

US EPA ARCHIVE DOCUMENT

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

1. **CHEMICAL:** Azoxystrobin PC Code No.: 129081  
2. **TEST MATERIAL:** ICIA55404 Purity: 96.2%  
3. **CITATION:**

Authors: Cameron, D.M., A.J. Johnson, M.H.  
Rodgers, G.F. Healey, A. Anderson, and  
I.S. Dawe

Title: ICIA55404: Effects on Reproduction in  
Bobwhite Quail After Dietary  
Administration

Study Completion Date: June 1, 1994

Laboratory: Huntingdon Research Center Ltd.,  
Huntingdon, Cambridgeshire, UK


Sponsor: Zeneca Ag Products, Wilmington, DE

Laboratory Report ID: ISN 314/942363

MRID No.: 436781-12

4. **REVIEWED BY:**

William Erickson  
Biologist  
EEB/EFED/EPA

Signature: 

Date: 4/01/96

5. **APPROVED BY:**

Harry Craven  
Section Head 4  
EEB/EFED/EPA

Signature: 

Date: 6/21/96

6. **STUDY PARAMETERS:**

**Scientific Name of Test Organism:** *Colinus virginianus*

**Age of Test Organisms at Test Initiation:** 11 months

**Definitive Study Duration:** 22 weeks

7. **CONCLUSIONS:** This study is not scientifically sound and does not meet the guideline requirements for an avian reproduction study using bobwhite quail.

MRID No. 436781-12

**DATA EVALUATION RECORD**  
**§ 71-4 -- AVIAN REPRODUCTION TEST**

1. **CHEMICAL:** Sulfentrazone *Azoxy-stroli-* 128810  
**PC Code No.:** 129001
2. **TEST MATERIAL:** ICIA55404 **Purity:** 96.2%

3. **CITATION:**

**Authors:** Cameron, D.M., A.J. Johnson, M.H.  
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**MRID No.:** 436781-12

**DP Barcode:** ~~D217072, D217078~~

4. **REVIEWED BY:** Max Feken, M.S., Environmental Toxicologist,  
KBN Engineering and Applied Sciences, Inc.

**Signature:** 

**Date:** 1/22/96

**APPROVED BY:** Pim Kosalwat, Ph.D., Senior Scientist,  
KBN Engineering and Applied Sciences, Inc.

**Signature:** P. Kosalwat

**Date:** 1/22/96

5. **APPROVED BY:**

**Signature:**

**Date:**

6. **STUDY PARAMETERS**

**Scientific Name of Test Organism:** *Colinus virginianus*

**Age of Test Organisms at Test Initiation:** 11 months

**Definitive Study Duration:** 22 weeks

7. **CONCLUSIONS:** This study is not scientifically sound and does not meet the guideline requirements for an avian reproduction study using bobwhite quail. When compared to the control, there were no statistically significant effects on any of the parameters measured at any concentrations tested (500, 1200, and 3000 ppm).

**Results Synopsis**

**Most sensitive endpoints:** None were affected.

**NOEC:** 3000 ppm

**LOEC:** Not determined.

**8. ADEQUACY OF THE STUDY:**

- A. Classification:** Invalid.
- B. Rationale:** Seven of 20 control pens were eliminated due to mortality of the birds. In addition, no eggs were produced in 2 of the 13 remaining pens. This high mortality and infertility of some control birds cast doubt on the acceptability of the control used in this test. The toxic effects of the test chemical could not be evaluated due to the questionable control group.
- C. Repairability:** No.

**9. GUIDELINE DEVIATIONS:**

- 1. The birds in this study were approximately 11 months old; although, typically, the first breeding season begins between 22 to 25 weeks of age.
- 2. Neither the highest test concentration showed any significant effect nor the maximum field residue level was reported.
- 3. The humidity in the egg storage unit and egg hatcher was not reported.
- 4. Body weights were recorded biweekly up to week 6, but not to week 8 as recommended.

**10. SUBMISSION PURPOSE:**

**11. MATERIALS AND METHODS:**

**A. Test Organisms**

Guideline Criteria	Reported Information
<p><b>Species</b> A wild waterfowl species, preferably the mallard (<i>Anas platyrhynchos</i>), or an upland game species, preferably the northern bobwhite (<i>Colinus virginianus</i>)</p>	<p>Northern bobwhite (<i>Colinus virginianus</i>)</p>

Guideline Criteria	Reported Information
<u>Age at beginning of test</u> Birds should be approaching their first breeding season.	11 months old; birds were approaching their first breeding season.
<u>Supplier</u> All birds should be from the same source.	Obtained from Mr. B. Potter, Huntingdon, Cambridgeshire, UK
Were birds pen-reared?	Yes.
Were birds phenotypically indistinguishable from wild birds?	Yes.
<u>Health observation period</u> 2 to 6 weeks.	2 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.
Were pens constructed of a nonbinding material such as galvanized or stainless steel?	Yes.
Was adequate ventilation provided?	Yes.
<u>Temperature</u> Approx. 21°C (70°F)	Mean: maximum 21°C minimum 19°C
<u>Relative humidity</u> Approx. 55%	Mean: 53%

Guideline Criteria	Reported Information
<p><b><u>Lighting</u></b>  <b>First 8 weeks:</b> 7 h per day.  <b>Thereafter:</b> 16-17 h per day.            At least 6 footcandles at bird level.</p>	<p>First 4 weeks: 7 h per day.            Weeks 5-11: 16 h per day.            Thereafter: 17 h per day.            Illumination: 5-11 foot-candles</p>
<p><b><u>Diet</u></b>            A commercial breeder feed (or its equivalent) that is appropriate for the test species.</p>	<p>Adults received avian layer diet manufactured by Special Diets Services, Witham, Essex, UK             Chicks were fed Standard HRC chick diet supplied by Parker Brothers Ltd, Mildenhall Suffolk, UK</p>
<p><b><u>Preparation of test diet</u></b>            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.</p>	<p>The test material was mixed with basal diet into a premix that was used for weekly preparation of the final diet.</p>
<p><b>Was the premix stored under conditions which maintain stability?</b></p>	<p>Not reported.</p>
<p><b>Was the diet analyzed to verify homogeneity and stability of the test substance?</b></p>	<p>Yes.</p>
<p><b><u>Replenishment of feed</u></b></p>	<p>Adult diets were prepared weekly. Additional diets were prepared when necessary.             Feed and water were provided <i>ad libitum</i> for the adults and offspring.</p>

## C. Test Design

Guideline Criteria	Reported Information
<p><b><u>Nominal concentrations</u></b> 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.</p>	<p>Nominal concentrations: Control, 500, 1200, 3000 ppm.  Max. residue level: Not reported.</p>
<p><b><u>Control</u></b> Vehicle control.</p>	<p>Negative control.</p>
<p><b><u>Vehicle</u></b> Corn oil or other appropriate vehicle.</p>	<p>None was used.</p>
<p><b><u>Vehicle amount (% of diet by weight)</u></b> Not more than 2%.</p>	<p>N/A</p>
<p><b><u>Number of birds per pen</u></b> 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.</p>	<p>1 male and 1 female per pen.</p>
<p><b><u>Number of pens per group</u></b> 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.</p>	<p>20 pens per group.</p>
<p><b><u>Pre-laying exposure duration</u></b> At least 10 weeks prior to the onset of egg-laying.</p>	<p>10 weeks.</p>
<p><b><u>Exposure duration with egg-laying</u></b> At least 10 weeks.</p>	<p>12 weeks.</p>

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
<b>Were eggs collected daily?</b>	Yes.
<u>Egg storage temperature</u> Approximately 16°C (61°F)	16°C
<u>Egg storage humidity</u> Approximately 65%	Not reported.
<b>Were eggs set weekly?</b>	Yes.
<b>Were eggs candled for cracks prior to being set for incubation on Day 0?</b>	Yes.
<u>Candling for fertility</u> Quail: approx. Day 11 Ducks: approx. Day 14	Eggs were candled on days 11 and 18.
<u>Transfer of eggs to hatcher</u> Bobwhite: Day 21 Mallard: Day 23	Eggs were transferred on Day 22.
<u>Hatching temperature</u> 39°C (102°F) is recommended	37.5°C
<u>Hatching humidity</u> 70% is recommended	Not reported.
<u>Day after egg set that chicks were removed and counted</u> Bobwhite: Day 24 Mallard: Day 27	Chicks that had hatched were removed and counted on Day 24. All remaining hatchlings and unhatched eggs were removed on Day 25.



**E. Eggshell Thickness Measurement**

Guideline Criteria	Reported Information
<u>Collection Schedule</u> At least once every two weeks (Week 1, 3, 5, 7 and 9).	All eggs laid on the first day(s) of Weeks 11, 13, 15, 17, 19 and 21 in each replicate were removed for eggshell thickness measurement.
<b>Were shells opened, washed, and air dry for at least 48 hours before measuring?</b>	Yes; shells air dried for at least 48 hours.
<u>Measurement</u> 3-4 measurements per eggs to the nearest 0.01 mm.	4 measurements to the nearest 0.01 mm.

**12. REPORTED RESULTS**

Guideline Criteria	Reported Information
<b>Quality assurance and GLP compliance statements were included in the report?</b>	Yes.
<b>Did diet analysis verify the concentrations of test material?</b>	Yes.
<b>Did diet analysis show that the test substance was stable and homogeneous?</b>	Yes.
<b>Were body weights of adults reported for test initiation and biweekly up to week 8 or the onset of egg laying?</b>	No, body weights were reported biweekly up to week 6 and on the final week.
<b>Was average food consumption of adults reported at least biweekly?</b>	Yes.

Guideline Criteria	Reported Information
<p><b>Reproductive Endpoints</b> The following endpoints should be reported:</p> <ul style="list-style-type: none"> <li>• Eggs laid</li> <li>• Eggs cracked</li> <li>• Eggs set</li> <li>• Viable embryos</li> <li>• Live 3-week embryos</li> <li>• Normal hatchlings</li> <li>• 14-day-old survivors</li> <li>• Weights of 14-day-old survivors</li> <li>• Egg shell thickness</li> <li>• Total food consumption</li> <li>• Initial and final body weights, by sex</li> </ul>	All endpoints listed at left plus hatchling weight.
Were data reported by pen for all endpoints?	Yes.

**Significant Results:** There were no reductions in reproduction parameters, food consumption, or body weights at any test concentrations tested (i.e., 500, 1200, and 3000 ppm) when compared to the control.

### 13. VERIFIED STATISTICAL RESULTS

#### Means of Endpoints

Endpoint	Control	500 ppm	1200 ppm	3000 ppm
Eggs laid (EL)	38 (25)	40 (18)	48 (22)	36 (25)
Eggs cracked (EC)	2.1 (4.1)	3.2 (4.4)	2.3 (2.4)	1.4 (2.0)
Eggs set (ES)	32 (21)	33 (14)	42 (20)	31 (22)
Viable embryos (VE)	26 (18)	29 (12)	37 (22)	27 (21)
Live 3-wk embryos (LE)	25 (19)	28 (11)	35 (22)	26 (20)
Normal hatchlings (NH)	23 (18)	26 (11)	31 (22)	24 (20)
14-day-old survivors (HS)	20 (16)	22 (11)	29 (22)	22 (18)

Endpoint	Control	500 ppm	1200 ppm	3000 ppm
Egg shell thickness (THICK)	0.21 (0.01)	0.21 (0.01)	0.21 (0.01)	0.21 (0.01)
Hatchling weight (HATWT)	6.6 (0.3)	6.7 (0.5)	6.6 (0.6)	6.6 (0.5)
14-day-old survivor weight (SURVWT)	21.2 (7.3)	23.6 (1.6)	23.8 (2.9)	23.9 (1.7)
Mean food consumption (FOOD) g/bird/day	19.2 (2.1)	18.6 (1.5)	18.9 (1.9)	19.2 (2.1)
Final weight of males (POSTM)	192 (16)	188 (18)	191 (14)	197 (13)
Final weight of females (POSTF)	203 (23)	202 (18)	216 (15)	209 (30)

**Statistically Significant Endpoints:** There were no statistically significant effects on any of the parameters measured at the nominal concentrations tested (500, 1200 and 3000 ppm) when compared to the control.

Endpoint	Statistical Method	Levels at which Effect Was Observed
All parameters	Dunnett's	None

14. **REVIEWER'S COMMENTS:** This study is not scientifically sound and does not meet the guideline requirements for an avian reproduction study using bobwhite quail. Seven of 20 control pens were eliminated due to mortality of the birds. In addition, no eggs were produced in 2 of the 13 remaining pens. This high mortality and infertility of some control birds cast doubt on the acceptability of the control used in this test. The toxic effects of the test chemical could not be evaluated due to the questionable control group. This study is classified as invalid.



Variable Label	HS/ES (%)	HS/NH (%)	THICK	HATWT	SURVWT	FOOD	POSTM	POSTF	Mean	Std Dev	CV
ES/EL (%)	66.08	69.06		57.50					37.692	24.672	65.458
NH/EL (%)	88.13	85.89		85.92					2.077	4.092	197.017
(EL-EC)/EL (%)									31.769	20.661	65.033
VE/ES (%)	0.21	0.21		0.21					25.692	18.377	71.529
NH/ES (%)	6.64	6.65		6.60					24.923	18.513	74.282
HS/ES (%)									22.615	17.863	78.986
LE/VE (%)									19.846	15.826	79.745
NH/LE (%)									0.209	0.012	5.789
HS/NH (%)									6.840	0.344	5.178
THICK									21.236	7.325	34.492
HATWT									19.223	2.109	10.970
SURVWT									181.923	16.312	7.427
FOOD									191.615	17.512	8.513
POSTM									180.615	8.894	4.919
POSTF									203.077	23.250	11.449
ES/EL (%)									84.415	4.810	5.698
NH/EL (%)									25.045	5.831	38.894
(EL-EC)/EL (%)									95.575	5.831	6.094
VE/ES (%)									86.721	28.117	32.422
NH/ES (%)									66.083	29.598	39.125
HS/ES (%)									88.870	25.566	38.688
LE/VE (%)									89.149	29.791	33.522
NH/LE (%)									88.134	12.359	13.863
HS/NH (%)									88.134	9.700	11.006

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
14:50 Friday, December 22, 1995

LEVEL=CONTROL

Variable Label	N	Mean	Std Dev	CV
EL	13	37.692	24.672	65.458
EC	13	2.077	4.092	197.017
ES	13	31.769	20.661	65.033
VE	13	25.692	18.377	71.529
LE	13	24.923	18.513	74.282
NH	13	22.615	17.863	78.986
HS	13	19.846	15.826	79.745
THICK	11	0.209	0.012	5.789
HATWT	10	6.840	0.344	5.178
SURVWT	11	21.236	7.325	34.492
FOOD	13	19.223	2.109	10.970
POSTM	13	181.923	16.312	7.427
POSTF	13	191.615	17.512	8.513
ES/EL (%)	13	180.615	8.894	4.919
NH/EL (%)	13	203.077	23.250	11.449
(EL-EC)/EL (%)	11	84.415	4.810	5.698
VE/ES (%)	11	25.045	5.831	38.894
NH/ES (%)	11	95.575	5.831	6.094
HS/ES (%)	11	86.721	28.117	32.422
LE/VE (%)	11	66.083	29.598	39.125
NH/LE (%)	11	88.870	25.566	38.688
HS/NH (%)	10	89.149	29.791	33.522
ES/EL (%)	10	88.134	12.359	13.863
NH/EL (%)	10	88.134	9.700	11.006

LEVEL=TRT1

Variable Label	N	Mean	Std Dev	CV
EL	19	39.789	17.526	44.048
EC	19	3.158	4.425	140.140
ES	19	32.684	14.357	43.926
VE	19	29.105	11.695	40.181
LE	19	28.053	11.247	40.093
NH	19	25.526	10.849	41.754
HS	19	22.421	10.658	48.388
THICK	19	0.206	0.014	6.973
HATWT	19	6.647	0.504	7.578
SURVWT	19	23.584	1.578	6.690
FOOD	19	18.826	1.493	8.013
POSTM	19	184.000	12.279	6.673
POSTF	19	188.421	18.437	9.785
ES/EL (%)	19	183.053	12.869	7.030

Variable Label	ES/EL (%)	NH/EL (%)	(EL-EC)/EL (%)	VE/ES (%)	NH/ES (%)	HS/ES (%)	LE/VE (%)	NH/LE (%)	HS/NH (%)	Mean	Std Dev	CV
POSTF	19	202.474								48.167	21.853	45.370
ES/EL (%)	19	81.290								2.278	2.445	107.333
NH/EL (%)	19	64.814								41.667	20.413	48.992
(EL-EC)/EL (%)	19	92.222								37.389	22.435	60.003
VE/ES (%)	19	90.709								35.444	22.364	63.096
NH/ES (%)	19	79.345								31.444	21.691	68.982
HS/ES (%)	19	69.056								28.722	21.954	76.436
LE/VE (%)	19	96.511								0.011	0.011	5.191
NH/LE (%)	19	90.429								6.600	0.611	9.252
HS/NH (%)	19	85.890								23.780	2.864	12.045
THICK	17									18.878	1.896	10.043
HATWT	15									183.944	9.656	5.269
SURVWT	15									191.278	14.183	7.415
FOOD	18									188.611	6.545	3.470
POSTM	18									215.611	15.089	6.998
POSTF	18									82.720	15.488	18.724
ES/EL (%)	18									56.559	29.702	52.515
NH/EL (%)	18									92.520	11.968	12.936
(EL-EC)/EL (%)	18									84.564	27.700	32.796
VE/ES (%)	18									65.007	33.822	52.029
NH/ES (%)	18									57.499	33.777	58.744
HS/ES (%)	18									81.747	32.064	39.224
LE/VE (%)	18									81.620	24.444	29.948
NH/LE (%)	16									85.919	17.824	20.745
HS/NH (%)	15											

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
14:50 Friday, December 22, 1995

LEVEL=TRT2

Variable Label	N	Mean	Std Dev	CV
EL	18	48.167	21.853	45.370
EC	18	2.278	2.445	107.333
ES	18	41.667	20.413	48.992
VE	18	37.389	22.435	60.003
LE	18	35.444	22.364	63.096
NH	18	31.444	21.691	68.982
HS	18	28.722	21.954	76.436
THICK	17	0.212	0.011	5.191
HATWT	15	6.600	0.611	9.252
SURVWT	15	23.780	2.864	12.045
FOOD	18	18.878	1.896	10.043
POSTM	18	183.944	9.656	5.269
POSTF	18	191.278	14.183	7.415
ES/EL (%)	18	188.611	6.545	3.470
NH/EL (%)	18	215.611	15.089	6.998
(EL-EC)/EL (%)	18	82.720	15.488	18.724
VE/ES (%)	18	56.559	29.702	52.515
NH/ES (%)	18	92.520	11.968	12.936
HS/ES (%)	18	84.564	27.700	32.796
LE/VE (%)	18	65.007	33.822	52.029
NH/LE (%)	18	57.499	33.777	58.744
HS/NH (%)	18	81.747	32.064	39.224
ES/EL (%)	16	81.620	24.444	29.948
NH/EL (%)	16	81.620	24.444	29.948
(EL-EC)/EL (%)	15	85.919	17.824	20.745

LEVEL=TRT3

Variable Label	N	Mean	Std Dev	CV
EL	18	35.556	25.192	70.851
EC	18	1.444	2.007	138.913
ES	18	30.500	22.266	73.005
VE	18	27.389	20.632	75.328
LE	18	25.778	20.403	79.151
NH	18	24.333	19.991	82.156
HS	18	22.000	17.948	81.580
THICK	16	0.207	0.011	5.125
HATWT	16	6.641	0.500	7.530
SURVWT	17	23.888	1.655	6.929
FOOD	18	19.222	2.101	10.929
POSTM	18	191.278	11.575	6.051
POSTF	18	197.000	13.079	6.639
ES/EL (%)	18	191.644	15.382	8.035
NH/EL (%)	18	208.556	29.746	14.263
(EL-EC)/EL (%)	17	85.096	7.454	8.759
VE/ES (%)	17	66.917	21.859	32.665
NH/ES (%)	17	95.506	5.227	5.473
HS/ES (%)	17	88.191	19.568	21.961

NH ES 17 77.410 22.006 28.428  
 HS ES (X) 17 70.944 21.082 29.717  
 LE\_VE (X) 17 93.709 9.568 10.210  
 NH\_LE (X) 17 93.022 6.169 6.632  
 HS\_NH (X) 17 91.888 8.617 9.378

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL

1. ANALYSIS OF EGGS LAID  
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14:50 Friday, December 22, 1995

General Linear Models Procedure  
 Class Level Information

Class Levels Values  
 LEVEL 4 CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 80

NOTE: Due to missing values, only 68 observations can be used in this analysis.

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL

1. ANALYSIS OF EGGS LAID  
 \*\*\*\*\*

14:50 Friday, December 22, 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

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL

1. ANALYSIS OF EGGS LAID  
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14:50 Friday, December 22, 1995

General Linear Models Procedure

Dependent Variable: EL  
 Source DF Sum of Squares Mean Square F Value Pr > F  
 Model 3 1610.1137 536.7046 1.08 0.3631  
 Error 64 31740.8716 495.9511  
 Corrected Total 67 33350.9853  
 R-Square C.V. Root MSE EL Mean  
 0.048278 55.00753 22.270 40.485

Source DF Type I SS Mean Square F Value Pr > F  
 LEVEL 3 1610.1137 536.7046 1.08 0.3631

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL

1. ANALYSIS OF EGGS LAID  
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14:50 Friday, December 22, 1995

General Linear Models Procedure  
 Least Squares Means

LEVEL EL Pr > |T| H0: LSMEAN(i)=LSMEAN(j)  
 LSMEAN 1/j 1 2 3 4  
 CONTROL 37.6923077 1 0.7944 0.2009 0.7929  
 TRT1 39.7894737 2 0.7944 0.2570 0.5653  
 TRT2 48.1666667 3 0.2009 0.2570 0.0942  
 TRT3 35.5555556 4 0.7929 0.5653 0.0942

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

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL

1. ANALYSIS OF EGGS LAID  
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14:50 Friday, December 22, 1995

General Linear Models Procedure

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= 64 MSE= 495.9511  
 Critical Value of Studentized Range= 3.730

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
TRT2 - TRT1	-10.945	8.377	8.377	27.699	31.856
TRT2 - CONTROL	-10.907	10.474	10.474	31.856	32.193
TRT2 - TRT3	-6.970	12.611	12.611	10.945	23.242
TRT1 - TRT2	-27.699	-8.377	-8.377	10.945	23.556
TRT1 - CONTROL	-19.047	2.097	2.097	23.242	23.556
TRT1 - TRT3	-15.088	4.234	4.234	10.907	19.047
CONTROL - TRT2	-31.856	-10.474	-10.474	19.047	23.518
CONTROL - TRT1	-23.242	-2.097	-2.097	6.970	15.088
CONTROL - TRT3	-19.245	2.137	2.137	19.245	19.245
TRT3 - TRT2	-32.193	-12.611	-12.611	15.088	19.245
TRT3 - TRT1	-23.556	-4.234	-4.234	15.088	19.245
TRT3 - CONTROL	-23.518	-2.137	-2.137	15.088	19.245

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL

1. ANALYSIS OF EGGS LAID  
 \*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure

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

NOTE: This test controls the type I experimentwise error for

Alpha= 0.05 Confidence= 0.95 df= 64 MSE= 495.9511  
 Critical Value of Dunnett's T= 2.078

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	-6.370	10.474	27.319
TRT1 - CONTROL	-14.560	2.097	18.755
TRT3 - CONTROL	-18.981	-2.137	14.708

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 2. ANALYSIS OF EGGS CRACKED  
 \*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure  
 Class Level Information

Class Levels	Values
LEVEL 4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 80

NOTE: Due to missing values, only 68 observations can be used in this analysis.

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 2. ANALYSIS OF EGGS CRACKED  
 \*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure  
 Type I Estimable Functions for: LEVEL

Coefficients

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

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 2. ANALYSIS OF EGGS CRACKED  
 \*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	27.730346	9.243449	0.82	0.4889
Error	64	723.504948	11.304765		
Corrected Total	67	751.235294			

R-Square 0.036913  
 C.V. 148.4632  
 Root MSE 3.3623  
 EC Mean 2.2647

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	27.730346	9.243449	0.82	0.4889

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 2. ANALYSIS OF EGGS CRACKED  
 \*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure  
 Least Squares Means

LEVEL	LSMEAN	EC Pr >  T	HO: LSMEAN(I)=LSMEAN(J)
CONTROL	2.07692308	1	0.3751 0.8701 0.6071
TRT1	3.15789474	2	0.3751 0.4291 0.1262
TRT2	2.27777778	3	0.8701 0.4291 0.4599
TRT3	1.44444444	4	0.6071 0.1262 0.4599

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

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 2. ANALYSIS OF EGGS CRACKED  
 \*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure

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

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

Alpha= 0.05 Confidence= 0.95 df= 64 MSE= 11.30476  
 Critical Value of Studentized Range= 3.730

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	-2.037	0.880	3.797
TRT1 - CONTROL	-2.111	1.081	4.273
TRT1 - TRT3	-1.204	1.713	4.631
TRT2 - TRT1	-3.797	-0.880	2.037
TRT2 - CONTROL	-3.027	0.201	3.429
TRT2 - TRT3	-2.123	0.833	3.790
CONTROL - TRT1	-4.273	-1.081	2.111
CONTROL - TRT2	-3.429	-0.201	3.027
CONTROL - TRT3	-2.596	0.632	3.861
TRT3 - TRT1	-4.631	-1.713	1.204
TRT3 - TRT2	-3.790	-0.833	2.123
TRT3 - CONTROL	-3.861	-0.632	2.596

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 2. ANALYSIS OF EGGS CRACKED  
 \*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure

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

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

Alpha= 0.05 Confidence= 0.95 df= 64 MSE= 11.30476  
 Critical Value of Dunnnett's T= 2.078

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

LEVEL Comparison	Simultaneous Lower Confidence Limit		Difference Between Means		Simultaneous Upper Confidence Limit	
	Lower	Upper	Mean	Limit	Lower	Upper
CONTROL	-1.434	1.081	1.081	3.596	3.596	3.596
TRT1	-2.342	0.201	0.201	2.744	2.744	2.744
TRT2	-3.176	-0.632	-0.632	1.911	1.911	1.911

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 3. ANALYSIS OF EGGS SET  
 \*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure  
 Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 80

NOTE: Due to missing values, only 68 observations can be used in this analysis.

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 3. ANALYSIS OF EGGS SET  
 \*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure  
 Type I Estimable Functions for: LEVEL

Effect Coefficients

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

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 3. ANALYSIS OF EGGS SET  
 \*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure

Dependent Variable: ES

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	1369.6018	456.5339	1.20	0.3169
Error	64	24344.9130	380.3893		
Corrected Total	67	25714.5147			
R-Square	C.V.		Root MSE	ES Mean	
0.053262	56.84710		19.504	34.309	

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	1369.6018	456.5339	1.20	0.3169

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 3. ANALYSIS OF EGGS SET  
 \*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure  
 Least Squares Means

LEVEL	LSMEAN	Pr >  T  HO: LSMEAN(i)=LSMEAN(j)			
		1	2	3	4
CONTROL	31.7692308	1	0.8967	0.1681	0.8587
TRT1	32.6842105	2	0.8967	0.1663	0.7346
TRT2	41.6666667	3	0.1681	0.1663	0.0907
TRT3	30.5000000	4	0.8587	0.7346	0.0907

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

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 3. ANALYSIS OF EGGS SET  
 \*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure

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

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

Alpha= 0.05 Confidence= 0.95 df= 64 MSE= 380.3893  
 Critical Value of Studentized Range= 3.730

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

LEVEL Comparison	Simultaneous Lower Confidence Limit		Difference Between Means		Simultaneous Upper Confidence Limit	
	Lower	Upper	Mean	Limit	Lower	Upper
TRT2 - TRT1	-7.939	8.982	8.982	25.904	25.904	25.904
TRT2 - CONTROL	-8.828	9.897	9.897	28.623	28.623	28.623
TRT2 - TRT3	-5.982	11.167	11.167	28.316	28.316	28.316
TRT1 - TRT2	-25.904	-8.982	-8.982	7.939	7.939	7.939



CONTROL	-17.603	0.915	19.433
TRT1	-14.738	2.184	19.106
TRT3	-19.995	-1.269	17.456
CONTROL	-28.623	-9.897	8.828
TRT1	-19.433	-0.915	17.603
TRT3	-28.316	-11.167	5.982
CONTROL	-19.106	-2.184	14.738
TRT1	-19.995	-1.269	17.456

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL

3. ANALYSIS OF EGGS SET

14:50 Friday, December 22, 1995

General Linear Models Procedure

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

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

Alpha= 0.05 Confidence= 0.95 df= 64 MSE= 380.3893  
Critical Value of Dunnett's T= 2.078

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

LEVEL	Comparison	Lower Limit	Difference Between Means	Upper Confidence Limit	Simultaneous
CONTROL	- CONTROL	-4.854	9.897	24.649	
TRT1	- CONTROL	-13.673	0.915	15.503	
TRT3	- CONTROL	-16.021	-1.269	13.483	

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL

4. ANALYSIS OF VIABLE EMBRYOS

14:50 Friday, December 22, 1995

General Linear Models Procedure

Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 80

NOTE: Due to missing values, only 68 observations can be used in this analysis.

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL

4. ANALYSIS OF VIABLE EMBRYOS

14:50 Friday, December 22, 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

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL

4. ANALYSIS OF VIABLE EMBRYOS

14:50 Friday, December 22, 1995

General Linear Models Procedure

Dependent Variable: VE

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	1359.4004	453.1335	1.30	0.2821
Error	64	22307.1143	348.5487		
Corrected Total	67	23666.5147			

R-Square C.V. Root MSE

R-Square	0.057440	61.83746	18.669	30.191
C.V.				
Root MSE				

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	1359.4004	453.1335	1.30	0.2821

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL

4. ANALYSIS OF VIABLE EMBRYOS

14:50 Friday, December 22, 1995

General Linear Models Procedure

Least Squares Means

LEVEL	LSMEAN	VE	Pr >  T	H0: LSMEAN(i)=LSMEAN(j)
CONTROL	25.6923077	1	0.6133	0.0900 0.8036
TRT1	29.1052632	2	0.6133	0.1821 0.7808
TRT2	37.3888889	3	0.0900	0.1821 0.1130
TRT3	27.3888889	4	0.8036	0.7808 0.1130

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

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL

4. ANALYSIS OF VIABLE EMBRYOS

14:50 Friday, December 22, 1995

General Linear Models Procedure

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

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

Alpha= 0.05 Confidence= 0.95 df= 64 MSE= 348.5487  
Critical Value of Studentized Range= 3.730

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

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 4. ANALYSIS OF VIABLE EMBRYOS  
 \*\*\*\*\*  
 14:50 Friday, December 22, 1995

General Linear Models Procedure  
 Class Level Information

LEVEL	Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT2	- TRT1	-7.915	8.284	24.482
TRT2	- TRT3	-6.416	10.000	26.416
TRT2	- CONTROL	-6.228	11.697	29.621
TRT1	- TRT2	-24.482	-8.284	7.915
TRT1	- TRT3	-14.582	1.716	17.915
TRT1	- CONTROL	-14.313	3.413	21.139
TRT3	- TRT2	-26.416	-10.000	6.416
TRT3	- TRT1	-17.915	-1.716	14.482
TRT3	- CONTROL	-16.228	1.697	19.621
CONTROL	- TRT2	-29.621	-11.697	6.228
CONTROL	- TRT1	-21.139	-3.413	14.313
CONTROL	- TRT3	-19.621	-1.697	16.228

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 5. ANALYSIS OF LIVE 3-WEEK EMBRYOS  
 \*\*\*\*\*  
 14:50 Friday, December 22, 1995

General Linear Models Procedure

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

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

Alpha= 0.05 Confidence= 0.95 df= 64 MSE= 348.5487  
 Critical Value of Dunnnett's T= 2.078

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

General Linear Models Procedure  
 Least Squares Means

LEVEL	Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT2	- CONTROL	-2.424	11.697	25.818
TRT1	- CONTROL	-10.551	3.413	17.377
TRT3	- CONTROL	-12.424	1.697	15.818

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 5. ANALYSIS OF LIVE 3-WEEK EMBRYOS  
 \*\*\*\*\*  
 14:50 Friday, December 22, 1995

General Linear Models Procedure  
 Least Squares Means

LEVEL	LSMEAN	LE	PR >  T	NO	LSMEAN(1)=LSMEAN(J)
CONTROL	24.9230769	1	0.6405	0.1236	0.8995
TRT1	28.0526316	2	0.6405	0.2296	0.7102
TRT2	35.4444444	3	0.1236	0.2296	0.1225
TRT3	25.7777778	4	0.8995	0.7102	0.1225

NOTE: Due to missing values, only 68 observations can be used in this analysis.

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 5. ANALYSIS OF LIVE 3-WEEK EMBRYOS  
 \*\*\*\*\*  
 14:50 Friday, December 22, 1995

General Linear Models Procedure  
 Type I Estimable Functions for: LEVEL

Coefficients

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

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 5. ANALYSIS OF LIVE 3-WEEK EMBRYOS  
 \*\*\*\*\*  
 14:50 Friday, December 22, 1995

General Linear Models Procedure

Dependent Variable: LE

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	1165.0887	388.3629	1.13	0.3431
Error	64	21969.4260	343.2723		
Corrected Total	67	23134.5147			

R-Square 0.050361 C.V. Root MSE 18.528 LE Mean 28.809

General Linear Models Procedure  
 Least Squares Means

LEVEL	LE	PR >  T	NO	LSMEAN(1)=LSMEAN(J)
CONTROL	24.9230769	1	0.6405	0.1236
TRT1	28.0526316	2	0.6405	0.2296
TRT2	35.4444444	3	0.1236	0.2296
TRT3	25.7777778	4	0.8995	0.7102

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 5. ANALYSIS OF LIVE 3-WEEK EMBRYOS  
 \*\*\*\*\*  
 14:50 Friday, December 22, 1995

General Linear Models Procedure  
 Least Squares Means

LEVEL	LSMEAN	LE	PR >  T	NO	LSMEAN(1)=LSMEAN(J)
CONTROL	24.9230769	1	0.6405	0.1236	0.8995
TRT1	28.0526316	2	0.6405	0.2296	0.7102
TRT2	35.4444444	3	0.1236	0.2296	0.1225
TRT3	25.7777778	4	0.8995	0.7102	0.1225

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

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 5. ANALYSIS OF LIVE 3-WEEK EMBRYOS  
 \*\*\*\*\*  
 14:50 Friday, December 22, 1995

General Linear Models Procedure

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

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

Alpha= 0.05 Confidence= 0.95 df= 64 MSE= 343.2723  
Critical Value of Studentized Range= 3.730

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
TRT2 - TRT1	-8.683	7.392	7.392	23.467	
TRT2 - TRT3	-6.624	9.667	9.667	25.958	
TRT2 - CONTROL	-7.267	10.521	10.521	28.310	
TRT1 - TRT2	-23.467	-7.392	-7.392	8.683	
TRT1 - TRT3	-13.800	2.275	2.275	18.350	
TRT1 - CONTROL	-14.462	3.130	3.130	20.721	
TRT3 - TRT2	-25.958	-9.667	-9.667	6.624	
TRT3 - TRT1	-18.350	-2.275	-2.275	13.800	
TRT3 - CONTROL	-16.934	0.855	0.855	18.643	
CONTROL - TRT2	-28.310	-10.521	-10.521	7.267	
CONTROL - TRT1	-20.721	-3.130	-3.130	14.662	
CONTROL - TRT3	-18.643	-0.855	-0.855	16.934	

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL

5. ANALYSIS OF LIVE 3-WEEK EMBRYOS

\*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure

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

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

Alpha= 0.05 Confidence= 0.95 df= 64 MSE= 343.2723  
Critical Value of Dunnett's T= 2.078

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
TRT2 - CONTROL	-3.492	10.521	10.521	24.535	
TRT1 - CONTROL	-10.729	3.130	3.130	16.988	
TRT3 - CONTROL	-13.159	0.855	0.855	14.868	

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL

6. ANALYSIS OF NORMAL HATCHLINGS

\*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure

Least Squares Means

LEVEL	LSMEAN	Pr >  T  NO: LSMEAN(i)=LSMEAN(j)			
		1	2	3	4
CONTROL	22.6153846	1	0.6542	0.1818	0.7937
TRT1	25.5263158	2	0.6542	0.3205	0.8407

Class Levels Values

LEVEL 4 CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 80

NOTE: Due to missing values, only 68 observations can be used in this analysis.

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL

6. ANALYSIS OF NORMAL HATCHLINGS

\*\*\*\*\*

14:50 Friday, December 22, 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

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL

6. ANALYSIS OF NORMAL HATCHLINGS

\*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure

Dependent Variable: MH

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	733.43297	244.47766	0.76	0.5223
Error	64	20666.25821	322.91028		
Corrected Total	67	21399.69118			

R-Square C.V. Root MSE MH Mean

0.034273 68.53281 17.970 26.221

Source DF Type I SS Mean Square F Value Pr > F

LEVEL 3 733.43297 244.47766 0.76 0.5223

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL

6. ANALYSIS OF NORMAL HATCHLINGS

\*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure

Least Squares Means

LEVEL	LSMEAN	Pr >  T  NO: LSMEAN(i)=LSMEAN(j)			
		1	2	3	4
CONTROL	22.6153846	1	0.6542	0.1818	0.7937
TRT1	25.5263158	2	0.6542	0.3205	0.8407

18

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 TRT2 31.444444 3 0.1818 0.3205 0.2395  
 TRT3 24.333333 4 0.7937 0.8407 0.2395

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

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 6. ANALYSIS OF NORMAL HATCHLINGS  
 \*\*\*\*\*  
 14:50 Friday, December 22, 1995

General Linear Models Procedure

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

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

Alpha= 0.05 Confidence= 0.95 df= 64 MSE= 322.9103  
 Critical Value of Studentized Range= 3.730

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

LEVEL Comparison	Simultaneous Confidence Limit		Difference Between Means	Simultaneous Confidence Limit	
	Lower Limit	Upper Limit		Lower Limit	Upper Limit
TRT2 - TRT1	-9.673	21.509	5.918	9.673	21.509
TRT2 - TRT3	-8.689	22.912	7.111	16.784	22.912
TRT2 - CONTROL	-8.424	26.082	8.829	19.972	26.082
TRT1 - TRT2	-21.509	-5.918	-5.918	8.689	21.509
TRT1 - TRT3	-14.398	1.193	1.193	14.398	1.193
TRT1 - CONTROL	-14.151	2.911	2.911	18.971	2.911
TRT3 - TRT2	-22.912	-7.111	-7.111	8.689	22.912
TRT3 - TRT1	-16.784	-1.193	-1.193	14.398	16.784
TRT3 - CONTROL	-15.535	1.718	1.718	18.971	1.718
CONTROL - TRT2	-26.082	-8.829	-8.829	8.424	26.082
CONTROL - TRT1	-19.972	-2.911	-2.911	14.151	19.972
CONTROL - TRT3	-18.971	1.718	1.718	15.535	1.718

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 6. ANALYSIS OF NORMAL HATCHLINGS  
 \*\*\*\*\*  
 14:50 Friday, December 22, 1995

General Linear Models Procedure

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= 64 MSE= 322.9103  
 Critical Value of Dunnnett's T= 2.078

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

LEVEL Comparison	Simultaneous Confidence Limit		Difference Between Means	Simultaneous Confidence Limit	
	Lower Limit	Upper Limit		Lower Limit	Upper Limit
TRT2 - CONTROL	-4.763	8.829	8.829	22.421	8.829
TRT1 - CONTROL	-10.530	2.911	2.911	16.352	2.911

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 TRT3 - CONTROL -11.874 1.718 15.310

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 7. ANALYSIS OF 14-DAY-OLD SURVIVORS  
 \*\*\*\*\*  
 14:50 Friday, December 22, 1995

General Linear Models Procedure  
 Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 80

NOTE: Due to missing values, only 68 observations can be used in this analysis.

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 7. ANALYSIS OF 14-DAY-OLD SURVIVORS  
 \*\*\*\*\*  
 14:50 Friday, December 22, 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

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 7. ANALYSIS OF 14-DAY-OLD SURVIVORS  
 \*\*\*\*\*  
 14:50 Friday, December 22, 1995

General Linear Models Procedure

Dependent Variable: HS

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	727.05030	242.35010	0.83	0.4848
Error	64	18793.93500	293.65523		
Corrected Total	67	19520.98529			

R-Square	C.V.	Root MSE	HS Mean
0.037245	72.96639	17.136	23.485

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	727.05030	242.35010	0.83	0.4848

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 7. ANALYSIS OF 14-DAY-OLD SURVIVORS

General Linear Models Procedure  
 Least Squares Means

LEVEL	LSMEAN	HS 1/J	Pr >  T  HO: LSMEAN(I)=LSMEAN(J)	1	2	3	4
CONTROL	19.8461538	1	0.6777	0.1596	0.7310	0.7310	
TRT1	22.4210526	2	0.6777	0.2678	0.9407	0.9407	
TRT2	28.7222222	3	0.1596	0.2678	0.2436	0.2436	
TRT3	22.0000000	4	0.7310	0.9407	0.2436	0.2436	

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

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 7. ANALYSIS OF 14-DAY-OLD SURVIVORS  
 \*\*\*\*\*  
 14:50 Friday, December 22, 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= 64 MSE= 293.6552  
 Critical Value of Studentized Range= 3.730  
 Comparisons significant at the 0.05 level are indicated by \*\*\*\*\*.

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Upper Confidence Limit
TRT2 - TRT1	-8.567	6.301	21.169
TRT2 - TRT3	-8.345	6.722	21.790
TRT2 - CONTROL	-7.577	8.876	25.329
TRT1 - TRT2	-21.169	-6.301	8.567
TRT1 - TRT3	-14.447	0.421	15.289
TRT1 - CONTROL	-13.695	2.575	18.845
TRT3 - TRT2	-21.790	-6.722	8.345
TRT3 - TRT1	-15.289	-0.421	14.447
TRT3 - CONTROL	-14.299	2.154	18.607
CONTROL - TRT2	-25.329	-8.876	7.577
CONTROL - TRT1	-18.845	-2.575	13.695
CONTROL - TRT3	-18.607	-2.154	14.299

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 7. ANALYSIS OF 14-DAY-OLD SURVIVORS  
 \*\*\*\*\*  
 14:50 Friday, December 22, 1995

General Linear Models Procedure  
 Dunnett's One-tailed T tests for variable: HS  
 NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.  
 Alpha= 0.05 Confidence= 0.95 df= 64 MSE= 293.6552

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

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Upper Confidence Limit
TRT2 - CONTROL	-4.085	8.876	21.837
TRT1 - CONTROL	-10.243	2.575	15.392
TRT3 - CONTROL	-10.808	2.154	15.115

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 8. ANALYSIS OF EGGS SET/EGGS LAID  
 \*\*\*\*\*  
 14:50 Friday, December 22, 1995

General Linear Models Procedure  
 Class Level Information  
 Class Levels Values  
 LEVEL 4 CONTROL TRT1 TRT2 TRT3  
 Number of observations in data set = 80

NOTE: Due to missing values, only 65 observations can be used in this analysis.

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 8. ANALYSIS OF EGGS SET/EGGS LAID  
 \*\*\*\*\*  
 14:50 Friday, December 22, 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

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 8. ANALYSIS OF EGGS SET/EGGS LAID  
 \*\*\*\*\*  
 14:50 Friday, December 22, 1995

General Linear Models Procedure  
 Dependent Variable: RESPONSE  
 Weight: EL

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	4989.8354	1663.2785	1.58	0.2029
Error	61	64128.0146	1051.2789		
Corrected Total	64	69117.8499			

R-Square C.V. Root MSE RESPONSE Mean

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	4989.8354	1663.2785	1.58	0.2029
		48.12607	32.423		67.372

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL

8. ANALYSIS OF EGGS SET/EGGS LAID

\*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure  
Least Squares Means

LEVEL	RESPONSE	Pr >  T	H0: LSMEAN(I)=LSMEAN(J)
	LSMEAN	1/j	2 3 4
CONTROL	66.8685565	1	0.4545 0.2992 0.5271
TRT1	65.4530330	2	0.4545 0.0430 0.1328
TRT2	68.7872401	3	0.2992 0.0430 0.6884
TRT3	68.1064256	4	0.5271 0.1328 0.6884

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

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL

8. ANALYSIS OF EGGS SET/EGGS LAID

\*\*\*\*\*

14:50 Friday, December 22, 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= 61 MSE= 1051.279  
Critical Value of Studentized Range= 3.735

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

LEVEL	Comparison	Simultaneous		
		Lower Confidence Limit	Difference Between Means	Upper Confidence Limit
TRT2	- TRT3	-28.283	0.681	29.644
TRT2	- CONTROL	-30.856	1.919	34.694
TRT2	- TRT1	-24.834	3.334	31.503
TRT3	- TRT2	-29.644	-0.681	28.283
TRT3	- CONTROL	-31.901	1.238	34.376
TRT3	- TRT1	-25.937	2.653	31.244
CONTROL	- TRT2	-34.694	-1.919	30.856
CONTROL	- TRT3	-34.376	-1.238	31.901
CONTROL	- TRT1	-31.031	1.416	33.862
TRT1	- TRT2	-31.503	-3.334	24.834
TRT1	- TRT3	-31.244	-2.653	25.937
TRT1	- CONTROL	-33.862	-1.416	31.031

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL

8. ANALYSIS OF EGGS SET/EGGS LAID

\*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure

Dunnett'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= 61 MSE= 1051.279

Critical Value of Dunnett's T= 2.069

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

LEVEL	Comparison	Simultaneous		
		Lower Confidence Limit	Difference Between Means	Upper Confidence Limit
TRT2	- CONTROL	-23.749	1.919	27.587
TRT3	- CONTROL	-24.715	1.238	27.191
TRT1	- CONTROL	-26.826	-1.416	23.995

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL

9. ANALYSIS OF VIABLE EMBRYOS/EGGS SETS

\*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure

Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 80

NOTE: Due to missing values, only 65 observations can be used in this analysis.

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL

9. ANALYSIS OF VIABLE EMBRYOS/EGGS SETS

\*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure

Type I Estimable Functions for: LEVEL

Coefficients

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

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL

9. ANALYSIS OF VIABLE EMBRYOS/EGGS SETS

\*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure

File:b:\43678112.out Page 23  
 Dependent Variable: RESPONSE  
 Weight:

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	12610.856	4203.619	0.41	0.7459
Error	61	624407.051	10236.181		
Corrected Total	64	637017.908			

R-Square	C.V.	Root MSE	RESPONSE Mean
0.019797	136.4588	101.17	74.143

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	12610.856	4203.619	0.41	0.7459

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 9. ANALYSIS OF VIABLE EMBRYOS/EGGS SETS  
 \*\*\*\*\*  
 14:50 Friday, December 22, 1995

General Linear Models Procedure  
 Least Squares Means

LEVEL	RESPONSE	LSMEAN	Pr >  T	H0: LSMEAN(I)=LSMEAN(J)
CONTROL	69.3488604	1	0.4617	0.3216 0.3260
TRT1	74.1069901	2	0.4617	0.7944 0.7666
TRT2	75.5440750	3	0.3216	0.7944 0.9539
TRT3	75.8742588	4	0.3260	0.7666 0.9539

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

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 9. ANALYSIS OF VIABLE EMBRYOS/EGGS SETS  
 \*\*\*\*\*  
 14:50 Friday, December 22, 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= 61 MSE= 10236.18  
 Critical Value of Studentized Range= 3.735

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

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT3 - TRT2	-90.047	0.330	90.707
TRT3 - TRT1	-87.447	1.767	90.982
TRT3 - CONTROL	-96.880	6.525	109.931
TRT2 - TRT3	-90.707	-0.330	90.047
TRT2 - TRT1	-86.460	1.437	89.334

File:b:\43678112.out Page 24  
 TRT2 - CONTROL -96.076

TRT1 - TRT3	-90.982	6.195	108.466
TRT1 - TRT2	-89.334	-1.767	87.447
TRT1 - CONTROL	-96.487	-1.437	86.460
CONTROL - TRT3	-109.931	4.758	106.003
CONTROL - TRT2	-108.466	-6.525	96.880
CONTROL - TRT1	-106.003	-6.195	96.076
		-4.758	96.487

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 9. ANALYSIS OF VIABLE EMBRYOS/EGGS SETS  
 \*\*\*\*\*  
 14:50 Friday, December 22, 1995

General Linear Models Procedure

Dunnett'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= 61 MSE= 10236.18  
 Critical Value of Dunnett's T= 2.069

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

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT3 - CONTROL	-74.458	6.525	87.509
TRT2 - CONTROL	-73.900	6.195	86.290
TRT1 - CONTROL	-74.533	4.758	84.049

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 10. ANALYSIS OF LIVE 3-WEEK EMBRYOS/VIABLE EMBRYOS  
 \*\*\*\*\*  
 14:50 Friday, December 22, 1995

General Linear Models Procedure  
 Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 80

NOTE: Due to missing values, only 65 observations can be used in this analysis.

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 10. ANALYSIS OF LIVE 3-WEEK EMBRYOS/VIABLE EMBRYOS  
 \*\*\*\*\*  
 14:50 Friday, December 22, 1995

General Linear Models Procedure  
 Type I Estimable Functions for: LEVEL

Effect	Coefficients
INTERCEPT	0

22

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 10. ANALYSIS OF LIVE 3-WEEK EMBRYOS/VIALE EMBRYOS  
 \*\*\*\*\*  
 14:50 Friday, December 22, 1995

General Linear Models Procedure

Dependent Variable: RESPONSE  
 Weight: VE

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	8774.4299	2924.8100	1.12	0.3461
Error	61	158615.8653	2600.2601		
Corrected Total	64	167390.2953			

R-Square	C.V.	Root MSE	RESPONSE Mean
0.052419	63.26588	50.993	80.601

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	8774.4299	2924.8100	1.12	0.3461

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 10. ANALYSIS OF LIVE 3-WEEK EMBRYOS/VIALE EMBRYOS  
 \*\*\*\*\*  
 14:50 Friday, December 22, 1995

General Linear Models Procedure  
 Least Squares Means

LEVEL	RESPONSE	Pr >  t	H0: LSMEAN(I)=LSMEAN(J)
	LSMEAN	i/j	1 2 3 4
CONTROL	84.7591014	1	0.2926 0.0745 0.2026
TRT1	81.0073422	2	0.2926 0.4075 0.7761
TRT2	78.5660163	3	0.0745 0.4075 0.6125
TRT3	80.1049168	4	0.2026 0.7761 0.6125

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

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 10. ANALYSIS OF LIVE 3-WEEK EMBRYOS/VIALE EMBRYOS  
 \*\*\*\*\*  
 14:50 Friday, December 22, 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= 61 MSE= 2600.26  
 Critical Value of Studentized Range= 3.735

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

LEVEL Comparison  
 CONTROL - TRT1  
 CONTROL - TRT3  
 CONTROL - TRT2  
 TRT1 - CONTROL  
 TRT1 - TRT3  
 TRT1 - TRT2  
 TRT3 - CONTROL  
 TRT3 - TRT1  
 TRT3 - TRT2  
 TRT2 - CONTROL  
 TRT2 - TRT1  
 TRT2 - TRT3

Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
-47.277	3.752	54.780
-47.463	4.654	56.772
-45.352	6.193	57.739
-54.780	-3.752	47.277
-44.063	0.902	45.867
-41.860	2.441	46.742
-56.772	-4.654	47.463
-45.867	-0.902	44.063
-44.012	1.539	47.090
-57.739	-6.193	45.352
-46.742	-2.441	41.860
-47.090	-1.539	44.012

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 10. ANALYSIS OF LIVE 3-WEEK EMBRYOS/VIALE EMBRYOS  
 \*\*\*\*\*  
 14:50 Friday, December 22, 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= 61 MSE= 2600.26  
 Critical Value of Dunnnett's T= 2.069

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

LEVEL Comparison  
 CONTROL - CONTROL  
 TRT3 - CONTROL  
 TRT2 - CONTROL

Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
-43.715	-3.752	36.212
-45.471	-4.654	36.162
-46.562	-6.193	34.176

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 11. ANALYSIS OF NORMAL HATCHINGS/3-WEEK LIVE EMBRYOS  
 \*\*\*\*\*  
 14:50 Friday, December 22, 1995

General Linear Models Procedure  
 Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 80

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

23



ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 11. ANALYSIS OF NORMAL HATCHLINGS/3-WEEK LIVE EMBRYOS  
 \*\*\*\*\*

14:50 Friday, December 22, 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

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 11. ANALYSIS OF NORMAL HATCHLINGS/3-WEEK LIVE EMBRYOS  
 \*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure

Dependent Variable: RESPONSE

LE

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	12010.707	4003.569	1.44	0.2402
Error	58	161156.391	2778.558		
Corrected Total	61	173167.097			

R-Square 0.069359  
 C.V. 70.49602  
 Root MSE 52.712  
 RESPONSE Mean 74.773

Source DF Type I SS Mean Square F Value Pr > F  
 .LEVEL 3 12010.707 4003.569 1.44 0.2402

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 11. ANALYSIS OF NORMAL HATCHLINGS/3-WEEK LIVE EMBRYOS  
 \*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure

Least Squares Means

LEVEL	RESPONSE	LSMEAN	Pr >  T	HO: LSMEAN(I)=LSMEAN(J)
CONTROL	74.0241401	1	0.7649	0.5814 0.2308
TRT1	75.7397597	2	0.7649	0.3190 0.2992
TRT2	72.0305774	3	0.5814	0.3190 0.0442
TRT3	78.6457030	4	0.2308	0.2992 0.0442

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

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 11. ANALYSIS OF NORMAL HATCHLINGS/3-WEEK LIVE EMBRYOS  
 \*\*\*\*\*

14:50 Friday, December 22, 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= 58 MSE= 2778.558  
 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
TRT3 - TRT1	-43.042	3.506	50.054
TRT3 - CONTROL	-50.945	4.622	60.188
TRT3 - TRT2	-41.950	6.615	55.180
TRT1 - TRT3	-50.054	-3.506	43.042
TRT1 - CONTROL	-53.357	1.116	55.588
TRT1 - TRT2	-44.201	3.109	50.419
CONTROL - TRT3	-60.188	-4.622	50.945
CONTROL - TRT1	-55.588	-1.116	53.357
CONTROL - TRT2	-54.212	1.994	58.199
TRT2 - TRT3	-55.180	-6.615	41.950
TRT2 - TRT1	-50.419	-3.109	44.201
TRT2 - CONTROL	-58.199	-1.994	54.212

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 11. ANALYSIS OF NORMAL HATCHLINGS/3-WEEK LIVE EMBRYOS  
 \*\*\*\*\*

14:50 Friday, December 22, 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= 58 MSE= 2778.558  
 Critical Value of Dunnnett's T= 2.066

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

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT3 - CONTROL	-38.782	4.622	48.025
TRT1 - CONTROL	-41.833	1.116	43.665
TRT2 - CONTROL	-45.897	-1.994	41.909

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 12. ANALYSIS OF NORMAL HATCHLINGS/EGGS LAID  
 \*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure  
 Class Level Information

29

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 80

NOTE: Due to missing values, only 65 observations can be used in this analysis.

IC1A5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 12. ANALYSIS OF NORMAL HATCHINGS/EGGS LAID  
 \*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure  
 Type I Estimable Functions for: LEVEL

Coefficients

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

IC1A5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 12. ANALYSIS OF NORMAL HATCHINGS/EGGS LAID  
 \*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure

Dependent Variable: RESPONSE  
 Weight: EL

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	16910.403	5636.801	0.54	0.6571
Error	61	637411.810	10449.374		
Corrected Total	64	654322.213			

R-Square 0.025844  
 C.V. 191.4561  
 Root MSE 102.22

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	16910.403	5636.801	0.54	0.6571

IC1A5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 12. ANALYSIS OF NORMAL HATCHINGS/EGGS LAID  
 \*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure  
 Least Squares Means

RESPONSE	Pr >  t	H0: LSMEAN(i)=LSMEAN(j)
LSMEAN	i/j	1 2 3 4

CONTROL	48.8405238	1	0.4260	0.4334	0.2088
TRT1	53.5917516	2	0.4260	0.9695	0.5815
TRT2	53.5964015	3	0.4334	0.9695	0.5455
TRT3	56.6346391	4	0.2088	0.5815	0.5455

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

IC1A5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 12. ANALYSIS OF NORMAL HATCHINGS/EGGS LAID  
 \*\*\*\*\*

14:50 Friday, December 22, 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= 61 MSE= 10449.37  
 Critical Value of Studentized Range= 3.735

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

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT3 - TRT1	-87.096	3.043	93.182
TRT3 - TRT2	-88.075	3.238	94.552
TRT3 - CONTROL	-96.685	7.794	112.271
TRT1 - TRT3	-93.182	-3.043	87.096
TRT1 - TRT2	-88.612	0.195	89.003
TRT1 - CONTROL	-97.543	4.751	107.045
TRT2 - TRT3	-94.552	-3.238	88.075
TRT2 - TRT1	-89.003	-0.195	88.612
TRT2 - CONTROL	-98.774	4.556	107.886
CONTROL - TRT3	-112.271	-7.794	96.683
CONTROL - TRT1	-107.045	-4.751	97.543
CONTROL - TRT2	-107.886	-4.556	98.774

IC1A5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 12. ANALYSIS OF NORMAL HATCHINGS/EGGS LAID  
 \*\*\*\*\*

14:50 Friday, December 22, 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= 61 MSE= 10449.37  
 Critical Value of Dunnnett's T= 2.069

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

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
CONTROL - TRT3	-107.045	-4.751	97.543
CONTROL - TRT2	-107.886	-4.556	98.774

TRT3 - CONTROL 7.794 89.617  
 TRT1 - CONTROL 4.751 84.864  
 TRT2 - CONTROL 4.556 85.480

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 13. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/NORMAL HATCHLINGS  
 \*\*\*\*\*  
 14:50 Friday, December 22, 1995

General Linear Models Procedure  
 Class Level Information

Class Levels Values  
 LEVEL 4 CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 80

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

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 13. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/NORMAL HATCHLINGS  
 \*\*\*\*\*  
 14:50 Friday, December 22, 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

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 13. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/NORMAL HATCHLINGS  
 \*\*\*\*\*  
 14:50 Friday, December 22, 1995

General Linear Models Procedure

Dependent Variable: RESPONSE

Weight: NH

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	7453.0246	2484.3415	0.85	0.4738
Error	57	167141.1768	2932.3013		
Corrected Total	60	174594.2014			

R-Square 0.042688  
 C.V. 73.81833  
 Root MSE 54.151  
 RESPONSE Mean 73.357

Source DF Type I SS Mean Square F Value Pr > F  
 LEVEL 3 7453.0246 2484.3415 0.85 0.4738

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 13. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/NORMAL HATCHLINGS  
 \*\*\*\*\*  
 14:50 Friday, December 22, 1995

General Linear Models Procedure  
 Least Squares Means

LEVEL	RESPONSE	Pr >  T	NO: LSMEAN(i)=LSMEAN(j)
	LSMEAN	1/j	2 3 4
CONTROL	71.050571	1	0.8962 0.1973 0.5845
TRT1	71.5752192	2	0.8962 0.1795 0.6317
TRT2	76.1285234	3	0.1973 0.1795 0.4145
TRT3	73.2956358	4	0.5845 0.6317 0.4145

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

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 13. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/NORMAL HATCHLINGS  
 \*\*\*\*\*  
 14:50 Friday, December 22, 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= 2932.301  
 Critical Value of Studentized Range= 3.743

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

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT2 - TRT3	-47.934	2.833	53.599
TRT2 - TRT1	-44.945	4.553	54.051
TRT2 - CONTROL	-53.427	5.078	63.583
TRT3 - TRT2	-53.599	-2.833	47.934
TRT3 - TRT1	-46.123	1.720	49.564
TRT3 - CONTROL	-54.867	2.245	59.357
TRT1 - TRT2	-54.051	-4.553	44.945
TRT1 - TRT3	-49.564	-1.720	46.123
TRT1 - CONTROL	-55.463	0.525	56.513
CONTROL - TRT2	-63.583	-5.078	53.427
CONTROL - TRT3	-59.357	-2.245	54.867
CONTROL - TRT1	-56.513	-0.525	55.463

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 13. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/NORMAL HATCHLINGS  
 \*\*\*\*\*  
 14:50 Friday, December 22, 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 significant at the 0.05 level are indicated by \*\*\*\*.

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT2 - CONTROL	-40.654	5.078	50.810
TRT3 - CONTROL	-42.398	2.245	46.888
TRT1 - CONTROL	-43.239	0.525	44.289

IC1A5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 14. ANALYSIS OF EGGS NOT CRACKED/EGGS LAID  
 \*\*\*\*\*  
 14:50 Friday, December 22, 1995

General Linear Models Procedure  
 Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 80

NOTE: Due to missing values, only 65 observations can be used in this analysis.

IC1A5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 14. ANALYSIS OF EGGS NOT CRACKED/EGGS LAID  
 \*\*\*\*\*  
 14:50 Friday, December 22, 1995

General Linear Models Procedure  
 Type I Estimable Functions for: LEVEL

Coefficients

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

IC1A5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 14. ANALYSIS OF EGGS NOT CRACKED/EGGS LAID  
 \*\*\*\*\*  
 14:50 Friday, December 22, 1995

General Linear Models Procedure

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Dependent Variable: EL					
Weight:					
Source	3	4912.3949	1637.4650	0.52	0.6728
Model	61	193579.9897	3173.4425		
Error					

R-Square	C.V.	Root MSE	RESPONSE Mean
0.024749	71.32710	56.333	78.979

IC1A5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 14. ANALYSIS OF EGGS NOT CRACKED/EGGS LAID  
 \*\*\*\*\*  
 14:50 Friday, December 22, 1995

General Linear Models Procedure  
 Least Squares Means

LEVEL	RESPONSE LSMEAN	Pr >  T  NO: LSMEAN(i)=LSMEAN(j)
CONTROL	79.3802990	1
TRT1	76.8643174	2 0.4442
TRT2	79.6587661	3 0.9356
TRT3	80.2752350	4 0.7922

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

IC1A5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 14. ANALYSIS OF EGGS NOT CRACKED/EGGS LAID  
 \*\*\*\*\*  
 14:50 Friday, December 22, 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= 61 MSE= 3173.442  
 Critical Value of Studentized Range= 3.735

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

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT3 - TRT2	-49.685	0.636	50.958
TRT3 - CONTROL	-56.681	0.895	58.471
TRT3 - TRT1	-46.263	3.411	53.085
TRT2 - TRT3	-50.958	-0.636	49.685
TRT2 - CONTROL	-56.686	0.258	57.202
TRT2 - TRT1	-46.166	2.774	51.715
CONTROL - TRT3	-58.471	-0.895	56.681
CONTROL - TRT2	-57.202	-0.258	56.686
CONTROL - TRT1	-53.857	2.516	58.889
TRT1 - TRT3	-53.085	-3.411	46.263
TRT1 - TRT2	-51.715	-2.774	46.166
TRT1 - CONTROL	-58.889	-2.516	53.857

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 14. ANALYSIS OF EGGS NOT CRACKED/EGGS LAID  
 \*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure

Dunnett'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= 61 MSE= 3173.442  
 Critical Value of Dunnett's T= 2.069

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

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit	
			Lower	Upper
TR13 - CONTROL	-44.196	0.895	45.986	
TR12 - CONTROL	-44.338	0.258	44.855	
TR11 - CONTROL	-46.665	-2.516	41.633	

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 15. ANALYSIS OF NORMAL HATCHLINGS/EGGS SET  
 \*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure  
 Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 80

NOTE: Due to missing values, only 65 observations can be used in this analysis.

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 15. ANALYSIS OF NORMAL HATCHLINGS/EGGS SET  
 \*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure  
 Type I Estimable Functions for: LEVEL

Effect	Coefficients
INTERCEPT	0
LEVEL	L2 L3 L4 -L2-L3-L4

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 15. ANALYSIS OF NORMAL HATCHLINGS/EGGS SET  
 \*\*\*\*\*

14:50 Friday, December 22, 1995

28

General Linear Models Procedure

Dependent Variable: RESPONSE  
 Weight: ES

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	20687.888	6895.963	0.55	0.6475
Error	61	759539.710	12451.471		
Corrected Total	64	780227.598			

R-Square 0.026515 C.V. 111.59 Root MSE 111.59  
 RESPONSE Mean 62.754

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	20687.888	6895.963	0.55	0.6475

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 15. ANALYSIS OF NORMAL HATCHLINGS/EGGS SET  
 \*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure  
 Least Squares Means

LEVEL	RESPONSE	Pr >  T	HO: LSMEAN(1)=LSMEAN(J)
	LSMEAN	i/j	1 2 3 4
CONTROL	58.1166560	1	0.3841 0.6588 0.2448
TRT1	64.3277890	2	0.3841 0.6017 0.7234
TRT2	61.1511267	3	0.6588 0.6017 0.3836
TRT3	66.6519088	4	0.2448 0.7234 0.3836

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

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 15. ANALYSIS OF NORMAL HATCHLINGS/EGGS SET  
 \*\*\*\*\*

14:50 Friday, December 22, 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= 61 MSE= 12451.47  
 Critical Value of Studentized Range= 3.735

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

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit	
			Lower	Upper
TRT3 - TRT1	-96.072	2.324	100.720	
TRT3 - TRT2	-94.177	5.501	105.179	
TRT3 - CONTROL	-105.512	8.535	122.583	

TRT1	- TRT3	-100.720	-2.324	96.072
TRT1	- TRT2	-93.766	3.177	100.119
TRT1	- CONTROL	-105.453	6.211	117.875
TRT2	- TRT3	-105.179	-5.501	94.177
TRT2	- TRT1	-100.119	-3.177	93.766
TRT2	- CONTROL	-109.761	3.034	115.830
CONTROL	- TRT3	-122.583	-8.535	105.512
CONTROL	- TRT1	-117.875	-6.211	105.453
CONTROL	- TRT2	-115.830	-3.034	109.761

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 15. ANALYSIS OF NORMAL HATCHLINGS/EGGS SET  
 \*\*\*\*\*

14:50 Friday, December 22, 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= 61 MSE= 12451.47  
 Critical Value of Dunnnett's T= 2.069

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

LEVEL Comparison	Simultaneous		Upper Confidence Limit
	Lower Limit	Difference Between Means	
TRT3 - CONTROL	-80.782	8.535	97.853
TRT1 - CONTROL	-81.240	6.211	93.663
TRT2 - CONTROL	-85.303	3.034	91.372

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 16. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/EGGS SET  
 \*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure  
 Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 80

NOTE: Due to missing values, only 65 observations can be used in this analysis.

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 16. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/EGGS SET  
 \*\*\*\*\*

14:50 Friday, December 22, 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

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 16. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/EGGS SET  
 \*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure

Dependent Variable: RESPONSE  
 Weight: ES

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	17056.815	5685.605	0.53	0.6648
Error	61	656996.767	10770.439		
Corrected Total	64	674053.581			

R-Square 0.025305  
 C.V. 184.2881  
 Root MSE 103.78  
 RESPONSE Mean 56.314

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	17056.815	5685.605	0.53	0.6648

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 16. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/EGGS SET  
 \*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure  
 Least Squares Means

LEVEL	RESPONSE	LSMEAN(i)=LSMEAN(j)			
		i/j	1	2	3
CONTROL	50.9027183	1	0.3551	0.3758	0.2242
TRT1	57.0428561	2	0.3551	0.9343	0.7236
TRT2	56.5768611	3	0.3758	0.9343	0.6540
TRT3	59.2028470	4	0.2242	0.7236	0.6540

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

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
 16. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/EGGS SET  
 \*\*\*\*\*

14:50 Friday, December 22, 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= 61 MSE= 10770.44

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

LEVEL Comparison	Simultaneous Lower Confidence Limit		Difference Between Means	Simultaneous Upper Confidence Limit	
	Lower Limit	Upper Limit		Lower Limit	Upper Limit
TRT3 - TRT1	-89.353	93.673	2.160	93.673	
TRT3 - TRT2	-90.080	95.352	2.626	95.352	
TRT3 - CONTROL	-97.770	114.370	8.300	114.370	
TRT1 - TRT3	-93.673	89.353	-2.160	89.353	
TRT1 - TRT2	-89.695	90.627	0.466	90.627	
TRT1 - CONTROL	-97.713	109.994	6.140	109.994	
TRT2 - TRT3	-95.332	90.080	-2.626	90.080	
TRT2 - TRT1	-90.627	89.695	-0.466	89.695	
TRT2 - CONTROL	-99.232	110.580	5.674	110.580	
CONTROL - TRT3	-114.370	97.770	-8.300	97.770	
CONTROL - TRT1	-109.994	97.713	-6.140	97.713	
CONTROL - TRT2	-110.580	99.232	-5.674	99.232	

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
16. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/EGGS SET  
\*\*\*\*\*

14:50 Friday, December 22, 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= 61 MSE= 10770.44  
Critical Value of Dunnnett's T= 2.069

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

LEVEL Comparison	Simultaneous Lower Confidence Limit		Difference Between Means	Simultaneous Upper Confidence Limit	
	Lower Limit	Upper Limit		Lower Limit	Upper Limit
TRT3 - CONTROL	-74.770	8.300	8.300	91.370	
TRT1 - CONTROL	-75.194	6.140	6.140	87.474	
TRT2 - CONTROL	-76.484	5.674	5.674	87.833	

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
17. ANALYSIS OF EGGSHELL THICKNESS  
\*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure  
Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 80

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
17. ANALYSIS OF EGGSHELL THICKNESS  
\*\*\*\*\*

14:50 Friday, December 22, 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

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
17. ANALYSIS OF EGGSHELL THICKNESS  
\*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure

Dependent Variable: THICK

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	0.0003284	0.0001095	0.73	0.5368
Error	59	0.0088191	0.0001495		
Corrected Total	62	0.0091476			

R-Square 0.035904  
C.V. 5.862258  
Root MSE 0.0122  
THICK Mean 0.2086

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	0.0003284	0.0001095	0.73	0.5368

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
17. ANALYSIS OF EGGSHELL THICKNESS  
\*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure  
Least Squares Means

LEVEL	THICK	Pr >  T	NO: LSMEAN(I)=LSMEAN(J)
	LSMEAN	1/j	2 3 4
CONTROL	0.2090000	1	0.5569 0.5284 0.7258
TRT1	0.20626316	2	0.5569 0.1651 0.8012
TRT2	0.2120000	3	0.5284 0.1651 0.2755
TRT3	0.20731250	4	0.7258 0.8012 0.2755

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

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL

30

17. ANALYSIS OF EGGSHELL THICKNESS  
\*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure

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

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

Alpha= 0.05 Confidence= 0.95 df= 59 MSE= 0.000149  
Critical Value of Studentized Range= 3.739

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	-0.009508	0.003000	0.015508
TRT2 - TRT3	-0.006571	0.004688	0.015946
TRT2 - TRT1	-0.005054	0.005737	0.016528
CONTROL - TRT2	-0.015508	-0.003000	0.009508
CONTROL - TRT3	-0.010973	0.001688	0.014348
CONTROL - TRT1	-0.009509	0.002737	0.014983
TRT3 - TRT2	-0.015946	-0.004688	0.006571
TRT3 - CONTROL	-0.014348	-0.001688	0.010973
TRT3 - TRT1	-0.009918	0.001049	0.012017
TRT1 - TRT2	-0.016528	-0.005737	0.005054
TRT1 - CONTROL	-0.014983	-0.002737	0.009509
TRT1 - TRT3	-0.012017	-0.001049	0.009918

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL

17. ANALYSIS OF EGGSHELL THICKNESS  
\*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure

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

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= 0.000149  
Critical Value of Dunnnett's T= 2.073

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	-0.006807	0.003000	0.012807
TRT3 - CONTROL	-0.011615	-0.001688	0.008240
TRT1 - CONTROL	-0.012339	-0.002737	0.006866

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL

18. ANALYSIS OF HATCHLING WEIGHT  
\*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure  
Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 80

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

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL

18. ANALYSIS OF HATCHLING WEIGHT  
\*\*\*\*\*

14:50 Friday, December 22, 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

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL

18. ANALYSIS OF HATCHLING WEIGHT  
\*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure

Dependent Variable: HATWT	DF	Sum of Squares	Mean Square	F Value	Pr > F
Source	3	0.0218813	0.0072938	0.03	0.9936
Model	57	14.8525449	0.2605710		
Error	60	14.8744262			
Corrected Total					
R-Square		C.V.	Root MSE	HATWT Mean	
0.001471		7.696034	0.5105	6.6328	

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	0.0218813	0.0072938	0.03	0.9936

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL

18. ANALYSIS OF HATCHLING WEIGHT  
\*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure

Least Squares Means

LEVEL	HATWT Pr >  T	LSMEAN(i)=LSMEAN(j)
		1 2 3 4
		2 3 4
		3 4
		4



CONTROL	6.64000000	1	0.9707	0.8485	0.9954
TRT1	6.64736842	2	0.9707	0.7892	0.9711
TRT2	6.60000000	3	0.8485	0.7892	0.8207
TRT3	6.64117647	4	0.9954	0.9711	0.8207

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

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
18. ANALYSIS OF HATCHLING WEIGHT  
\*\*\*\*\*

14:50 Friday, December 22, 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= 57 MSE= 0.260571  
Critical Value of Studentized Range= 3.743

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

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT1 - TRT3	-0.44481	0.00619	0.45720
TRT1 - CONTROL	-0.52041	0.00737	0.53515
TRT1 - TRT2	-0.41923	0.04737	0.51397
TRT3 - TRT1	-0.45720	-0.00619	0.44481
TRT3 - CONTROL	-0.53720	0.00118	0.53956
TRT3 - TRT2	-0.43738	0.04118	0.51974
CONTROL - TRT1	-0.53515	-0.00737	0.52041
CONTROL - TRT3	-0.53956	-0.00118	0.53720
CONTROL - TRT2	-0.51151	0.04000	0.59151
TRT2 - TRT1	-0.51397	-0.04737	0.41923
TRT2 - TRT3	-0.51974	-0.04118	0.43738
TRT2 - CONTROL	-0.59151	-0.04000	0.51151

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
18. ANALYSIS OF HATCHLING WEIGHT  
\*\*\*\*\*

14:50 Friday, December 22, 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= 57 MSE= 0.260571  
Critical Value of Dunnnett's T= 2.069

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

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT1 - TRT3	-0.44481	0.00619	0.45720
TRT1 - CONTROL	-0.52041	0.00737	0.53515
TRT1 - TRT2	-0.41923	0.04737	0.51397
TRT3 - TRT1	-0.45720	-0.00619	0.44481
TRT3 - CONTROL	-0.53720	0.00118	0.53956
TRT3 - TRT2	-0.43738	0.04118	0.51974
CONTROL - TRT1	-0.53515	-0.00737	0.52041
CONTROL - TRT3	-0.53956	-0.00118	0.53720
CONTROL - TRT2	-0.51151	0.04000	0.59151
TRT2 - TRT1	-0.51397	-0.04737	0.41923
TRT2 - TRT3	-0.51974	-0.04118	0.43738
TRT2 - CONTROL	-0.59151	-0.04000	0.51151

TRT1	- CONTROL	-0.40518	0.00737	0.41992
TRT3	- CONTROL	-0.41966	0.00118	0.42201
TRT2	- CONTROL	-0.47110	-0.04000	0.39110

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
19. ANALYSIS OF 14-DAY SURVIVOR WEIGHT  
\*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure  
Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 80

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

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
19. ANALYSIS OF 14-DAY SURVIVOR WEIGHT  
\*\*\*\*\*

14:50 Friday, December 22, 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

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
19. ANALYSIS OF 14-DAY SURVIVOR WEIGHT  
\*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure

Dependent Variable: SURVWT	Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
	Model	3	57.717474	19.239158	1.51	0.2220
	Error	58	740.032365	12.759179		
	Corrected Total	61	797.749839			

R-Square	C.V.	Root MSE	SURVWT Mean
0.072350	15.33153	3.5720	23.298

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	57.717474	19.239158	1.51	0.2220

32

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL

19. ANALYSIS OF 14-DAY SURVIVOR WEIGHT  
\*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure  
Least Squares Means

LEVEL	SURVWT	Pr >  T	H0: LSMEAN(i)=LSMEAN(j)
LSMEAN	i/j	1	2 3 4
CONTROL	21.2363636	1	0.0881 0.0780 0.0600
TRT1	23.5842105	2	0.0881 0.8745 0.7997
TRT2	23.7800000	3	0.0780 0.8745 0.9321
TRT3	23.8882353	4	0.0600 0.7997 0.9321

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

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL

19. ANALYSIS OF 14-DAY SURVIVOR WEIGHT  
\*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models 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= 58 MSE= 12.75918  
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
TRT3	- TRT2	-3.239	0.108	3.455
TRT3	- TRT1	-2.850	0.304	3.458
TRT3	- CONTROL	-1.004	2.652	6.308
TRT2	- TRT3	-3.455	-0.108	3.239
TRT2	- TRT1	-3.068	0.196	3.459
TRT2	- CONTROL	-1.207	2.544	6.294
TRT1	- TRT3	-3.458	-0.304	2.850
TRT1	- TRT2	-3.459	-0.196	3.068
TRT1	- CONTROL	-1.232	2.348	5.928
CONTROL	- TRT3	-6.308	-2.652	1.004
CONTROL	- TRT2	-6.294	-2.544	1.207
CONTROL	- TRT1	-5.928	-2.348	1.232

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL

19. ANALYSIS OF 14-DAY SURVIVOR WEIGHT  
\*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure

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

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 MSE= 12.75918  
Critical Value of Dunnnett's T= 2.076

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

LEVEL	Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT3	- CONTROL	-0.217	2.652	5.521
TRT2	- CONTROL	-0.399	2.544	5.487
TRT1	- CONTROL	-0.461	2.348	5.157

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL

20. ANALYSIS OF FOOD CONSUMPTION  
\*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure  
Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 80

NOTE: Due to missing values, only 68 observations can be used in this analysis.

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL

20. ANALYSIS OF FOOD CONSUMPTION  
\*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure  
Type I Estimable Functions for: LEVEL

Coefficients

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

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL

20. ANALYSIS OF FOOD CONSUMPTION  
\*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure

Dependent Variable: FOOD	DF	Sum of Squares	Mean Square	F Value	Pr > F
Source	3	4.3731529	1.4577176	0.41	0.7490
Model	64	229.6021413	3.5875335		
Error	67	233.9752941			
Corrected Total					

33

R-Square	C.V.	Root MSE	FOOD Mean
0.018691	9.987387	1.8941	18.965

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	4.3731529	1.4577176	0.41	0.7490

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
20. ANALYSIS OF FOOD CONSUMPTION  
\*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure  
Least Squares Means

LEVEL	FOOD LSMEAN	Pr >  T	H0: LSMEAN(i)=LSMEAN(j)
	i/j	1	2 3 4
CONTROL	19.2230769	1	0.3847 0.6182 0.9990
TRT1	18.6263158	2	0.3847 0.6878 0.3424
TRT2	18.8777778	3	0.6182 0.6878 0.5873
TRT3	19.2222222	4	0.9990 0.3424 0.5873

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

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
20. ANALYSIS OF FOOD CONSUMPTION  
\*\*\*\*\*

14:50 Friday, December 22, 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= 64 MSE= 3.587533  
Critical Value of Studentized Range= 3.730

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

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Upper Confidence Limit
CONTROL - TRT3	-1.8177	0.0009	1.8194
CONTROL - TRT2	-1.4732	0.3453	2.1638
CONTROL - TRT1	-1.2016	0.5968	2.3951
TRT3 - CONTROL	-1.8194	-0.0009	1.8177
TRT3 - TRT2	-1.3210	0.3444	2.0099
TRT3 - TRT1	-1.0475	0.5959	2.2393
TRT2 - CONTROL	-2.1638	-0.3453	1.4732
TRT2 - TRT3	-2.0099	-0.3444	1.3210
TRT2 - TRT1	-1.3919	0.2515	1.8948
TRT1 - CONTROL	-2.3951	-0.5968	1.2016
TRT1 - TRT3	-2.2393	-0.5959	1.0475
TRT1 - TRT2	-1.8948	-0.2515	1.3919

34

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
20. ANALYSIS OF FOOD CONSUMPTION  
\*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure

Dunnett'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= 64 MSE= 3.587533  
Critical Value of Dunnett's T= 2.078

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

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Upper Confidence Limit
TRT3 - CONTROL	-1.4335	-0.0009	1.4318
TRT2 - CONTROL	-1.7779	-0.3453	1.0873
TRT1 - CONTROL	-2.0135	-0.5968	0.8200

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
21. COVARIATE ANALYSIS OF MALE BODY WEIGHT  
\*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure  
Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 80

NOTE: Due to missing values, only 68 observations can be used in this analysis.

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
21. COVARIATE ANALYSIS OF MALE BODY WEIGHT  
\*\*\*\*\*

14:50 Friday, December 22, 1995

General Linear Models Procedure

Dependent Variable: POSTM	DF	Sum of Squares	Mean Square	F Value	Pr > F
Source	4	7869.5361	1967.3840	14.63	0.0001
Model	4	7869.5361	1967.3840	14.63	0.0001
Error	63	8474.2286	134.5116		
Corrected Total	67	16343.7647			

R-Square	C.V.	Root MSE	POSTM Mean
0.481501	6.038729	11.598	192.06

Source	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	704.4451	234.8150	1.75
PREM	1	7165.0910	53.27	0.0001

Source	Type III SS	Mean Square	F Value	Pr > F
LEVEL	3	207.2870	69.0957	0.51
PREM	1	7165.0910	53.27	0.0001

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL

21. COVARIATE ANALYSIS OF MALE BODY WEIGHT

14:50 Friday, December 22, 1995

General Linear Models Procedure  
Least Squares Means

LEVEL	POSTM LSMEAN	Std Err LSMEAN	Pr >  T  LSMEAN=0	LSMEAN Number
CONTROL	194.862255	3.247299	0.0001	1
TRT1	189.790363	2.667350	0.0001	2
TRT2	192.697311	2.740565	0.0001	3
TRT3	191.790122	2.825318	0.0001	4

Pr > |T| H0: LSMEAN(I)=LSMEAN(J)

i/j	1	2	3	4
1		0.2298	0.6105	0.4854
2	0.2298		0.4489	0.6117
3	0.6105	0.4489		0.8200
4	0.4854	0.6117	0.8200	

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

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL

21. COVARIATE ANALYSIS OF MALE BODY WEIGHT

14:50 Friday, December 22, 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= 63 MSE= 134.5116  
Critical Value of Studentized Range= 3.732

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

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT3 - CONTROL	-5.755	5.385	16.525
TRT3 - TRT2	-4.480	5.722	15.924
TRT3 - TRT1	-1.488	8.579	18.646
CONTROL - TRT3	-16.525	-5.385	5.755
CONTROL - TRT2	-10.802	-0.338	11.478
CONTROL - TRT1	-7.822	3.194	14.211

Source	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	15.924	0.119	0.938
PREM	1	11.478	0.838	0.362

Source	Type III SS	Mean Square	F Value	Pr > F
LEVEL	3	18.646	0.137	0.938
PREM	1	14.211	1.038	0.362

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL

21. COVARIATE ANALYSIS OF MALE BODY WEIGHT

14:50 Friday, December 22, 1995

General Linear Models Procedure

Dunnett'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= 63 MSE= 134.5116  
Critical Value of Dunnett's T= 2.079

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

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT3 - CONTROL	-3.390	5.385	14.159
TRT2 - CONTROL	-9.112	-0.338	8.437
TRT1 - CONTROL	-11.872	-3.194	5.483

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL

22. COVARIATE ANALYSIS OF FEMALE BODY WEIGHT

14:50 Friday, December 22, 1995

General Linear Models Procedure

Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 80

NOTE: Due to missing values, only 68 observations can be used in this analysis.

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL

22. COVARIATE ANALYSIS OF FEMALE BODY WEIGHT

14:50 Friday, December 22, 1995

General Linear Models Procedure

Dependent Variable: POSTF	Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
	Model	4	14480.134	3620.034	12.29	0.0001
	Error	63	18562.748	294.647		

Corrected Total 67 33042.882

R-Square 0.438222 8.265394 C.V. 17.165 Root MSE 207.68

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	1936.500	645.500	2.19	0.0979
PREF	1	12543.634	12543.634	42.57	0.0001
Source	DF	Type III SS	Mean Square	F Value	Pr > F
LEVEL	3	1068.914	356.305	1.21	0.3137
PREF	1	12543.634	12543.634	42.57	0.0001

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
22. COVARIATE ANALYSIS OF FEMALE BODY WEIGHT

14:50 Friday, December 22, 1995

General Linear Models Procedure  
Least Squares Means

LEVEL	POSTF LSMEAN	Std Err LSMEAN	Pr >  T  HO: LSMEAN=0	LSMEAN Number
CONTROL	209.886318	4.873839	0.0001	1
TRT1	206.352977	3.982615	0.0001	2
TRT2	212.807900	4.068642	0.0001	3
TRT3	202.346061	4.156318	0.0001	4

Pr > |T| HO: LSMEAN(i)=LSMEAN(j)

i/j	1	2	3	4
1		0.5704	0.6506	0.2546
2	0.5704		0.2649	0.4962
3	0.6506	0.2649		0.0734
4	0.2546	0.4962	0.0734	

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

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
22. COVARIATE ANALYSIS OF FEMALE BODY WEIGHT

14:50 Friday, December 22, 1995

General Linear Models Procedure

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

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

Alpha= 0.05 Confidence= 0.95 df= 63 MSE= 294.6468  
Critical Value of Studentized Range= 3.732

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

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
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36

TRT2 - TRT3 -8.044 7.056 22.155  
TRT2 - CONTROL -3.953 12.534 29.022  
TRT2 - TRT1 -1.762 13.137 28.037

TRT3 - TRT2 -22.155 -7.056 8.044  
TRT3 - CONTROL -11.009 5.479 21.966  
TRT3 - TRT1 -8.818 6.082 20.981

CONTROL - TRT2 -12.534 -2.155 3.953  
CONTROL - TRT3 -5.479 -11.009 11.009  
CONTROL - TRT1 -15.701 0.603 16.908

TRT1 - TRT2 -13.137 -28.037 1.762  
TRT1 - TRT3 -6.082 -20.981 8.818  
TRT1 - CONTROL -0.603 -16.908 15.701

ICIA5504: EFFECTS ON REPRODUCTION IN BOBWHITE QUAIL  
22. COVARIATE ANALYSIS OF FEMALE BODY WEIGHT

14:50 Friday, December 22, 1995

General Linear Models Procedure

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

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

Alpha= 0.05 Confidence= 0.95 df= 63 MSE= 294.6468  
Critical Value of Dunnett's T= 2.079

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	-0.453	12.534	25.521
TRT3 - CONTROL	-7.508	5.479	18.466
TRT1 - CONTROL	-13.446	-0.603	12.240