

US EPA ARCHIVE DOCUMENT

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

1. **CHEMICAL:** XDE-105 **PC Code No.:** 11003

2. **TEST MATERIAL:** Spinosad **Purity:** 88%

3. **CITATION**

Authors: Beavers, J.B., K. Chafey, L.R. Mitchell
and M. Jaber

Title: XDE-105 Insecticide: A Reproduction Study
With the Northern Bobwhite (*Colinus
virginianus*)

Study Completion Date: 1994

Laboratory: Wildlife International Ltd.

Sponsor: DowElanco

Laboratory Report ID: 103-387

MRID No.: 43414533

4. **REVIEWED BY:** Joanne S. Edwards, Entomologist, EEB, EFED

Signature: *Joanne S. Edwards* **Date:** 4/27/96

5. **APPROVED BY:** Leslie Touart, Head of Section 1, EEB, EFED

Signature: *L. Touart* **Date:** 3/25/96

6. **STUDY PARAMETERS**

Scientific Name of Test Organism: Bobwhite

Age of Test Organisms at Test Initiation: 25 weeks

Definitive Study Duration: 21 weeks

7. **CONCLUSIONS:**

Results Synopsis

Most sensitive endpoints: # eggs laid, live-three week
embryos, normal hatchlings, fourteen day old survivors and
hatchling weight

NOEC: 550 ppm ai

LOEC: 1100 ppm ai

8. **ADEQUACY OF THE STUDY**

A. **Classification:** Core.

B. **Rationale:** N/A

C. **Repairability:** N/A

9. **GUIDELINE DEVIATIONS**

1. None.

10. SUBMISSION PURPOSE:

11. MATERIALS AND METHODS

A. Test Organisms

Guideline Criteria	Reported Information
Species A wild waterfowl species, preferably the mallard (<i>Anas platyrhynchos</i>), or an upland game species, preferably the northern bobwhite (<i>Colinus virginianus</i>)	Northern Bobwhite (<i>Colinus virginianus</i>)
Age at beginning of test Birds should be approaching their first breeding season.	25 weeks old
Supplier All birds should be from the same source.	Top Flight Quail Farm, Belvidere, NJ
Were birds pen-reared?	Yes
Were birds phenotypically indistinguishable from wild birds?	Yes
Health observation period 2 to 6 weeks.	11 week acclimation
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 (30 X 51 cm; sloping floors so ceiling height ranged 21 - 26 cm)
Were pens for chicks of adequate size and designed to conform to good husbandry practices?	Yes (72 X 90 X 23 cm high)

Guideline Criteria	Reported Information
Where pens constructed of a nonbinding material such as galvanized or stainless steel?	Yes- galvanized wire
Was adequate ventilation provided?	Yes
Temperature Approx. 21°C (70°F)	Mean: 16.3 °C SD: 2.7 °C
Relative humidity Approx. 55%	Mean: 38%
Lighting First 8 weeks: 7 h per day. Thereafter: 16-17 h per day. At least 6 footcandles at bird level.	First 7 weeks: 8 h per day. Thereafter: 17 h per day. (367 lux)
Diet A commercial breeder feed (or its equivalent) that is appropriate for the test species.	Feed was formulated to Wildlife International LTD specifications and consisted of 27% protein minimum, 2.5% fat minimum, and 5% fiber maximum
Preparation of test diet	Test diets were prepared by mixing XDE-105 into a premix which was used for weekly preparation of the final diets
Was the premix stored under conditions which maintain stability?	Yes, based on results of analysis of diet samples held 7 days under ambient conditions
Was the diet analyzed to verify homogeneity and stability of the test substance?	Yes
Replenishment of feed	Presented to birds on Monday of each week; additional food was provided when needed.

C. Test Design

Guideline Criteria	Reported Information
<p><u>Nominal concentrations</u> At least two concentrations other than the control are required; three or more are strongly recommended. The highest test concentrations should show a significant effect or be at or above the maximum field residue level.</p>	<p>Nominal concentrations: 550, 1100 and 2200 ppm</p> <p>Max. residue level: unknown (label not available)</p>
<p><u>Control</u> Vehicle control.</p>	<p>Acetone</p>
<p><u>Vehicle</u> Corn oil or other appropriate vehicle.</p>	<p>Corn oil</p>
<p><u>Vehicle amount (% of diet by weight)</u> Not more than 2%.</p>	<p><2%</p>
<p><u>Number of birds per pen</u> One male and 1 female per pen is strongly recommended. For quail, 1 male and 2 females may be acceptable. For ducks, 2 males and 5 females may be acceptable.</p>	<p>1 male and 1 female per pen.</p>
<p><u>Number of pens per group</u> At least 5 replicate pens are required for mallards housed in groups of 7. For other arrangements, at least 12 pens are required, but considerably more may be needed if birds are kept in pairs.</p>	<p>16 pens per group.</p>
<p><u>Pre-laying exposure duration</u> At least 10 weeks prior to the onset of egg-laying.</p>	<p>7 weeks-pre-laying lighting regime- birds began laying eggs during week 13</p>
<p><u>Exposure duration with egg-laying</u> At least 10 weeks.</p>	<p>14 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
<u>Were eggs collected daily?</u>	Yes
<u>Egg storage temperature</u> Approximately 16°C (61°F)	12.9 °C
<u>Egg storage humidity</u> Approximately 65%	61%
<u>Were eggs set weekly?</u>	Yes
<u>Were eggs candled for cracks prior to being set for incubation on Day 0?</u>	Yes
<u>Candling for fertility</u> Quail: approx. Day 11 Ducks: approx. Day 14	Eggs were candled on Day 11.
<u>Incubator Temperature and Humidity</u>	37.5 °C 56% relative humidity
<u>Transfer of eggs to hatcher</u> Bobwhite: Day 21 Mallard: Day 23	Eggs were transferred on Day 21.
<u>Hatching temperature</u> 39°C (102°F) is recommended	37.2 °C
<u>Hatching humidity</u> 70% is recommended	76 %
<u>Day after egg set that chicks were removed and counted</u> Bobwhite: Day 24 Mallard: Day 27	Chicks were removed and counted on Day 25 or 26.

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E. Eggshell Thickness Measurement

Guideline Criteria	Reported Information
Collection Schedule At least once every two weeks (Week 1, 3, 5, 7 and 9).	At weekly intervals
Were shells opened, washed, and air dry for at least 48 hours before measuring?	Yes
Measurement 3-4 measurements per eggs to the nearest 0.01 mm.	5 points to the nearest 0.005

12. REPORTED RESULTS

Guideline Criteria	Reported Information
Quality assurance and GLP compliance statements were included in the report?	Yes
Did diet analysis verify the concentrations of test material?	Yes
Did diet analysis show that the test substance was stable and homogeneous?	Yes
Were body weights of adults reported for test initiation and biweekly up to week 8 or the onset of egg laying?	Yes
Was average food consumption of adults reported at least biweekly?	Yes

Guideline Criteria	Reported Information
<p>Reproductive Endpoints The following endpoints should be reported:</p> <ul style="list-style-type: none"> • Eggs laid • Eggs cracked • Eggs set • Viable embryos • Live 3-week embryos • Normal hatchlings • 14-day-old survivors • Weights of 14-day-old survivors • Egg shell thickness • Total food consumption • Initial and final body weights, by sex 	<p>All listed endpoints were measured. However, total food consumption per pen was not provided, rather:</p> <ul style="list-style-type: none"> o by pen for each week, average gram/bird/day o mean consumption per treatment level per week (grams/bird/day)
<p>Were data reported by pen for all endpoints?</p>	<p>Yes, except as noted above</p>

Significant Results:

Mortality/Gross Necropsy:

Mortalities: Two incidental mortalities occurred in both the control and 550 ppm treatment levels. One treatment related mortality occurred in the 1100 ppm treatment level and two incidental and six treatment related mortalities occurred in the 22000 ppm treatment level.

Gross Necropsy: At the 1100 ppm treatment level one hen was noted with a flaccid gizzard and four hens were noted with a distended ceca. These were considered to be treatment related effects. At the 2200 ppm treatment level effects were noted on reproductive condition (regressed ovaries and testes) and the gastro-intestinal tract (distended and flaccid gizzards), and were considered treatment related.

Adult Body Weight:

There were no treatment related effects on adult body weight in the 550 or 1100 ppm treatment groups. At the 2200 treatment level there was a treatment related reduction in body weight gain among both drakes and hens throughout the study. Male body weight was statistically significant ($p < 0.05$) from the control group for the week 2, 6, 8, and terminal body weight intervals. Hen body weight was statistically significant ($p < 0.05$) from the control group for the week 6, 8, and terminal body weight intervals.

Food Consumption:

Feed consumption was variable among pens due to excessive wastage. However, no treatment related effects were noted at any concentration level.

Eggshell Thickness:

No statistically significant effects were noted.

Offspring Body Weights:

At the 1100 ppm treatment level there was a slight, but statistically significant ($p < 0.05$) reduction in body weights of hatchlings, that was considered to be treatment related. At the 2200 ppm treatment level there reductions in body weight of both hatchlings and # of 14-day survivors that were statistically significant ($p < .05$).

Reproductive Results:

No apparent treatment related effects were noted at the lowest treatment level.

At the 1100 ppm treatment level there was a slight reduction in egg production that was not statistically significant. Also, there appeared to be a slight reduction in the survival of offspring to 14 days of age.

Statistically significant effects on reproductive performance were noted at the highest treatment level for the parameters: egg production, offspring survival, hatchlings as a percentage of both the maximum # of eggs set, and 14-day old survivors as percentages of both the number of eggs set and the maximum number set.

13. VERIFIED STATISTICAL RESULTS

EPA's Birdall Program was used to verify the laboratory findings.

Means of Endpoints

Endpoint	Control	550 ppm	1100 ppm	2200 ppm
Eggs laid (EL)	41.79	39.21	33.47	8.25*
Eggs cracked (EC)	0.86	0.57	1.07	0.13
Eggs set (ES)	35.79	34.29	27.93	5.87*
Viable embryos (VE)	31.21	30.29	23.33	5.00*
Live 3-wk embryos (LE)	30.64	30.07	22.27*	5.00*

Endpoint	Control	550 ppm	1100 ppm	2200 ppm
Normal hatchlings (NH)	28.86	27.43	20.73*	3.62*
14-day-old survivors (HS)	26.00	23.64	18.13*	2.25*
Egg shell thickness (THICK)	0.22	0.23	0.22	0.22
Hatchling weight (HATWT)	6.14	6.00	5.53*	5.33*
14-day-old survivor weight (SURVWT)	23.43	22.79	22.14	18.60*
Food consumption (FOOD) ¹	524	538	538	403*
Final weight of males (POSTM)	217	223	212	193*
Final weight of females (POSTF)	234	239	226	193*

¹ For each pen, weekly values reported (grams/bird/day) were totaled.

* Dunnett's test

Similar statistical findings were noted, except for the following:

- o Wildlife International reported slight reductions in egg production, 14 day survivors and hatchling body weight at the 1100 ppm treatment level, which were not statistically significant. Applying Dunnett's test we found statistically significant ($p < 0.05$) reductions in live three week embryos, normal hatchlings, 14 day survivors and hatchling body weight. We also noted a reduction in egg production at the 1100 treatment level, which can be considered to be biologically significant.

- o Wildlife International reported that feed consumption was variable among pens and no treatment related effects were noted at any concentration level. Applying Dunnett's test we found a statistically significant ($p < 0.05$) reduction in food consumption at the highest test concentration.

14. REVIEWER'S COMMENTS

The reviewer's findings were in general agreement with Wildlife International. There were no deviations noted with the following exception:

- o in the study room, the average temperature (16.3 °C) was lower than the recommended temperature (21 °C) and the relative humidity (38%) was lower than the recommended humidity (55%).

The NOEC for bobwhite exposed to spinosad in the diet for 21 weeks is 550 ppm based upon the following findings:

- o at the 550 ppm treatment level: no apparent chronic or reproductive effects noted.

- o at the 1100 ppm treatment level: a statistically significant reduction in live-three week embryos, normal hatchlings, fourteen day old survivors and hatchling weight and a reduction in eggs laid (viewed as biologically significant; one mortality and associated necropsy findings similar to the 2200 ppm treatment group.

- o at the 2200 ppm treatment level: a statistically significant reduction in eggs laid, viable embryos, live-three week embryos, normal hatchlings, 14 day old survivors, hatchling weight, 14 day survivor weight and adult terminal body weight; 6 adult mortalities; effects on reproduction condition (regressed ovaries/testes) and-gastro-intestinal tract (distended and flaccid livers)

DER dated 4/27/96 (MRID 4344533)

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Pages 11 through 12 are not included in this copy.

The material not included contains the following type of information:

- Identity of product inert ingredients.
 - Identity of product impurities.
 - Description of the product manufacturing process.
 - Description of quality control procedures.
 - Identity of the source of product ingredients.
 - Sales or other commercial/financial information.
 - A draft product label.
 - The product confidential statement of formula.
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234.29 | 239.71 | 225.80 | 193.12

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
11:45 Wednesday, December 13, 1995

LEVEL=CONTROL

N Obs	Variable	Label	N	Mean	Std Dev
16	EL		14	41.786	13.594
	EC		14	0.857	0.864
	ES		14	35.786	11.396
	VE		14	31.214	12.374
	LE		14	30.643	12.245
	NH		14	28.857	11.999
	HS		14	26.000	12.527
	THICK		14	0.224	0.013
	HATWT		14	6.143	0.864
	SURVWT		14	23.429	4.014
	FOOD		16	524.375	33.460
	PREM		16	204.812	11.583
	POSTM		16	216.500	20.410
	PRRF		16	199.625	11.401
	POSTP		14	234.286	16.150
	BS_EL	BS/EL (%)	14	85.604	6.466
	NH_EL	NH/EL (%)	14	68.779	18.528
	NC_EL	(EL-EC)/EL (%)	14	97.733	2.409
	VE_ES	VE/ES (%)	14	86.970	19.604
	NH_ES	NH/ES (%)	14	80.114	19.491
	HS_ES	HS/ES (%)	14	70.665	21.837
	LE_VE	LE/VE (%)	14	98.205	2.675
	NH_LE	NH/LE (%)	14	93.891	5.492
	HS_NH	HS/NH (%)	14	88.510	15.468

N Obs	Variable	Label	CV
16	EL		32.533
	EC		100.851
	ES		31.846
	VE		39.641
	LE		39.960
	NH		41.581
	HS		48.180
	THICK		5.816
	HATWT		14.072
	SURVWT		17.132
	FOOD		6.381
	PREM		5.655
	POSTM		9.427
	PRRF		5.711
	POSTP		6.893
	BS_EL	BS/EL (%)	7.553
	NH_EL	NH/EL (%)	26.938
	NC_EL	(EL-EC)/EL (%)	2.465
	VE_ES	VE/ES (%)	22.541
	NH_ES	NH/ES (%)	24.329
	HS_ES	HS/ES (%)	30.902
	LE_VE	LE/VE (%)	2.724
	NH_LE	NH/LE (%)	5.850
	HS_NH	HS/NH (%)	17.476

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
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LEVEL=TRT2

N Obs	Variable	Label	N	Mean	Std Dev
16	EL		14	39.214	7.954
	EC		14	0.571	0.756
	ES		14	34.286	7.630
	VE		14	30.286	6.799
	LE		14	30.071	6.731
	NH		14	27.429	6.914
	HS		14	23.643	7.001
	THICK		14	0.231	0.014
	HATWT		14	6.000	0.392
	SURVWT		14	22.786	2.547
	FOOD		16	538.125	105.528
	PREM		16	205.437	14.269
	POSTM		14	222.857	21.636
	PRRF		16	202.937	11.246
	POSTP		14	239.714	12.474
	BS_EL	BS/EL (%)	14	87.161	3.827
	NH_EL	NH/EL (%)	14	69.820	9.964
	NC_EL	(EL-EC)/EL (%)	14	98.477	2.132
	VE_ES	VE/ES (%)	14	88.732	8.336
	NH_ES	NH/ES (%)	14	79.853	8.862
	HS_ES	HS/ES (%)	14	68.437	10.323
	LE_VE	LE/VE (%)	14	99.312	2.023
	NH_LE	NH/LE (%)	14	90.859	8.108
	HS_NH	HS/NH (%)	14	85.755	9.280

N Obs	Variable	Label	CV
16	EL		20.282
	EC		132.288
	ES		22.255
	VE		22.448
	LE		22.382
	NH		25.207
	HS		29.612
	THICK		5.922
	HATWT		6.537
	SURVWT		11.180
	FOOD		19.610
	PREM		6.946
	POSTM		9.709
	PRRF		5.541
	POSTP		5.204
	BS_EL	BS/EL (%)	4.391
	NH_EL	NH/EL (%)	14.271
	NC_EL	(EL-EC)/EL (%)	2.165
	VE_ES	VE/ES (%)	9.394
	NH_ES	NH/ES (%)	11.098
	HS_ES	HS/ES (%)	15.099
	LE_VE	LE/VE (%)	2.037
	NH_LE	NH/LE (%)	8.973
	HS_NH	HS/NH (%)	10.821

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
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N Obs	Variable	Label	N	Mean	Std Dev
16	EL		15	33.467	16.239
	EC		15	1.067	2.815

LEVEL=TRT2

N Obs	Variable	Label	Mean	Std Dev
15	BS	BS/BL (%)	27.933	13.818
15	VE	NH/BL (%)	23.333	13.563
15	LB	(BL-BC)/BL (%)	22.267	12.731
15	NH	VE/BS (%)	20.733	12.442
15	HS	NH/BS (%)	18.133	11.643
14	THICK	HS/BS (%)	0.221	0.017
15	HATWT	LE/VE (%)	5.533	0.640
14	SURVWT	NH/LE (%)	22.143	1.231
16	FOOD	ES/BL (%)	538.125	57.645
16	PREM	NH/BL (%)	207.250	12.599
15	POSTM	VE/BS (%)	212.467	12.972
16	PRRP	NH/BS (%)	198.187	11.918
15	POSTP	LE/VE (%)	225.800	11.258
15	BS_BL	NH/LE (%)	84.513	9.015
15	NH_BL	HS/BL (%)	90.934	18.581
15	ENC_BL	(BL-BC)/BL (%)	82.169	25.783
15	VE_BS	VE/BS (%)	20.15	16.101
15	NH_BS	NH/BS (%)	73.936	20.151
15	HS_BS	HS/BS (%)	57.501	26.741
15	LE_VE	LE/VE (%)	97.236	9.277
15	NH_LE	NH/LE (%)	91.469	11.646
15	HS_NH	HS/NH (%)	79.254	29.001

N Obs Variable Label

N Obs	Variable	Label	Mean	Std Dev
16	BL	BS/BL (%)	48.522	11.565
16	BC	(BL-BC)/BL (%)	263.899	5.561
16	BS	VE/BS (%)	49.466	10.712
16	VE	NH/BS (%)	58.127	6.079
16	LE	LE/VE (%)	57.173	6.105
16	NH	HS/BS (%)	59.867	6.013
16	HS	LE/VE (%)	64.206	4.986
16	THICK	HS/BL (%)	7.574	10.667
16	HATWT	NH/BL (%)	7.574	28.571
16	SURVWT	(BL-BC)/BL (%)	11.565	28.353
16	FOOD	VE/BS (%)	5.561	19.595
16	PREM	NH/BS (%)	10.712	27.255
16	POSTM	HS/BS (%)	6.079	46.505
16	PRRP	LE/VE (%)	6.105	9.541
16	POSTP	NH/LE (%)	4.986	12.732
16	BS_BL	ES/BL (%)	10.667	36.593
16	NH_BL	NH/BL (%)	28.571	28.353
16	ENC_BL	(BL-BC)/BL (%)	28.353	19.595
16	VE_BS	VE/BS (%)	19.595	27.255
16	NH_BS	NH/BS (%)	27.255	46.505
16	HS_BS	HS/BS (%)	46.505	9.541
16	LE_VE	LE/VE (%)	9.541	12.732
16	NH_LE	NH/LE (%)	12.732	36.593
16	HS_NH	HS/NH (%)	36.593	28.353

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
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LEVEL=TRT3

N Obs	Variable	Label	Mean	Std Dev
16	BL	BS/BL (%)	8.250	6.714
16	BC	(BL-BC)/BL (%)	0.125	0.354
16	BS	VE/BS (%)	5.875	5.436
16	VE	NH/BS (%)	5.000	5.099
16	LE	LE/VE (%)	5.000	5.099
16	NH	HS/BS (%)	3.625	4.749
16	HS	LE/VE (%)	2.250	2.915
16	THICK	NH/LE (%)	0.028	0.028
16	HATWT	HS/NH (%)	5.333	0.816

N Obs	Variable	Label	Mean	Std Dev
5	SURVWT	BS/BL (%)	18.600	4.827
16	FOOD	NH/BL (%)	402.500	186.851
16	PREM	(BL-BC)/BL (%)	203.812	15.229
8	POSTM	VE/BS (%)	192.625	20.325
16	PRRP	NH/BS (%)	199.687	12.552
8	POSTP	HS/BS (%)	193.125	32.445
6	BS_BL	ES/BL (%)	68.492	13.732
6	NH_BL	NH/BL (%)	34.492	28.226
6	ENC_BL	(BL-BC)/BL (%)	98.958	2.552
6	VE_BS	VE/BS (%)	83.259	15.376
6	NH_BS	NH/BS (%)	49.190	34.936
6	HS_BS	HS/BS (%)	43.860	34.253
6	LE_VE	LE/VE (%)	100.000	0.000
6	NH_LE	NH/LE (%)	61.382	42.209
5	HS_NH	HS/NH (%)	63.000	33.300

N Obs Variable Label

N Obs	Variable	Label	Mean	Std Dev
16	BL	BS/BL (%)	81.376	16.800
16	BC	(BL-BC)/BL (%)	282.843	20.049
16	BS	VE/BS (%)	92.533	15.309
16	VE	NH/BS (%)	101.980	12.869
16	LE	LE/VE (%)	101.980	12.869
16	NH	HS/BS (%)	131.009	12.869
16	HS	LE/VE (%)	129.577	15.309
16	THICK	HS/BL (%)	12.869	25.952
16	HATWT	NH/BL (%)	15.309	46.423
16	SURVWT	(BL-BC)/BL (%)	25.952	7.487
16	FOOD	VE/BS (%)	46.423	10.552
16	PREM	NH/BS (%)	7.487	6.286
16	POSTM	HS/BS (%)	10.552	16.800
16	PRRP	LE/VE (%)	6.286	20.049
16	POSTP	ES/BL (%)	16.800	81.833
16	BS_BL	NH/BL (%)	20.049	2.578
16	NH_BL	NH/BL (%)	81.833	18.466
16	ENC_BL	(BL-BC)/BL (%)	2.578	71.023
16	VE_BS	VE/BS (%)	18.466	78.095
16	NH_BS	NH/BS (%)	71.023	0.000
16	HS_BS	HS/BS (%)	78.095	68.765
16	LE_VE	LE/VE (%)	0.000	52.857
16	NH_LE	NH/LE (%)	68.765	12.869
16	HS_NH	HS/NH (%)	52.857	12.869

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES

1. ANALYSIS OF EGGS LAID

11:45 Wednesday, December 13, 1995

General Linear Models Procedure
Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 51 observations can be used in this analysis.

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES

1. ANALYSIS OF EGGS LAID

11:45 Wednesday, December 13, 1995

General Linear Models Procedure
Type I Estimable Functions for: LEVEL

Effect Coefficients

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

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
1. ANALYSIS OF EGGS LAID

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General Linear Models Procedure

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	6517.9739	2172.6580	14.12	0.0001
Error	47	7231.9476	153.8712		
Corrected Total	50	13749.9216			
R-Square	0.474037	37.16972	12.404		33.37255
C.V.			Root MSE		EL Mean

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	6517.9739	2172.6580	14.12	0.0001

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
1. ANALYSIS OF EGGS LAID

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General Linear Models Procedure
Least Squares Means

LEVEL	EL	Pr > T	H0: LSMEAN(1)=LSMEAN(J)		
	LSMEAN	1/1	2	3	4
CONTROL	41.7857143	1	0.5860	0.0775	0.0001
TRT1	39.2142857	2	0.5860	0.2186	0.0001
TRT2	33.4666667	3	0.0775	0.2186	0.0001
TRT3	8.2500000	4	0.0001	0.0001	0.0001

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

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
1. ANALYSIS OF EGGS LAID

11:45 Wednesday, December 13, 1995

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

NOTE: This test controls the type I experimentwise error rate.
Alpha = 0.05 Confidence = 0.95 df = 47 MSB = 153.8712
Critical Value of Studentized Range = 3.766

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
CONTROL	- TRT1	-9.915	2.571	2.571	15.058	***
CONTROL	- TRT2	-3.958	8.319	8.319	20.596	***
CONTROL	- TRT3	18.894	33.536	33.536	48.178	***
TRT1	- CONTROL	-15.058	-2.571	-2.571	9.915	***
TRT1	- TRT2	-6.529	5.748	5.748	18.025	***
TRT1	- TRT3	16.322	30.964	30.964	45.606	***
TRT2	- CONTROL	-20.596	-8.319	-8.319	3.958	***
TRT2	- TRT1	-18.025	-5.748	-5.748	6.529	***
TRT2	- TRT3	10.753	25.217	25.217	39.680	***
TRT3	- CONTROL	-48.178	-33.536	-33.536	-18.894	***
TRT3	- TRT1	-45.606	-30.964	-30.964	-16.322	***
TRT3	- TRT2	-39.680	-25.217	-25.217	-10.753	***

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
1. ANALYSIS OF EGGS LAID

11:45 Wednesday, December 13, 1995

General Linear Models Procedure

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

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

Alpha = 0.05 Confidence = 0.95 df = 47 MSB = 153.8712
Critical Value of Dunnett's T = 2.128

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
TRT1	- CONTROL	-12.547	-2.571	-2.571	7.404	***
TRT2	- CONTROL	-18.127	-8.319	-8.319	1.489	***
TRT3	- CONTROL	-45.233	-33.536	-33.536	-21.839	***

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
2. ANALYSIS OF EGGS CRACKED

11:45 Wednesday, December 13, 1995

General Linear Models Procedure
Class Level Information

Class Levels Values
 LEVEL 4 CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 51 observations can be used in this analysis.

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 2. ANALYSIS OF EGGS CRACKED

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure
 Type I Estimable Functions for: LEVEL

Effect Coefficients

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

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 2. ANALYSIS OF EGGS CRACKED

11:45 Wednesday, December 13, 1995

General Linear Models Procedure

Dependent Variable: BC

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	5.2056723	1.7352241	0.63	0.5978
Error	47	128.9511905	2.7436424		
Corrected Total	50	134.1568627			

R-Square	C.V.	Root MSR	BC Mean
0.038803	228.3138	1.5564	.7254902

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	5.2056723	1.7352241	0.63	0.5978

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES

2. ANALYSIS OF EGGS CRACKED

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure

Least Squares Means

LEVEL BC Pr > |T| H0: LSMEAN(1) = LSMEAN(4)

LEVEL	1/j	1	2	3	4
CONTROL	0.85714286	1	0.6502	0.7351	0.3237
TRT1	0.57142857	2	0.6502	0.4251	0.5460
TRT2	1.06666667	3	0.7351	0.4251	0.2004
TRT3	0.12500000	4	0.3237	0.5460	0.2004

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

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES

2. ANALYSIS OF EGGS CRACKED

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure

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

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

Alpha = 0.05 Confidence = 0.95 df = 47 MSR = 2.743642
 Critical Value of Studentized Range = 3.766

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	-1.430	0.210	0.210	1.849	
TRT2	- TRT1	-1.144	0.495	0.495	2.135	
TRT2	- TRT3	-0.990	0.942	0.942	2.873	
CONTROL	- TRT2	-1.849	-0.210	-0.210	1.430	
CONTROL	- TRT1	-1.382	0.286	0.286	1.953	
CONTROL	- TRT3	-1.223	0.732	0.732	2.687	
TRT1	- TRT2	-2.135	-0.495	-0.495	1.144	
TRT1	- CONTROL	-1.953	0.286	0.286	1.382	
TRT1	- TRT3	-1.509	0.446	0.446	2.402	
TRT3	- TRT2	-2.873	-0.942	-0.942	0.990	
TRT3	- CONTROL	-2.687	-0.732	-0.732	1.223	
TRT3	- TRT1	-2.402	-0.446	-0.446	1.509	

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES

2. ANALYSIS OF EGGS CRACKED

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure

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

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

Alpha = 0.05 Confidence = 0.95 df = 47 MSR = 2.743642
 Critical Value of Dunnnett's T = 2.128

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

Simultaneous

Simultaneous

LEVEl	Comparison	Lower Confidence Limit	Difference Between Means	Upper Confidence Limit
TRT2	- CONTROL	-1.100	0.210	1.519
TRT1	- CONTROL	-1.618	-0.286	1.046
TRT3	- CONTROL	-2.294	-0.732	0.830

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES

3. ANALYSIS OF EGGS SET

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure
 Class Level Information

Class	Levels	Values
LEVEl	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 51 observations can be used in this analysis.

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES

3. ANALYSIS OF EGGS SET

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure
 Type I Estimable Functions for: LEVEl

Effect Coefficients

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

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES

3. ANALYSIS OF EGGS SET

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure

Dependent Variable: BS

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	5310.8989	1770.2996	15.63	0.0001
Error	47	5325.0226	113.2984		
Corrected Total	50	10635.9216			

R-Square 0.499336
 C.V. 37.51573
 Root MSE 10.644
 BS Mean 28.37255

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEl	3	5310.8989	1770.2996	15.63	0.0001

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES

3. ANALYSIS OF EGGS SET

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure
 Least Squares Means

LEVEl	BS	Pr > T H0: LSMEAN(i)=LSMEAN(j)
CONTROL	35.7857143	1 0.7109 0.0530 0.0001
TRT1	34.2857143	2 0.7109 0.1150 0.0001
TRT2	27.9333333	3 0.0530 0.1150 0.0001
TRT3	5.8750000	4 0.0001 0.0001 0.0001

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

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES

3. ANALYSIS OF EGGS SET

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for Variable: BS

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

Alpha= 0.05 Confidence= 0.95 df= 47 MSR= 113.2984
 Critical Value of Studentized Range= 3.766

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

LEVEl	Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
CONTROL	- TRT1	-9.215	1.500	12.215
CONTROL	- TRT2	-2.682	7.852	18.387
CONTROL	- TRT3	17.346	29.911	42.475
TRT1	- CONTROL	-12.215	-1.500	9.215
TRT1	- TRT2	-4.182	6.352	16.887
TRT1	- TRT3	15.846	28.411	40.975
TRT2	- CONTROL	-18.387	-7.852	2.682
TRT2	- TRT1	-16.887	-6.352	4.182
TRT2	- TRT3	9.647	22.058	34.469
TRT3	- CONTROL	-42.475	-29.911	-17.346
TRT3	- TRT1	-40.975	-28.411	-15.846
TRT3	- TRT2	-34.469	-22.058	-9.647

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES

3. ANALYSIS OF EGGS SRT

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure

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

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

Alpha= 0.05 Confidence= 0.95 df= 47 MSB= 113.2984
 Critical Value of Dunnett's T= 2.128

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

LEVEL	Simultaneous			Simultaneous		
	Lower Confidence Limit	Difference Between Means	Upper Confidence Limit	Lower Confidence Limit	Difference Between Means	Upper Confidence Limit
TRT1 - CONTROL	-10.060	-1.500	7.060	-10.060	-1.500	7.060
TRT2 - CONTROL	-16.268	-7.852	0.563	-16.268	-7.852	0.563
TRT3 - CONTROL	-39.948	-29.911	-19.874	-39.948	-29.911	-19.874

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 4. ANALYSIS OF VIABLE EMBRYOS

11:45 Wednesday, December 13, 1995

General Linear Models Procedure
 Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 51 observations can be used in this analysis.

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 4. ANALYSIS OF VIABLE EMBRYOS

11:45 Wednesday, December 13, 1995

General Linear Models Procedure
 Type I Estimable Functions for: LEVEL

Coefficients

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

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 4. ANALYSIS OF VIABLE EMBRYOS

11:45 Wednesday, December 13, 1995

General Linear Models Procedure

Dependent Variable: VB

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	4162.1583	1387.3861	12.19	0.0001
Error	47	5348.5476	113.7989		
Corrected Total	50	9510.7059			

Source	DF	Type I SS	Mean Square	F Value	Pr > F
R-Square	0.437629	43.48925	10.668	24.52941	
C.V.			10.668		
Root MSR			10.668		
VB Mean					

LEVEL	DF	Type I SS	Mean Square	F Value	Pr > F
CONTROL	3	4162.1583	1387.3861	12.19	0.0001

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 4. ANALYSIS OF VIABLE EMBRYOS

11:45 Wednesday, December 13, 1995

General Linear Models Procedure
 Least Squares Means

LEVEL	VB	Pr > T HO: LSMEAN(1)=LSMEAN(3)
CONTROL	31.2142857	1
TRT1	30.2857143	2
TRT2	23.3333333	3
TRT3	5.0000000	4

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

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 4. ANALYSIS OF VIABLE EMBRYOS

11:45 Wednesday, December 13, 1995

General Linear Models Procedure

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

NOTE: This test controls the type I experimentwise error rate.
 Alpha= 0.05 Confidence= 0.95 df= 47 MSB= 113.7989
 Critical Value of Studentized Range= 3.766

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

LEVEL	Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
CONTROL - TRT1		-9.810	0.929	11.667
CONTROL - TRT2		-2.677	7.881	18.439

LEVEL	CONTROL	TRT1	TRT2	TRT3
CONTROL	13.622	26.214	38.806	***
TRT1	-11.667	-0.929	9.810	
TRT2	-3.606	6.952	17.510	
TRT3	12.694	25.286	37.878	***
CONTROL	-18.439	-7.881	2.677	
TRT1	-17.510	-6.952	3.606	
TRT2	5.895	18.333	30.772	***
TRT3	-38.806	-26.214	-13.622	***
CONTROL	-37.878	-25.286	-12.694	***
TRT1	-30.772	-18.333	-5.895	***

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 4. ANALYSIS OF VIABLE EMBRYOS

 11:45 Wednesday, December 13, 1995
 General Linear Models Procedure

Dunnett'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= 47 MSB= 113.7989
 Critical Value of Dunnett's T= 2.128

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

LEVEL	Simultaneous		Simultaneous	
	Lower Confidence Limit	Difference Between Means	Upper Confidence Limit	
TRT1 - CONTROL	-9.507	-0.929	7.650	
TRT2 - CONTROL	-16.315	-7.881	0.553	
TRT3 - CONTROL	-36.274	-26.214	-16.155	***

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 5. ANALYSIS OF LIVE 3-WEEK EMBRYOS

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure
 Class Level Information
 Class Levels Values
 LEVEL 4 CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 51 observations can be used in this analysis.

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 5. ANALYSIS OF LIVE 3-WEEK EMBRYOS

 11:45 Wednesday, December 13, 1995
 General Linear Models Procedure

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

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 5. ANALYSIS OF LIVE 3-WEEK EMBRYOS

 11:45 Wednesday, December 13, 1995
 General Linear Models Procedure

Dependent Variable: LB

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	4066.9238	1355.6413	12.77	0.0001
Error	47	4989.0762	106.1506		
Corrected Total	50	9056.0000			
R-Square		C.V.	Root MSB	LB Mean	
	0.449086	42.92891	10.303	24.00000	

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	4066.9238	1355.6413	12.77	0.0001

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 5. ANALYSIS OF LIVE 3-WEEK EMBRYOS

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure
 Least Squares Means

LEVEL	LB				
	Pr > T	HO: LSMEAN(1)=LSMEAN(2)	3	4	
CONTROL	30.6428571	1	0.8840	0.0337	0.0001
TRT1	30.0714286	2	0.8840	0.0471	0.0001
TRT2	22.2666667	3	0.0337	0.0471	0.0004
TRT3	5.0000000	4	0.0001	0.0001	0.0004

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

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 5. ANALYSIS OF LIVE 3-WEEK EMBRYOS

 11:45 Wednesday, December 13, 1995
 General Linear Models Procedure

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

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

Alpha= 0.05 Confidence= 0.95 df= 47 MSB= 106.1506
Critical Value of Studentized Range= 3.766

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
CONTROL - TRT1	-9.800	0.571	10.943	10.943	***
CONTROL - TRT2	-1.821	8.376	18.573	18.573	***
CONTROL - TRT3	13.481	25.643	37.804	37.804	***
TRT1 - CONTROL	-10.943	-0.571	9.800	9.800	***
TRT1 - TRT2	-2.392	7.805	18.002	18.002	***
TRT1 - TRT3	12.910	25.071	37.233	37.233	***
TRT2 - CONTROL	-18.573	-8.376	1.821	1.821	***
TRT2 - TRT1	-18.002	-7.805	2.392	2.392	***
TRT2 - TRT3	5.254	17.267	29.280	29.280	***
TRT3 - CONTROL	-37.804	-25.643	-13.481	-13.481	***
TRT3 - TRT1	-37.233	-25.071	-12.910	-12.910	***
TRT3 - TRT2	-29.280	-17.267	-5.254	-5.254	***

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES

5. ANALYSIS OF LAYE 3-WEEK EMBRYOS

11:45 Wednesday, December 13, 1995

General Linear Models Procedure

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

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

Alpha= 0.05 Confidence= 0.95 df= 47 MSB= 106.1506
Critical Value of Dunnnett's T= 2.128

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
TRT1 - CONTROL	-8.857	-0.571	7.714	7.714	***
TRT2 - CONTROL	-16.522	-8.376	-0.230	-0.230	***
TRT3 - CONTROL	-35.358	-25.643	-15.928	-15.928	***

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES

6. ANALYSIS OF NORMAL HATCHLINGS

11:45 Wednesday, December 13, 1995

General Linear Models Procedure
Class Level Information

Class Levels Values
LEVEL 4 CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 51 observations can be used in this analysis.

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES

6. ANALYSIS OF NORMAL HATCHLINGS

11:45 Wednesday, December 13, 1995

General Linear Models Procedure
Type I Estimable Functions for: LEVEL

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

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES

6. ANALYSIS OF NORMAL HATCHLINGS

11:45 Wednesday, December 13, 1995

General Linear Models Procedure

Dependent Variable: NH

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	3795.3429	1265.1143	12.37	0.0001
Error	47	4807.9512	102.2968		
Corrected Total	50	8603.2941			

R-Square C.V. Root MSB NH Mean
0.441150 45.72905 10.114 22.11765

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	3795.3429	1265.1143	12.37	0.0001

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES

6. ANALYSIS OF NORMAL HATCHLINGS

11:45 Wednesday, December 13, 1995

General Linear Models Procedure
Least Squares Means

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

LEVEL	Comparison	Confidence Limit	Between Means	Confidence Limit
CONTROL	CONTROL	28.8571429	0.7103	0.0358
TRT1	- CONTROL	27.4285714	2 0.7103	0.0813
TRT2	- CONTROL	20.7333333	3 0.0358	0.0001
TRT3	- CONTROL	3.6250000	4 0.0001	0.0003

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

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES

6. ANALYSIS OF NORMAL HATCHLINGS

 11:45 Wednesday, December 13, 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= 47 MSB= 102.2968
 Critical Value of Studentized Range= 3.766

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

LEVEL	Comparison	Simultaneous		Simultaneous	
		Lower Confidence Limit	Difference Between Means	Upper Confidence Limit	
CONTROL	- TRT1	-8.753	1.429	11.610	
CONTROL	- TRT2	-1.886	8.124	18.134	
CONTROL	- TRT3	13.293	25.232	37.171	****
TRT1	- CONTROL	-11.610	-1.429	8.753	
TRT1	- TRT2	-3.315	6.695	16.705	
TRT1	- TRT3	11.865	23.804	35.742	****
TRT2	- CONTROL	-18.134	-8.124	1.886	
TRT2	- TRT1	-16.705	-6.695	3.315	
TRT2	- TRT3	5.315	17.108	28.901	****
TRT3	- CONTROL	-37.171	-25.232	-13.293	****
TRT3	- TRT1	-35.742	-23.804	-11.865	****
TRT3	- TRT2	-28.901	-17.108	-5.315	****

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES

6. ANALYSIS OF NORMAL HATCHLINGS

 11:45 Wednesday, December 13, 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= 47 MSB= 102.2968
 Critical Value of Dunnnett's T= 2.128

Comparisons significant at the 0.05 level are indicated by '****'.
 Simultaneous Lower Difference Upper Simultaneous

LEVEL	Comparison	Confidence Limit	Between Means	Confidence Limit
TRT1	- CONTROL	-9.562	-1.429	6.705
TRT2	- CONTROL	-16.121	-8.124	-0.127
TRT3	- CONTROL	-34.769	-25.232	-15.695

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES

7. ANALYSIS OF 14-DAY-OLD SURVIVORS

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure
 Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 51 observations can be used in this analysis.

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES

7. ANALYSIS OF 14-DAY-OLD SURVIVORS

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure
 Type I Estimable Functions for: LEVEL

Effect	Coefficients
INTERCEPT	0

LEVEL	L2	L3	L4
CONTROL			
TRT1			
TRT2			
TRT3	-12	-13	-14

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES

7. ANALYSIS OF 14-DAY-OLD SURVIVORS

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure

Dependent Variable: HS	DF	Sum of Squares	Mean Square	F Value	Pr > F
Source					
Model	3	3238.5328	1079.5109	10.95	0.0001
Error	47	4634.4476	98.6053		
Corrected Total	50	7872.9804			
R-Square					
	0.411348	51.41431	9.9300		
Root MSE					
					19.31373

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	3238.5328	1079.5109	10.95	0.0001

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES

7. ANALYSIS OF 14-DAY-OLD SURVIVORS

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure
 Least Squares Means

LEVEL	HS	Pr > T	HO: LSMEAN(1)=LSMEAN(2)	LSMEAN 1/3	2	3	4
CONTROL	26.0000000	1	0.5330	0.0383	0.0001		
TRT1	23.6428571	2	0.5330	0.1421	0.0001		
TRT2	18.1333333	3	0.0383	0.1421	0.0006		
TRT3	2.2500000	4	0.0001	0.0001	0.0006		

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

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES

7. ANALYSIS OF 14-DAY-OLD SURVIVORS

 11:45 Wednesday, December 13, 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= 47 MSB= 98.60527
 Critical Value of Studentized Range= 3.766

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
CONTROL	- TRT1	-7.639	2.357	2.357	12.353	****
CONTROL	- TRT2	-1.961	7.867	7.867	17.695	****
CONTROL	- TRT3	12.029	23.750	23.750	35.471	****
TRT1	- CONTROL	-12.353	-2.357	-2.357	7.639	****
TRT1	- TRT2	-4.318	5.510	5.510	15.337	****
TRT1	- TRT3	9.672	21.393	21.393	33.114	****
TRT2	- CONTROL	-17.695	-7.867	-7.867	1.961	****
TRT2	- TRT1	-15.337	-5.510	-5.510	4.318	****
TRT2	- TRT3	4.305	15.883	15.883	27.462	****
TRT3	- CONTROL	-35.471	-23.750	-23.750	-12.029	****
TRT3	- TRT1	-33.114	-21.393	-21.393	-9.672	****
TRT3	- TRT2	-27.462	-15.883	-15.883	-4.305	****

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 7. ANALYSIS OF 14-DAY-OLD SURVIVORS

General Linear Models Procedure

Dunnnett'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= 47 MSB= 98.60527
 Critical Value of Dunnnett's T= 2.128

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
TRT1	- CONTROL	-10.343	-2.357	-2.357	5.628	****
TRT2	- CONTROL	-15.718	-7.867	-7.867	-0.016	****
TRT3	- CONTROL	-33.114	-23.750	-23.750	-14.386	****

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES

8. ANALYSIS OF EGGS SET/EGGS LAID

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure
 Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 49 observations can be used in this analysis.

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES

8. ANALYSIS OF EGGS SET/EGGS LAID

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure
 Type I Estimable Functions for: LEVEL

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

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 8. ANALYSIS OF EGGS SET/EGGS LAID

11:45 Wednesday, December 13, 1995

Dependent Variable: RESPONSE
Weight: RL

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	8579.6433	2859.8811	3.04	0.0384
Error	45	42285.5586	939.6791		
Corrected Total	48	50865.2019			
R-Square		C.V.	Root MSB	RESPONSE Mean	
	0.168674	45.29938	30.654	67.67021	

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	8579.6433	2859.8811	3.04	0.0384

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
8. ANALYSIS OF EGGS SET/EGGS LAID

11:45 Wednesday, December 13, 1995

General Linear Models Procedure
Least Squares Means

LEVEL	RESPONSE	Pr > T	H0: LSMEAN(1)=LSMEAN(J)
	LSMEAN	1/J	1
CONTROL	68.0985156	1	0.4760 0.4085 0.0147
TRT1	69.4078515	2	0.4760 0.1371 0.0064
TRT2	66.5426274	3	0.4085 0.1371 0.0387
TRT3	57.9964294	4	0.0147 0.0064 0.0387

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

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
9. ANALYSIS OF EGGS SET/EGGS LAID

11:45 Wednesday, December 13, 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= 45 MSB= 939.6791
Critical Value of Studentized Range= 3.773

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

LEVEL	Comparison	Simultaneous		Simultaneous	
		Lower	Difference	Upper	Confidence
		Limit	Between	Limit	Limit
TRT1	- CONTROL	-29.60	1.31	32.22	
TRT1	- TRT2	-27.52	2.87	33.25	

TRT1	- TRT3	-28.49	11.41	51.31	
CONTROL	- TRT1	-32.22	-1.31	29.60	
CONTROL	- TRT2	-28.83	1.56	31.94	
CONTROL	- TRT3	-29.80	10.10	50.00	
TRT2	- TRT1	-33.25	-2.87	27.52	
TRT2	- CONTROL	-31.94	-1.56	28.83	
TRT2	- TRT3	-30.95	8.55	48.05	
TRT3	- TRT1	-51.31	-11.41	28.49	
TRT3	- CONTROL	-50.00	-10.10	29.80	
TRT3	- TRT2	-48.05	-8.55	30.95	

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
8. ANALYSIS OF EGGS SET/EGGS LAID

11:45 Wednesday, December 13, 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= 45 MSB= 939.6791
Critical Value of Dunnett's T= 2.138

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

LEVEL	Comparison	Simultaneous		Simultaneous	
		Lower	Difference	Upper	Confidence
		Confidence	Between	Confidence	Limit
TRT1	- CONTROL	-23.46	1.31	26.08	
TRT2	- CONTROL	-25.91	-1.56	22.79	
TRT3	- CONTROL	-42.08	-10.10	21.87	

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
9. ANALYSIS OF VIABLE EMBRYOS/EGGS SETS

11:45 Wednesday, December 13, 1995

General Linear Models Procedure
Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 49 observations can be used in this analysis.

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
9. ANALYSIS OF VIABLE EMBRYOS/EGGS SETS

11:45 Wednesday, December 13, 1995

Effect Coefficients

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

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 9. ANALYSIS OF VIABLE EMBRYOS/EGGS SETS

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	5078.3741	1692.7914	0.40	0.7569
Error	45	192576.7788	4281.7062		
Corrected Total	48	197755.1530			
R-Square		C.V.	Root MSE	RESPONSE Mean	
	0.025680	92.34058	65.435	70.86239	

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 9. ANALYSIS OF VIABLE EMBRYOS/EGGS SETS

11:45 Wednesday, December 13, 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	72.2836803	1	0.9207 0.3219 0.9360
TRT1	71.8652005	2	0.9207 0.3750 0.9693
TRT2	67.9451435	3	0.3219 0.3750 0.7273
TRT3	71.4776567	4	0.9360 0.9693 0.7273

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

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 9. ANALYSIS OF VIABLE EMBRYOS/EGGS SETS

11:45 Wednesday, December 13, 1995

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= 45 MSB= 4281.706
 Critical Value of Studentized Range= 3.773

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
CONTROL	- TRT1	-65.558	66.395	0.418	65.558	
CONTROL	- TRT2	-84.359	85.981	0.806	85.981	
CONTROL	- TRT3	-60.529	69.206	4.339	69.206	
TRT1	- CONTROL	-66.395	65.558	-0.418	65.558	
TRT1	- TRT2	-84.787	84.787	0.388	85.562	
TRT1	- TRT3	-60.947	68.787	3.920	68.787	
TRT2	- CONTROL	-85.981	84.369	-0.806	84.369	
TRT2	- TRT1	-85.562	84.787	-0.388	84.787	
TRT2	- TRT3	-80.786	87.851	3.533	87.851	
TRT3	- CONTROL	-69.206	60.529	-4.339	60.529	
TRT3	- TRT1	-68.787	60.947	-3.920	60.947	
TRT3	- TRT2	-87.851	80.786	-3.533	80.786	

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 9. ANALYSIS OF VIABLE EMBRYOS/EGGS SETS

 11:45 Wednesday, December 13, 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= 45 MSB= 4281.706
 Critical Value of Dunnnett's T= 2.138

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
TRT1	- CONTROL	-53.285	52.448	-0.418	52.448	
TRT2	- CONTROL	-69.057	67.445	-0.806	67.445	
TRT3	- CONTROL	-56.317	47.640	-4.339	47.640	

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 10. ANALYSIS OF LIVE 3-WEEK EMBRYOS/VIABLE EMBRYOS

11:45 Wednesday, December 13, 1995

General Linear Models Procedure
 Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 49 observations can be used in this analysis.

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 10. ANALYSIS OF LIVE 3-WEEK EMBRYOS/VIALB EMBRYOS

 11:45 Wednesday, December 13, 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

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 10. ANALYSIS OF LIVE 3-WEEK EMBRYOS/VIALB EMBRYOS

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure

Dependent Variable: RESPONSE	Weight:	VB	Sum of Squares	Mean Square	F Value	Pr > F
Source	DF					
Model	3		3506.8305	1168.9435	0.71	0.5514
Error	45		74138.4006	1647.5200		
Corrected Total	48		77645.2311			

R-Square	C.V.	Root MSE	RESPONSE Mean
0.045165	47.13771	40.590	86.10868

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	3506.8305	1168.9435	0.71	0.5514

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 10. ANALYSIS OF LIVE 3-WEEK EMBRYOS/VIALB EMBRYOS

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure
 Least Squares Means

LEVEL	RESPONSE	Pr > T	H0: LSMEAN(1)=LSMEAN(2)	1	2	3	4
CONTROL	85.1918974	1	0.3073	0.8033	0.4803		
TRT1	88.0489818	2	0.3073	0.2275	0.7768		
TRT2	84.4622133	3	0.8033	0.2275	0.4210		
TRT3	89.9637896	4	0.4803	0.7768	0.4210		

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

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 10. ANALYSIS OF LIVE 3-WEEK EMBRYOS/VIALB EMBRYOS

 11:45 Wednesday, December 13, 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= 45 MSB= 1647.52
 Critical Value of Studentized Range= 3.773

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

LEVEL	Comparison	Simultaneous		Difference Between Means	Simultaneous	
		Lower Confidence Limit	Upper Confidence Limit		Lower Confidence Limit	Upper Confidence Limit
TRT3	- TRT1	-50.920	1.915	54.749		
TRT3	- CONTROL	-48.063	4.772	57.606		
TRT3	- TRT2	-46.802	5.502	57.805		
TRT1	- TRT3	-54.749	-1.915	50.920		
TRT1	- CONTROL	-38.068	2.857	43.783		
TRT1	- TRT2	-36.651	3.587	43.824		
CONTROL	- TRT3	-57.606	-4.772	48.063		
CONTROL	- TRT1	-43.783	-2.857	38.068		
CONTROL	- TRT2	-39.508	0.730	40.967		
TRT2	- TRT3	-57.805	-5.502	46.802		
TRT2	- TRT1	-43.824	-3.587	36.651		
TRT2	- CONTROL	-40.967	-0.730	39.508		

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 10. ANALYSIS OF LIVE 3-WEEK EMBRYOS/VIALB EMBRYOS

 11:45 Wednesday, December 13, 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= 45 MSB= 1647.52
 Critical Value of Dunnnett's T= 2.138

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

LEVEL	Simultaneous		Difference Between Means	Simultaneous	
	Lower Confidence Limit	Upper Confidence Limit		Lower Confidence Limit	Upper Confidence Limit
TRT3 - CONTROL	-37.565	4.772	47.108	47.108	
TRT1 - CONTROL	-29.937	2.857	35.651	35.651	
TRT2 - CONTROL	-32.972	-0.730	31.513	31.513	

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

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure
 Class Level Information

Classes	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 49 observations can be used in this analysis.

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

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure
 Type I Estimable Functions for: LEVEL

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

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

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	15277.291	5092.430	2.21	0.0997
Error	45	103565.986	2301.466		
Corrected Total	48	118843.277			

R-Square C.V. Root MSE RESPONSE Mean

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	15277.291	5092.430	2.21	0.0997

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

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure
 Least Squares Means

LEVEL	RESPONSE	Pr > T	H0: LSMEAN(1)=LSMEAN(2)	H0: LSMEAN(1)=LSMEAN(3)	H0: LSMEAN(1)=LSMEAN(4)
CONTROL	78.0112056	1	0.2496	0.9099	0.0279
TRT1	74.1725162	2	0.2496	0.2344	0.0807
TRT2	78.4098114	3	0.9099	0.2344	0.0265
TRT3	59.9915906	4	0.0279	0.0807	0.0265

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

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

 11:45 Wednesday, December 13, 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= 45 MSB= 2301.466
 Critical Value of Studentized Range= 3.773
 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		-47.16	0.40	47.96	47.96	
TRT2 - TRT1		-43.32	4.24	51.79	51.79	
TRT2 - TRT3		-43.40	18.42	80.24	80.24	
CONTROL - TRT2		-47.96	-0.40	47.16	47.16	
CONTROL - TRT1		-44.53	3.84	52.21	52.21	
CONTROL - TRT3		-44.43	18.02	80.47	80.47	
TRT1 - TRT2		-51.79	-4.24	43.32	43.32	
TRT1 - CONTROL		-52.21	-3.84	44.53	44.53	
TRT1 - TRT3		-48.27	14.18	76.63	76.63	
TRT3 - TRT2		-80.24	-18.42	43.40	43.40	
TRT3 - CONTROL		-80.47	-18.02	44.43	44.43	
TRT3 - TRT1		-76.63	-14.18	48.27	48.27	

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

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure

Dunnnett's One-tailed T tests for Variable: RSPONSR
 NOTE: This tests controls the type I experimentwise error for
 comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 45 MSR= 2301.466
 Critical Value of Dunnnett's T= 2.138

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

LEVEL	Simultaneous		Simultaneous	
	Lower Confidence Limit	Difference Between Means	Upper Confidence Limit	
TRT2	-37.71	0.40	38.51	
TRT1	-42.60	-3.84	34.92	
TRT3	-68.06	-18.02	32.02	

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 12. ANALYSIS OF NORMAL HATCHLINGS/EGGS LAID

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure
 Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 49 observations can be used in this analysis.

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 12. ANALYSIS OF NORMAL HATCHLINGS/EGGS LAID

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure
 Type I Estimable Functions for: LEVEL

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

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 12. ANALYSIS OF NORMAL HATCHLINGS/EGGS LAID

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	23038.383	7679.461	2.29	0.0916
Error	45	151173.728	3359.416		
Corrected Total	48	174212.111			

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	23038.383	7679.461	2.29	0.0916

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 12. ANALYSIS OF NORMAL HATCHLINGS/EGGS LAID

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure
 Least Squares Means

LEVEL	RESPONSE	Pr > T	H0: LSMEAN(1)=LSMEAN(J)
CONTROL	56.7966677	1	0.9528 0.1842 0.0318
TRT1	57.0014496	2	0.9528 0.1726 0.0304
TRT2	52.0410892	3	0.1842 0.1726 0.1232
TRT3	40.1191541	4	0.0318 0.0304 0.1232

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

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 12. ANALYSIS OF NORMAL HATCHLINGS/EGGS LAID

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for Variable: RSPONSR

NOTE: This test controls the type I experimentwise error rate.
 Alpha= 0.05 Confidence= 0.95 df= 45 MSR= 3359.416
 Critical Value of Studentized Range= 3.773

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

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

Treatment	Mean	SE	DF	F Value	Pr > F
CONTROL	58.24	0.20	4	2.17	0.1053
TRT1	58.64	0.20	4	2.17	0.1053
TRT2	58.24	0.20	4	2.17	0.1053
TRT3	58.64	0.20	4	2.17	0.1053

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 12. ANALYSIS OF NORMAL HATCHLINGS/BGGS LARD

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure
 Dunnett's One-tailed T tests for variable: RSPONSER

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

Alpha= 0.05 Confidence= 0.95 df= 45 MSE= 3359.416
 Critical Value of Dunnett's T= 2.138

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

LEVEL	Simultaneous Lower Limit	Difference Between Means	Simultaneous Upper Limit
CONTROL	-46.62	0.20	47.03
TRT1	-50.80	-4.76	41.29
TRT2	-77.13	-16.68	43.78

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

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure
 Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 47 observations can be used in this analysis.

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

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

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

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	19213.404	6404.468	2.17	0.1053
Error	43	126860.882	2950.253		
Corrected Total	46	146074.286			

R-Square 0.131532 C.V. 76.98900 Root MSE 54.316 RSPONSER Mean 70.55064

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

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure
 Least Squares Means

LEVEL	RSPONSER	Pr > T HO: LSMEAN(1)=LSMEAN(2)	Pr > T HO: LSMEAN(1)=LSMEAN(3)	Pr > T HO: LSMEAN(1)=LSMEAN(4)
CONTROL	74.1564797	1	0.2021	0.2723
TRT1	69.1416166	2	0.2021	0.9389
TRT2	69.4697797	3	0.2723	0.0660
TRT3	49.4852723	4	0.0227	0.0670

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

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

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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= 43 MSE= 2950.253
 Critical Value of Studentized Range= 3.779

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
CONTROL - TRT2	-50.18	4.69	4.69	59.55	
CONTROL - TRT1	-49.85	5.01	5.01	59.88	
CONTROL - TRT3	-50.95	24.67	24.67	100.29	
TRT2 - CONTROL	-59.55	-4.69	-4.69	50.18	
TRT2 - TRT1	-54.53	0.33	0.33	55.19	
TRT2 - TRT3	-55.64	19.98	19.98	95.61	
TRT1 - CONTROL	-59.88	-5.01	-5.01	49.85	
TRT1 - TRT2	-55.19	-0.33	-0.33	54.53	
TRT1 - TRT3	-55.97	19.66	19.66	95.28	
TRT3 - CONTROL	-100.29	-24.67	-24.67	50.95	
TRT3 - TRT2	-95.61	-19.98	-19.98	55.64	
TRT3 - TRT1	-95.28	-19.66	-19.66	55.97	

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

 11:45 Wednesday, December 13, 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= 43 MSE= 2950.253
 Critical Value of Dunnnett's T= 2.146

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	-48.74	-4.69	-4.69	39.37	
TRT1 - CONTROL	-49.07	-5.01	-5.01	39.04	
TRT3 - CONTROL	-85.40	-24.67	-24.67	36.05	

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 14. ANALYSIS OF EGGS NOT CRACKED/EGGS LAID

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure
 Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 49 observations can be used in this analysis.

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 14. ANALYSIS OF EGGS NOT CRACKED/EGGS LAID

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure
 Type I Estimable Functions for: LEVEL

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

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 14. ANALYSIS OF EGGS NOT CRACKED/EGGS LAID

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	1477.9773	492.6591	0.28	0.8424
Error	45	80305.2267	1784.5606		
Corrected Total	48	81783.2039			
R-Square		C.V.	Root MSR	RESPONSE Mean	
	0.018072	49.91820	42.244	84.62656	

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 14. ANALYSIS OF EGGS NOT CRACKED/EGGS LAID

11:45 Wednesday, December 13, 1995

LEVEL	RESPONSE	Pr > T	H0: LSMEAN(I)=LSMEAN(J)		
	LSMEAN	1/3	2	3	4
CONTROL	83.4316012	1	0.4194	0.5842	0.5842
TRT1	85.4770860	2	0.4194	0.8107	0.8597
TRT2	84.8484894	3	0.5842	0.8107	0.7727
TRT3	86.4555018	4	0.5842	0.8597	0.7727

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

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 14. ANALYSIS OF EGGS NOT CRACKED/EGGS LAID

 11:45 Wednesday, December 13, 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= 45 MSE= 1784.561
 Critical Value of Studentized Range= 3.773

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

LEVEL	Comparison	Simultaneous		Simultaneous	
		Lower Confidence Limit	Difference Between Means	Upper Confidence Limit	Upper Confidence Limit
TRT3	- TRT1	-54.010	0.978	55.966	55.966
TRT3	- TRT2	-52.828	1.607	56.042	56.042
TRT3	- CONTROL	-51.964	3.024	58.012	58.012
TRT1	- TRT3	-55.966	-0.978	54.010	54.010
TRT1	- TRT2	-41.249	0.629	42.506	42.506
TRT1	- CONTROL	-40.548	2.045	44.639	44.639
TRT2	- TRT3	-56.042	-1.607	52.828	52.828
TRT2	- TRT1	-42.506	-0.629	41.249	41.249
TRT2	- CONTROL	-40.461	1.417	43.295	43.295
CONTROL	- TRT3	-58.012	-3.024	51.964	51.964
CONTROL	- TRT1	-44.639	-2.045	40.548	40.548
CONTROL	- TRT2	-43.295	-1.417	40.461	40.461

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES

14. ANALYSIS OF EGGS NOT CRACKED/EGGS LAID

 11:45 Wednesday, December 13, 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= 45 MSE= 1784.561
 Critical Value of Dunnnett's T= 2.138

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

LEVEL	Comparison	Simultaneous		Simultaneous	
		Lower Confidence Limit	Difference Between Means	Upper Confidence Limit	Upper Confidence Limit
TRT3	- CONTROL	-41.038	3.024	47.086	47.086
TRT1	- CONTROL	-32.085	2.045	36.176	36.176
TRT2	- CONTROL	-32.140	1.417	34.974	34.974

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 15. ANALYSIS OF NORMAL HATCHLINGS/EGGS SRT

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure
 Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 49 observations can be used in this analysis.

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 15. ANALYSIS OF NORMAL HATCHLINGS/EGGS SRT

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure
 Type I Estimable Functions for: LEVEL

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

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES

15. ANALYSIS OF NORMAL HATCHLINGS/EGGS SRT

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure

Dependent Variable: RESPONSE

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	13993.573	4664.524	1.15	0.3404
Error	45	182959.155	4065.759		
Corrected Total	48	196952.729			

R-Square	C.V.	Root MSE	RESPONSE Mean
0.071050	100.7514	63.763	63.28774

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	13993.573	4664.524	1.15	0.3404

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 15. ANALYSIS OF NORMAL HATCHINGS/EGGS SET

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure
 Least Squares Means

LEVEL	RESPONSE	Pr > T	H0: LSMEAN(1)=LSMEAN(2)	H0: LSMEAN(1)=LSMEAN(3)	H0: LSMEAN(1)=LSMEAN(4)
	LSMEAN	1/3	2	3	4
CONTROL	66.1021850	1	0.5974	0.1917	0.1390
TRT1	63.9359792	2	0.15974	0.4255	0.2067
TRT2	60.5076029	3	0.1917	0.4255	0.3608
TRT3	51.4511937	4	0.1390	0.2067	0.3608

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

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 15. ANALYSIS OF NORMAL HATCHINGS/EGGS SET

 11:45 Wednesday, December 13, 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= 45 MSE= 4065.759
 Critical Value of Studentized Range= 3.773

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

LEVEL	Comparison	Simultaneous		Simultaneous	
		Lower Confidence Limit	Difference Between Means	Upper Confidence Limit	
CONTROL	- TRT1	-62.12	2.17	66.46	
CONTROL	- TRT2	-57.62	5.59	68.80	
CONTROL	- TRT3	-68.35	14.65	97.65	
TRT1	- CONTROL	-66.46	-2.17	62.12	
TRT1	- TRT2	-59.78	3.43	66.64	
TRT1	- TRT3	-70.51	12.48	95.48	
TRT2	- CONTROL	-68.80	-5.59	57.62	
TRT2	- TRT1	-66.64	-3.43	59.78	
TRT2	- TRT3	-73.11	9.06	91.22	
TRT3	- CONTROL	-97.65	-14.65	68.35	
TRT3	- TRT1	-95.48	-12.48	70.51	

LEVEL	Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT3	- TRT2	-91.22	-9.06	73.11

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 15. ANALYSIS OF NORMAL HATCHINGS/EGGS SET

 11:45 Wednesday, December 13, 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= 45 MSE= 4065.759
 Critical Value of Dunnett's T= 2.138

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

LEVEL	Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT1	- CONTROL	-53.68	-2.17	49.35
TRT2	- CONTROL	-56.25	-5.59	45.06
TRT3	- CONTROL	-81.16	-14.65	51.86

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 16. ANALYSIS OF 14-DAY HATCHING SURVIVORS/EGGS SET

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure
 Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 49 observations can be used in this analysis.

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 16. ANALYSIS OF 14-DAY HATCHING SURVIVORS/EGGS SET

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure
 Type I Estimable Functions for: LEVEL

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

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

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure

Dependent Variable:	RESPONSE	ES	Sum of Squares	Mean Square	F Value	Pr > F
Source	DF	Squares	Mean Square	F Value	Pr > F	
Model	3	22865.707	7621.902	1.93	0.1382	
Error	45	177686.168	3948.582			
Corrected Total	48	200551.875				
R-Square		C.V.	Root MSE	RESPONSE Mean		
	0.114014	111.6436	62.838	56.28423		

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	22865.707	7621.902	1.93	0.1382

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

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure
 Least Squares Means

LEVEL	RESPONSE	Pr > t	H0: LSMEAN(1) = LSMEAN(2)	H0: LSMEAN(1) = LSMEAN(3)	H0: LSMEAN(1) = LSMEAN(4)
	LSMEAN	1/2	1	2	3
CONTROL	59.6223137	1	0.4233	0.2007	0.0299
TRT1	56.3791893	2	0.4233	0.6099	0.0638
TRT2	54.2207773	3	0.2007	0.6099	0.1029
TRT3	38.1272312	4	0.0299	0.0638	0.1029

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

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

 11:45 Wednesday, December 13, 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= 45 MSB= 3948.582
 Critical Value of Studentized Range= 3.773

Simultaneous Simultaneous

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

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

 11:45 Wednesday, December 13, 1995

LEVEL	Comparison	Lower Confidence Limit	Difference Between Means	Upper Confidence Limit
CONTROL	- TRT1	-60.11	3.24	66.60
CONTROL	- TRT2	-56.89	5.40	67.69
CONTROL	- TRT3	-60.30	21.50	103.29
TRT1	- CONTROL	-66.60	-3.24	60.11
TRT1	- TRT2	-60.13	2.16	64.45
TRT1	- TRT3	-63.54	18.25	100.05
TRT2	- CONTROL	-67.69	-5.40	56.89
TRT2	- TRT1	-64.45	-2.16	60.13
TRT2	- TRT3	-64.88	16.09	97.07
TRT3	- CONTROL	-103.29	-21.50	60.30
TRT3	- TRT1	-100.05	-18.25	63.54
TRT3	- TRT2	-97.07	-16.09	64.88

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

Alpha= 0.05 Confidence= 0.95 df= 45 MSB= 3948.582
 Critical Value of Dunnett's T= 2.138

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

LEVEL	Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
CONTROL	- CONTROL	-54.01	-3.24	47.53
CONTROL	- CONTROL	-55.32	-5.40	44.51
CONTROL	- CONTROL	-87.04	-21.50	44.05

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 17. ANALYSIS OF EGGSHELL THICKNESS

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure
 Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 48 observations can be used in this analysis.

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 17. ANALYSIS OF EGGSHELL THICKNESS

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure
 Type I Estimable Functions for: LEVBL

Effect	Coefficients
INTERCEPT	0

LEVEL	CONTROL	I2	TRT1	I3	TRT2	I4	TRT3	-I2-I3-I4
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EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 17. ANALYSIS OF EGGSHELL THICKNESS

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	0.0008599	0.0002866	1.03	0.3893
Error	44	0.0122638	0.0002787		
Corrected Total	47	0.0131237			

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVBL	3	0.0008599	0.0002866	1.03	0.3893

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 17. ANALYSIS OF EGGSHELL THICKNESS

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure
 Least Squares Means

LEVEL	THICK	Pr > T	H0: LSMEAN(1)=LSMEAN(2)	LSMEAN(1/3)	LSMEAN(2)	LSMEAN(3)	LSMEAN(4)
CONTROL	0.22435714	1	0.3246	0.5974	0.5406		
TRT1	0.23064286	2	0.3246	0.1336	0.1720		
TRT2	0.22100000	3	0.5974	0.1336	0.8388		
TRT3	0.21933333	4	0.5406	0.1720	0.8388		

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

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 17. ANALYSIS OF EGGSHELL THICKNESS

 11:45 Wednesday, December 13, 1995

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

Alpha= 0.05 Confidence= 0.95 df= 44 MSB= 0.000279
 Critical Value of Studentized Range= 3.776

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

LEVEL	Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT1	- CONTROL	-0.01056	0.00629	0.02313
TRT1	- TRT2	-0.00720	0.00964	0.02649
TRT1	- TRT3	-0.01044	0.01131	0.03306
CONTROL	- TRT1	-0.02313	-0.00629	0.01056
CONTROL	- TRT2	-0.01349	0.00336	0.02020
CONTROL	- TRT3	-0.01673	0.00502	0.02677
TRT2	- TRT1	-0.02649	-0.00964	0.00720
TRT2	- CONTROL	-0.02020	-0.00336	0.01349
TRT2	- TRT3	-0.02008	0.00167	0.02342
TRT3	- TRT1	-0.03306	-0.01131	0.01044
TRT3	- CONTROL	-0.02677	-0.00502	0.01673
TRT3	- TRT2	-0.02342	-0.00167	0.02008

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 17. ANALYSIS OF EGGSHELL THICKNESS

 11:45 Wednesday, December 13, 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= 44 MSB= 0.000279
 Critical Value of Dunnnett's T= 2.140

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

LEVEL	Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT1	- CONTROL	-0.00722	0.00629	0.01979
TRT2	- CONTROL	-0.01686	-0.00336	0.01014
TRT3	- CONTROL	-0.02245	-0.00502	0.01241

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 18. ANALYSIS OF HATCHLING WEIGHT

General Linear Models Procedure
 Class Level Information
 Class Levels Values
 LEVEL 4 CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 49 observations can be used in this analysis.

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 18. ANALYSIS OF HATCHLING WEIGHT

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure
 Type I Estimable Functions for: LEVEL

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

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 18. ANALYSIS OF HATCHLING WEIGHT

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure

Dependent Variable: HATWT
 Source DF Sum of Squares Mean Square F Value Pr > F
 Model 3 4.5659864 1.5219955 3.30 0.0288
 Error 45 20.7809524 0.4617989
 Corrected Total 48 25.3469388

R-Square C.V. Root MSB HATWT Mean
 0.180140 11.68363 0.6796 5.816327
 Source DF Type I SS Mean Square F Value Pr > F
 LEVEL 3 4.5659864 1.5219955 3.30 0.0288

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 18. ANALYSIS OF HATCHLING WEIGHT

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure
 Least Squares Means

LEVEL	HATWT LSMEAN	Pr > T H0: LSMEAN(1)=LSMEAN(j)	1	2	3	4
CONTROL	6.14285714	1	0.5808	0.0199	0.0186	
TRT1	6.00000000	2	0.5808	0.0712	0.0504	
TRT2	5.53333333	3	0.0199	0.0712	0.5454	
TRT3	5.33333333	4	0.0186	0.0504	0.5454	

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

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 18. ANALYSIS OF HATCHLING WEIGHT

 11:45 Wednesday, December 13, 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= 45 MSB= 0.461799
 Critical Value of Studentized Range= 3.773

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

LEVEL	Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
CONTROL	- TRT1	-0.542	0.143	0.828
CONTROL	- TRT2	-0.064	0.610	1.283
CONTROL	- TRT3	-0.075	0.810	1.694
TRT1	- CONTROL	-0.828	-0.143	0.542
TRT1	- TRT2	-0.207	0.467	1.140
TRT1	- TRT3	-0.218	0.667	1.551
TRT2	- CONTROL	-1.283	-0.610	0.064
TRT2	- TRT1	-1.140	-0.467	0.207
TRT2	- TRT3	-0.676	0.200	1.076
TRT3	- CONTROL	-1.694	-0.810	0.075
TRT3	- TRT1	-1.551	-0.667	0.218
TRT3	- TRT2	-1.076	-0.200	0.676

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 18. ANALYSIS OF HATCHLING WEIGHT

 11:45 Wednesday, December 13, 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= 45 MSB= 0.461799

Critical Value of Dunnett's T= 2.138

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

LEVEL	Simultaneous		Simultaneous	
	Lower Confidence Limit	Difference Between Means	Upper Confidence Limit	
TRT1 - CONTROL	-0.692	-0.143	0.406	***
TRT2 - CONTROL	-1.149	-0.610	-0.070	***
TRT3 - CONTROL	-1.518	-0.810	-0.101	***

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES

19. ANALYSIS OF 14-DAY SURVIVOR WEIGHT

11:45 Wednesday, December 13, 1995

General Linear Models Procedure

Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 47 observations can be used in this analysis.

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES

19. ANALYSIS OF 14-DAY SURVIVOR WEIGHT

11:45 Wednesday, December 13, 1995

General Linear Models Procedure

Type I Estimable Functions for: LEVEL

Effect Coefficients

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

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES

19. ANALYSIS OF 14-DAY SURVIVOR WEIGHT

11:45 Wednesday, December 13, 1995

General Linear Models Procedure

Dependent Variable: SURVWT

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	89.853191	29.951064	3.17	0.0339
Error	43	406.700000	9.458140		
Corrected Total	46	496.553191			

Source	DF	Type I SS	Mean Square	F Value	Pr > F	SURVWT Mean
R-Square						
		0.180954	13.76612	3.0754		22.34043
LEVEL	3	89.853191	29.951064	3.17	0.0339	

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES

19. ANALYSIS OF 14-DAY SURVIVOR WEIGHT

11:45 Wednesday, December 13, 1995

General Linear Models Procedure

Least Squares Means

LEVEL	SURVWT	Pr > T HO: LSMEAN(1)=LSMEAN(1)	1/ J	1	2	3	4
CONTROL	23.4285714	1	0.5831	0.2748	0.0043		
TRT1	22.7857143	2	0.5831	0.5831	0.0123		
TRT2	22.1428571	3	0.2748	0.5831	0.0324		
TRT3	18.6000000	4	0.0043	0.0123	0.0324		

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

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES

19. ANALYSIS OF 14-DAY SURVIVOR WEIGHT

11:45 Wednesday, December 13, 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= 43 MSB= 9.45814
Critical Value of Studentized Range= 3.779

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

LEVEL	Comparison	Simultaneous		Simultaneous	
		Lower Confidence Limit	Difference Between Means	Upper Confidence Limit	
CONTROL	- TRT1	-2.464	0.643	3.749	
CONTROL	- TRT2	-1.821	1.286	4.392	
CONTROL	- TRT3	0.547	4.829	9.110	***
TRT1	- CONTROL	-3.749	-0.643	2.464	
TRT1	- TRT2	-2.464	0.643	3.749	
TRT1	- TRT3	-0.096	4.186	8.468	
TRT2	- CONTROL	-4.392	-1.286	1.821	
TRT2	- TRT1	-3.749	-0.643	2.464	
TRT2	- TRT3	-0.739	3.543	7.825	
TRT3	- CONTROL	-9.110	-4.829	-0.547	***
TRT3	- TRT1	-8.468	-4.186	0.096	

TRT3 -7.825 -3.543 0.739

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 19. ANALYSIS OF 14-DAY SURVIVOR WEIGHT

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure

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

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

Alpha= 0.05 Confidence= 0.95 df= 43 MSB= 9.45814
 Critical Value of Dunnnett's T= 2.146

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

LEVEL	Simultaneous			Simultaneous		
	Lower Confidence Limit	Difference Between Means	Upper Confidence Limit	Lower Confidence Limit	Difference Between Means	Upper Confidence Limit
TRT1 - CONTROL	-3.137	-0.643	1.852	-3.137	-0.643	1.852
TRT2 - CONTROL	-3.780	-1.286	1.209	-3.780	-1.286	1.209
TRT3 - CONTROL	-8.267	-4.829	-1.390	-8.267	-4.829	-1.390

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 20. ANALYSIS OF FOOD CONSUMPTION

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure
 Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 20. ANALYSIS OF FOOD CONSUMPTION

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure
 Type I Estimable Functions for: LEVEL

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

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 20. ANALYSIS OF FOOD CONSUMPTION

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure

Dependent Variable: FOOD

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	208079.69	69359.90	5.49	0.0021
Error	60	757381.25	12623.02		
Corrected Total	63	965460.94			

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	208079.69	69359.90	5.49	0.0021

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 20. ANALYSIS OF FOOD CONSUMPTION

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure
 Least Squares Means

LEVEL	FOOD	Pr > T HO: LSMEAN(1)=LSMEAN(3)
CONTROL	524.375000	1 0.7304 0.7304 0.0032
TRT1	538.125000	2 0.7304 1.0000 0.0012
TRT2	538.125000	3 0.7304 1.0000 0.0012
TRT3	402.500000	4 0.0032 0.0012 0.0012

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

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 20. ANALYSIS OF FOOD CONSUMPTION

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure

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

NOTE: This test controls the type I experimentwise error rate.
 Alpha= 0.05 Confidence= 0.95 df= 60 MSB= 12623.02
 Critical Value of Studentized Range= 3.737
 Minimum Significant Difference= 104.97

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

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

TRT1	TRT2	TRT3	CONTROL
-104.97	-91.22	30.66	135.62
0.00	13.75	135.62	104.97
118.72	240.59	***	***
0.00	13.75	135.62	104.97
118.72	240.59	***	***
121.87	226.84	***	***
-135.62	-30.66	***	***
-135.62	-30.66	***	***
-121.87	-16.91	***	***

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES

20. ANALYSIS OF FOOD CONSUMPTION

11:45 Wednesday, December 13, 1995

General Linear Models Procedure

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

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

Alpha= 0.05 Confidence= 0.95 df= 60 MSB= 12623.02
Critical Value of Dunnnett's T= 2.104
Minimum Significant Difference= 83.573

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	-69.82	13.75	97.32
TRT1	- CONTROL	-69.82	13.75	97.32
TRT3	- CONTROL	-205.45	-121.87	-38.30

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES

21. COVARIATE ANALYSIS OF MALE BODY WEIGHT

11:45 Wednesday, December 13, 1995

General Linear Models Procedure

Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 51 observations can be used in this analysis.

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES

21. COVARIATE ANALYSIS OF MALE BODY WEIGHT

11:45 Wednesday, December 13, 1995

General Linear Models Procedure

Dependent Variable: POSTM

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	11505.018	2876.254	13.11	0.0001
Error	46	10095.962	219.477		
Corrected Total	50	21600.980			
R-Square		6.945062	14.815		213.3137

Source

LEVEL	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	4852.1578	1617.3859	7.37	0.0004
PREM	1	6652.8602	6652.8602	30.31	0.0001
Source	DF	Type III SS	Mean Square	F Value	Pr > F
LEVEL	3	5323.3606	1774.4535	8.08	0.0002
PREM	1	6652.8602	6652.8602	30.31	0.0001

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES

21. COVARIATE ANALYSIS OF MALE BODY WEIGHT

11:45 Wednesday, December 13, 1995

General Linear Models Procedure

Least Squares Means

LEVEL	POSTM LSMEAN	Std Err	Pr > T	LSMEAN
CONTROL	217.4455062	3.965212	0.0001	1
TRT1	222.646644	3.959599	0.0001	2
TRT2	212.456563	3.825158	0.0001	3
TRT3	191.340958	5.243002	0.0001	4

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

1/2	1	2	3	4
1	0.3590	0.3689	0.0003	
2	0.3590	0.0706	0.0001	
3	0.3689	0.0706	0.0021	
4	0.0003	0.0001	0.0021	

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

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES

21. COVARIATE ANALYSIS OF MALE BODY WEIGHT

11:45 Wednesday, December 13, 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= 46 MSB= 219.4774
 Critical Value of Studentized Range= 3.769

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
TRT1 - CONTROL	-8.568	6.357	6.357	21.282	25.065
TRT1 - TRT2	-4.284	10.390	10.390	18.707	25.065
TRT1 - TRT3	12.731	30.232	30.232	47.733	51.533
CONTROL - TRT1	-21.282	-6.357	-6.357	8.568	12.731
CONTROL - TRT2	-10.641	4.033	4.033	18.707	25.065
CONTROL - TRT3	6.374	23.875	23.875	41.376	51.533
TRT2 - TRT1	-25.065	-10.390	-10.390	4.284	8.568
TRT2 - CONTROL	-18.707	-4.033	-4.033	10.641	18.707
TRT2 - TRT3	2.554	19.842	19.842	37.129	41.376
TRT3 - TRT1	-47.733	-30.232	-30.232	-12.731	-8.568
TRT3 - CONTROL	-41.376	-23.875	-23.875	-6.374	-2.554
TRT3 - TRT2	-37.129	-19.842	-19.842	-2.554	2.554

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 21. COVARIATE ANALYSIS OF MALE BODY WEIGHT

 11:45 Wednesday, December 13, 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= 46 MSB= 219.4774
 Critical Value of Dunnett's T= 2.129

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
TRT1 - CONTROL	-5.563	6.357	6.357	18.277	21.282
TRT2 - CONTROL	-15.753	-4.033	-4.033	7.687	10.641
TRT3 - CONTROL	-37.853	-23.875	-23.875	-9.897	-6.357

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 22. COVARIATE ANALYSIS OF FEMALE BODY WEIGHT

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure
 Class Level Information

Class Levels Values
 LEVEL 4 CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 51 observations can be used in this analysis.

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 22. COVARIATE ANALYSIS OF FEMALE BODY WEIGHT

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Corrected Total	50	26763.412			
Model	4	15845.038	3961.260	16.69	0.0001
Error	46	10918.374	237.356		
R-square		6.792223	15.406		
Corrected R-square		0.592041	226.8235		

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	12206.422	4068.807	17.14	0.0001
PREP	1	3638.616	3638.616	15.33	0.0003
Source	DF	Type III SS	Mean Square	F Value	Pr > F
LEVEL	3	11407.355	3802.452	16.02	0.0001
PREP	1	3638.616	3638.616	15.33	0.0003

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
 22. COVARIATE ANALYSIS OF FEMALE BODY WEIGHT

 11:45 Wednesday, December 13, 1995

General Linear Models Procedure
 Least Squares Means

LEVEL	POSTF	Std Err	Pr > T	LSMEAN
CONTROL	234.555945	4.118101	0.0001	1
TRT1	237.371619	4.160769	0.0001	2
TRT2	227.678955	4.006748	0.0001	3
TRT3	193.228722	5.447035	0.0001	4

Pr > |T| H0: LSMEAN(1) = LSMEAN(2)

1/2	1	2	3	4
1	0.6332	0.2370	0.0001	
2	0.6332	0.1030	0.0001	
3	0.2370	0.1030	0.0001	

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

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
22. COVARIATE ANALYSIS OF FEMALE BODY WEIGHT

11:45 Wednesday, December 13, 1995

General Linear Models Procedure
Tukey's Studentized Range (HSD) Test for variable: POSTP

NOTE: This test controls the type I experimentwise error rate.
Alpha= 0.05 Confidence= 0.95 df= 46 MSE= 237.3559
Critical Value of Studentized Range= 3.769

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
TRT1 - CONTROL	-10.092	20.950	5.429	29.174	***
TRT2 - CONTROL	-1.346	13.914	13.914	64.789	***
TRT3 - CONTROL	28.389	46.589	46.589	59.361	***
CONTROL - TRT1	-20.950	-5.429	-5.429	10.092	***
CONTROL - TRT2	-6.774	8.486	8.486	23.746	***
CONTROL - TRT3	22.961	41.161	41.161	59.361	***
TRT2 - TRT1	-29.174	-13.914	-13.914	1.346	***
TRT2 - CONTROL	-23.746	-8.486	-8.486	6.774	***
TRT2 - TRT3	14.697	32.675	32.675	50.653	***
TRT3 - TRT1	-64.789	-46.589	-46.589	-28.389	***
TRT3 - CONTROL	-59.361	-41.161	-41.161	-22.961	***
TRT3 - TRT2	-50.653	-32.675	-32.675	-14.697	***

EFFECTS OF SPINOSAD ON THE REPRODUCTION OF BOBWHITES
22. COVARIATE ANALYSIS OF FEMALE BODY WEIGHT

11:45 Wednesday, December 13, 1995

General Linear Models Procedure

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

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

Alpha= 0.05 Confidence= 0.95 df= 46 MSE= 237.3559
Critical Value of Dunnett's T= 2.129

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
TRT1 - CONTROL	-6.968	5.429	5.429	17.825	***