of Studentized Range= 3.745

Comparisons significant at the 0.05 level are indicated by '***'.

LEVEL	Comparison	Simultaneous		Simultaneous	
		Lower Confidence Limit	Difference Between Means	Upper Confidence Limit	

TRT1 - CONTROL

-97.82

2.32

102.47

102.47

TRT1 - TRT2

-104.54

3.63

111.80

113.05

TRT1 - TRT3

-87.24

12.90

113.05

113.05

CONTROL - TRT1

-102.47

-2.32

97.82

97.82

CONTROL - TRT2

-106.86

1.31

109.48

110.73

CONTROL - TRT3

-89.56

10.58

110.73

110.73

TRT2 - TRT1

-111.80

-3.63

104.54

104.54

TRT2 - TRT2

-109.48

-1.31

106.86

106.86

TRT2 - TRT3

-96.90

9.27

117.44

117.44

TRT3 - TRT1

-113.05

-12.90

87.24

87.24

TRT3 - CONTROL

-110.73

-10.58

89.56

89.56

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
15. ANALYSIS OF NORMAL HATCHLINGS/EGGS SET

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Dunnnett's One-tailed T tests for variable: RESPONSE

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha=0.05 Confidence=0.95 df= 56 MSB= 11443.17
Critical Value of Dunnnett's T= 2.113

Comparisons significant at the 0.05 level are indicated by '***'.

LEVEL	Simultaneous		Simultaneous	
	Lower Confidence Limit	Difference Between Means	Upper Confidence Limit	
TRT1 - CONTROL	-77.60	2.32	82.24	
TRT2 - CONTROL	-87.63	-1.31	85.02	
TRT3 - CONTROL	-90.50	-10.58	69.34	

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
16. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/EGGS SET

15:53 Thursday, July 27, 1995

General Linear Models Procedure
Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 60 observations can be used in this analysis.

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
16. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/EGGS SET

15:53 Thursday, July 27, 1995

General Linear Models Procedure
Type I Estimable Functions for: LEVEL

Effect	Coefficient
INTERCEPT	0
LEVEL	
CONTROL	L2
TRT1	L3
TRT2	L4
TRT3	-L2-L3-L4

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
16. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/EGGS SET

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Dependent Variable: RESPONSE
Weight: 1

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	47668.444	15889.481	1.43	0.2438
Error	56	622464.929	11115.445		
Corrected Total	59	670133.373			

R-Square	C.V.	Root MSE	RESPONSE Mean
0.071133	193.1536	105.43	54.58336

Source	DF	Type III Sum of Squares	Mean Square	F Value	Pr > F
LEVEL	3	47668.444	15889.481	1.43	0.2438

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
16. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/EGGS SET

15:53 Thursday, July 27, 1995

General Linear Models Procedure
Least Squares Means

LEVEL	RESPONSE	Pr > T = 0: LSMEAN(I) - LSMEAN(J)
	LSMEAN	1/3 1 2 3 4
CONTROL	55.8788356	1 0.6339 0.8766 0.1102
TRT1	58.5106758	2 0.6339 0.5722 0.0464
TRT2	54.8973922	3 0.8766 0.5722 0.1955
TRT3	45.6046214	4 0.1102 0.0464 0.1955

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
16. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/EGGS SET

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: RESPONSE

NOTE: This test controls the type I experimentwise error rate.

Alpha=0.05 Confidence=0.95 df= 56 MSB= 11115.45
Critical Value of Studentized Range= 3.745

Comparisons significant at the 0.05 level are indicated by '***'.

Simultaneous Simultaneous

LEVEL	Comparison	Lower Confidence Limit	Difference Between Means	Upper Confidence Limit
TRT1	- CONTROL	-96.07	2.63	101.33
TRT1	- TRT2	-103.00	3.61	110.23
TRT1	- TRT3	-85.79	13.91	111.61
CONTROL	- TRT1	-101.33	-2.63	96.07
CONTROL	- TRT2	-105.63	0.98	107.59
CONTROL	- TRT3	-88.43	10.27	108.97
TRT2	- TRT1	-110.23	-3.61	103.00
TRT2	- CONTROL	-107.59	-0.98	105.63
TRT2	- TRT3	-97.32	9.29	115.90
TRT3	- TRT1	-111.61	-12.91	85.79
TRT3	- CONTROL	-108.97	-10.27	88.43
TRT3	- TRT2	-115.90	-9.29	97.32

EFFECTS OF PIRATE ON THE REPRODUCTION OF NALLARDS
16. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/EGGS SET

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Dunnnett's One-tailed T tests for variable: RESPONSE

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha=0.05 Confidence=0.95 df=56 MSR=11115.45
Critical Value of Dunnnett's T=2.113

Comparisons significant at the 0.05 level are indicated by '***'.

LEVEL	Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT1	- CONTROL	-76.14	2.63	81.40
TRT2	- CONTROL	-86.06	-0.98	84.10
TRT3	- CONTROL	-89.04	-10.27	68.49

EFFECTS OF PIRATE ON THE REPRODUCTION OF NALLARDS

17. ANALYSIS OF EGGSHELL THICKNESS

15:53 Thursday, July 27, 1995

General Linear Models Procedure
Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3
Number of observations in data set = 64		

NOTE: Due to missing values, only 52 observations can be used in this analysis.

EFFECTS OF PIRATE ON THE REPRODUCTION OF NALLARDS
17. ANALYSIS OF EGGSHELL THICKNESS

15:53 Thursday, July 27, 1995

General Linear Models Procedure
Type I Estimable Functions for: LEVEL
Coefficients

INTERCEPT	0
LEVEL	
CONTROL	L2
TRT1	L3
TRT2	L4
TRT3	-L2-L3-L4

EFFECTS OF PIRATE ON THE REPRODUCTION OF NALLARDS

17. ANALYSIS OF EGGSHELL THICKNESS

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Dependent Variable: THICK

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	0.0005752	0.0001918	0.27	0.8464
Error	48	0.0340328	0.0007090		
Corrected Total	51	0.0346081			

R-Square	0.016623	C.V.	6.900684	Root MSR	0.0266	THICK Mean	.3858654
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Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	0.0005753	0.0001918	0.27	0.8464

EFFECTS OF PIRATE ON THE REPRODUCTION OF NALLARDS

17. ANALYSIS OF EGGSHELL THICKNESS

15:53 Thursday, July 27, 1995

General Linear Models Procedure
Least Squares Means

LEVEL	THICK	Pr > T Ho: LSMEAN(1)=LSMEAN(3)
	LSMEAN 1/3	1 2 3 4
CONTROL	0.38978571	1 0.8209 0.5619 0.4169
TRT1	0.38753333	2 0.8209 0.7094 0.5394
TRT2	0.38366667	3 0.5619 0.7094 0.8114
TRT3	0.38100000	4 0.4169 0.5394 0.8114

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

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General Linear Models Procedure
Least Squares Means

LEVEL
HATWT Pr > |T| H0: LSMEAN(1)=LSMEAN(3)
LSMEAN 1/3 1 2 3 4

CONTROL 36.4866667 1 0.1142 0.9150 0.8553
TRT1 38.2687500 2 0.1142 0.1111 0.1616
TRT2 36.3583333 3 0.9150 0.1111 0.7805
TRT3 36.6933333 4 0.8553 0.1616 0.7805

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
18. ANALYSIS OF HATCHLING WEIGHT

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: HATWT

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 54 MSB= 9.539819
Critical Value of Studentized Range= 3.749

Comparisons significant at the 0.05 level are indicated by '***'.

LEVEL Comparison	Simultaneous		Simultaneous	
	Lower Confidence Limit	Difference Between Means	Upper Confidence Limit	
TRT1 - TRT3	-1.367	1.575	4.518	
TRT1 - CONTROL	-1.161	1.782	4.725	
TRT1 - TRT2	-1.216	1.910	5.037	
TRT3 - TRT1	-4.518	-1.575	1.367	
TRT3 - CONTROL	-2.783	0.207	3.196	
TRT3 - TRT2	-2.836	0.335	3.506	
CONTROL - TRT1	-4.725	-1.782	1.161	
CONTROL - TRT3	-3.196	-0.207	2.783	
CONTROL - TRT2	-3.043	0.138	3.299	
TRT2 - TRT1	-5.037	-1.910	1.216	
TRT2 - TRT3	-3.506	-0.335	2.836	
TRT2 - CONTROL	-3.299	-0.138	3.043	

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

18. ANALYSIS OF HATCHLING WEIGHT

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Dunnnett's One-tailed T tests for variable: HATWT

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 54 MSB= 9.539819

Critical Value of Dunnnett's T= 2.112

Comparisons significant at the 0.05 level are indicated by '***'.

LEVEL Comparison	Simultaneous		Simultaneous	
	Lower Confidence Limit	Difference Between Means	Upper Confidence Limit	
TRT1 - CONTROL	-0.563	1.782	4.127	
TRT3 - CONTROL	-2.176	0.207	2.589	
TRT2 - CONTROL	-2.655	-0.128	2.398	

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

19. ANALYSIS OF 14-DAY SURVIVOR WEIGHT

15:53 Thursday, July 27, 1995

General Linear Models Procedure
Class Level Information

Class Levels Values
LEVEL 4 CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 58 observations can be used in this analysis.

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

19. ANALYSIS OF 14-DAY SURVIVOR WEIGHT

15:53 Thursday, July 27, 1995

General Linear Models Procedure
Type I Rectifiable Functions for LEVEL

Coefficients	
INTERCEPT	0
LEVEL	
CONTROL L2	
TRT1 L3	
TRT2 L4	
TRT3 -L2-L3-L4	

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

19. ANALYSIS OF 14-DAY SURVIVOR WEIGHT

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Dependent Variable: SURVWT

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	1487.9650	495.9883	1.08	0.3639
Error	54	24716.0759	457.7051		
Corrected Total	57	26204.0409			

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Source	DF	Type I SS	Mean Square	F Value	Pr > F
R-Square					
C.V.					
Root MSE					
SURVWT Mean					
LEVEL	3	1487.9650	495.983	1.08	0.3639

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

19. ANALYSIS OF 14-DAY SURVIVOR WEIGHT

15:53 Thursday, July 27, 1995

General Linear Model Procedure
Least Squares Means

LEVEL	SURVWT	Pr > T HO: LSMEAN(1)=LSMEAN(J)
	LSMEAN	1/J
CONTROL	310.246667	1
TRT1	317.293750	2
TRT2	316.241667	3
TRT3	304.800000	4

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

19. ANALYSIS OF 14-DAY SURVIVOR WEIGHT

15:53 Thursday, July 27, 1995

General Linear Model Procedure

Tukey's Studentized Range (HSD) Test for variable: SURVWT

NOTE: This test controls the type I experimentwise error rate.

Alpha=0.05 Confidence=0.95 df= 54 MSB= 457.7051

Critical Value of Studentized Range=3.749

Comparisons significant at the 0.05 level are indicated by ****.

LEVEL	Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT1	- TRT2	-20.606	1.052	22.710
TRT1	- CONTROL	-13.335	7.047	27.430
TRT1	- TRT3	-7.889	12.494	32.876
TRT2	- TRT1	-22.710	-1.052	20.606
TRT2	- CONTROL	-15.970	5.995	27.960
TRT2	- TRT3	-10.523	11.442	33.407
CONTROL	- TRT1	-27.430	-7.047	13.335
CONTROL	- TRT2	-15.960	-5.995	15.970
CONTROL	- TRT3	-15.262	5.447	26.155
TRT3	- TRT1	-32.876	-12.494	7.889
TRT3	- TRT2	-33.407	-11.442	10.523

LEVEL	Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT3	- CONTROL	-26.155	5.447	15.262

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

19. ANALYSIS OF 14-DAY SURVIVOR WEIGHT

15:53 Thursday, July 27, 1995

General Linear Model Procedure

Dunnnett's One-tailed T tests for variable: SURVWT

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha=0.05 Confidence=0.95 df= 54 MSB= 457.7051

Critical Value of Dunnnett's T= 2.112

Comparisons significant at the 0.05 level are indicated by ****.

LEVEL	Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT1	- CONTROL	-9.194	7.047	23.289
TRT2	- CONTROL	-11.507	5.995	23.497
TRT3	- CONTROL	-21.948	5.447	11.055

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

20. ANALYSIS OF FOOD CONSUMPTION

15:53 Thursday, July 27, 1995

General Linear Model Procedure
Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

20. ANALYSIS OF FOOD CONSUMPTION

15:53 Thursday, July 27, 1995

General Linear Model Procedure
Type I Estimable Functions for LEVEL

Effect	Coefficients
INTERCEPT	0
LEVEL	
CONTROL	L2
TRT1	L3
TRT2	L4
TRT3	-L2-L3-L4

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

20. ANALYSIS OF FOOD CONSUMPTION

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Dependent Variable: FOOD

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	120836615	40278872	3.04	0.0358
Error	60	794986400	13249773		
Corrected Total	63	915823014			
R-Square		C.V.	Root MSE	FOOD Mean	
	0.131943	7.818214	3640.0	46556.25	

Source	DF	Type III Sum of Squares	F Value	Pr > F
LEVEL	3	120836615	40278872	3.04 0.0358

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
20. ANALYSIS OF FOOD CONSUMPTION

15:53 Thursday, July 27, 1995

General Linear Models Procedure
Least Squares Means

LEVEL	FOOD	Pr > T	H0: LSMEAN(1) = LSMEAN(3)
	LSMEAN	1/3	1 2 3 .4
CONTROL	44878.1250	1	0.3356 0.2021 0.0044
TRT1	46127.2500	2	0.3356 0.7508 0.0510
TRT2	46537.8750	3	0.2021 0.7508 0.0997
TRT3	48689.7500	4	0.0044 0.0510 0.0997

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

20. ANALYSIS OF FOOD CONSUMPTION

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: FOOD

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 60 MSR= 13249773
Critical Value of Studentized Range= 3.737
Minimum Significant Difference= 3400.8

Comparisons significant at the 0.05 level are indicated by '***'.

LEVEL	Simultaneous	Lower	Difference	Simultaneous
Comparison	Confidence	Limit	Between	Upper
	Limit	Means	Limit	Limit

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TRT3	-1249	2152	5553
TRT3 - TRT1	-838	2563	5963
TRT3 - CONTROL	411	3812	7212 ***
TRT2	-5553	-2152	1249
TRT2 - TRT1	-2990	411	3812
TRT2 - CONTROL	-1741	1660	5061
TRT1	-5963	-2563	838
TRT1 - TRT2	-3811	-411	2990
TRT1 - CONTROL	-2152	1249	4650
CONTROL - TRT3	-7212	-3812	-411 ***
CONTROL - TRT2	-5061	-1660	1741
CONTROL - TRT1	-4650	-1249	2152

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
20. ANALYSIS OF FOOD CONSUMPTION

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Dunnnett's One-tailed T tests for variable: FOOD

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 60 MSR= 13249773
Critical Value of Dunnnett's T= 2.104
Minimum Significant Difference= 2707.6

Comparisons significant at the 0.05 level are indicated by '***'.

LEVEL Comparison	Simultaneous		Difference (Between Means	Simultaneous	
	Lower Confidence Limit	Upper Confidence Limit		Lower Confidence Limit	Upper Confidence Limit
TRT3 - CONTROL	1104		3812	6519	
TRT2 - CONTROL	-1048		1660	4367	
TRT1 - CONTROL	-1458		1249	3957	

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS

21. COVARIATE ANALYSIS OF MALE BODY WEIGHT

15:53 Thursday, July 27, 1995

General Linear Models Procedure
Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
21. COVARIATE ANALYSIS OF MALE BODY WEIGHT

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Dependent Variable: POSTM

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	423655.51	105913.88	5.04	0.0015
Error	59	1240423.60	21024.13		
Corrected Total	63	1664079.11			

R-Square 0.254589 C.V. 12.40533 Root MSE 145.00 POSTM Mean 1168.828

Source	DF	Type III SS	Mean Square	F Value	Pr > F
LEVEL	3	290931.80	96977.27	4.61	0.0058
PREM	1	132723.72	132723.72	6.31	0.0147
Source	DF	Type III SS	Mean Square	F Value	Pr > F
LEVEL	3	218651.13	106217.04	5.05	0.0035
PREM	1	132723.72	132723.72	6.31	0.0147

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
21. COVARIATE ANALYSIS OF MALE BODY WEIGHT

15:53 Thursday, July 27, 1995

General Linear Models Procedure
Least Squares Means

LEVEL	POSTM	Std Err	Pr > T	LSMEAN
	LSMEAN	LSMEAN	HO:LSMEAN=0	Number
CONTROL	1255.48750	36.29322	0.0001	1
TRT1	1208.46939	36.25158	0.0001	2
TRT2	1144.18057	36.25012	0.0001	3
TRT3	1067.17504	36.30140	0.0001	4

Pr > |T| HO: LSMEAN(1)=LSMEAN(3)

1/3	1	2	3	4
1	0.3630	0.0341	0.0005	
2	0.0341	0.2148	0.0078	
3	0.0005	0.0078	0.1386	
4				

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
21. COVARIATE ANALYSIS OF MALE BODY WEIGHT

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: POSTM

NOTE: This test controls the type I experimentwise error rate.

Alpha=0.05 Confidence=0.95 df= 59 MSE= 21024.13
Critical Value of Studentized Range= 3.729
Minimum Significant Difference= 135.53

Comparisons significant at the 0.05 level are indicated by '***'

LEVEL	Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
CONTROL	- TRT1	-91.97	43.56	179.09
CONTROL	- TRT2	-29.34	106.19	241.72
CONTROL	- TRT3	43.41	178.94	316.47
TRT1	- CONTROL	-179.09	-43.56	91.97
TRT1	- TRT2	-72.91	62.63	198.16
TRT1	- TRT3	-0.16	135.37	270.91
TRT2	- CONTROL	-241.72	-106.19	29.34
TRT2	- TRT1	-198.16	-62.63	72.91
TRT2	- TRT3	-62.78	72.75	208.28
TRT3	- CONTROL	-314.47	-178.94	-43.41
TRT3	- TRT1	-270.91	-135.37	0.16
TRT3	- TRT2	-208.28	-72.75	62.78

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
21. COVARIATE ANALYSIS OF MALE BODY WEIGHT

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Dunnnett's One-tailed T tests for variable: POSTM

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha=0.05 Confidence=0.95 df= 59 MSE= 21024.13
Critical Value of Dunnnett's T= 2.105
Minimum Significant Difference= 107.89

Comparisons significant at the 0.05 level are indicated by '***'

LEVEL	Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT1	- CONTROL	-151.46	-43.56	64.33
TRT2	- CONTROL	-214.08	-106.19	1.71
TRT3	- CONTROL	-286.83	-178.94	-71.04

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS
22. COVARIATE ANALYSIS OF FEMALE BODY WEIGHT

15:53 Thursday, July 27, 1995

General Linear Models Procedure
Class Level Information

Class Levels Values

LEVEL 4 CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 61 observations can be used in this analysis.

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS 22. COVARIATE ANALYSIS OF FEMALE BODY WEIGHT

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Dependent Variable: POSTP

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	682260.74	170565.18	9.26	0.0001
Error	56	1032044.90	18429.17		
Corrected Total	60	1714305.64			

R-Square 0.397981 C.V. 12.75655 Root MSE 135.75 POSTP Mean 1064.197

Source	DF	Type III SS	Mean Square	F Value	Pr > F
LEVEL	3	394378.08	131459.36	7.13	0.0004
TRT1	1	287882.66	287882.66	15.62	0.0002
Source	DF	Type III SS	Mean Square	F Value	Pr > F
LEVEL	3	342286.97	114095.66	6.19	0.0010
TRT1	1	287882.66	287882.66	15.62	0.0002

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS 22. COVARIATE ANALYSIS OF FEMALE BODY WEIGHT

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Least Squares Means

LEVEL	POSTP	LSMEAN	Std Err	Pr > T	LSMEAN	Number
CONTROL		1158.94749	33.94835	0.0001	1	1
TRT1		1107.26215	34.20647	0.0001	2	2
TRT2		998.17319	36.65197	0.0001	3	3
TRT3		978.83607	35.07076	0.0001	4	4

Pr > |T| HO: LSMEAN(1)=LSMEAN(3)
1/3 1 0.2886 0.0021 0.0005
2 0.2886 0.0353 0.0111
3 0.0021 0.0353 0.7052
4 0.0005 0.0111 0.7052

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS 22. COVARIATE ANALYSIS OF FEMALE BODY WEIGHT

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: POSTP

NOTE: This test controls the type I experimentwise error rate.

Alpha=0.05 Confidence=0.95 df=56 MSB=18429.37
Critical Value of Studentized Range=3.745

Comparisons significant at the 0.05 level are indicated by '***'.

LEVEL	Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
CONTROL - TRT1		-95.46	31.62	158.71
CONTROL - TRT2		43.16	172.35	301.54
CONTROL - TRT3		46.56	178.11	309.66
TRT1 - TRT2		-158.71	-31.62	95.46
TRT1 - TRT3		11.53	140.73	269.92
TRT2 - TRT3		14.93	146.48	278.03
CONTROL - TRT1		-301.54	-172.35	-43.16
CONTROL - TRT2		-269.92	-140.73	-11.53
CONTROL - TRT3		-127.82	5.76	139.34
TRT1 - TRT2		-309.66	-178.11	-46.56
TRT1 - TRT3		-278.03	-146.48	-14.93
TRT2 - TRT3		-139.34	-5.76	127.82

EFFECTS OF PIRATE ON THE REPRODUCTION OF MALLARDS 22. COVARIATE ANALYSIS OF FEMALE BODY WEIGHT

15:53 Thursday, July 27, 1995

General Linear Models Procedure

Dunnnett's One-tailed T tests for variable: POSTP

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha=0.05 Confidence=0.95 df=56 MSB=18429.37
Critical Value of Dunnnett's T=2.111

Comparisons significant at the 0.05 level are indicated by '***'.

LEVEL	Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT1 - CONTROL		-132.95	-31.62	69.70
TRT2 - CONTROL		-275.35	-172.35	-69.35

