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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PESTICIDES AND TOXIC
SUBSTANCES

NOV - 3 1999

Memorandum

Subject: Review of Avian Reproduction Studies with Bobwhite quail (MRID 44755001) and Mallard duck (MRID 44761701) exposed to Metalaxyl
Barcodes: D253399 and D254022

From: Brian Montague, Biologist *Brian Montague*
Environmental Fate and Effects Division, 7507C

Through: Arnet Jones, Branch Chief *Arnet Jones 11/03/99*
Environmental Risk Branch I, EFED

To: Mary Waller, Product Manager 21
Thomas Ellwanger, Team Reviewer
Registration Division, 7505C

The Environmental Fate and Effects Division has completed review of two avian reproduction studies conducted with metalaxyl and submitted by Nations Ag, L.L.C. to support seed treatment usage of this fungicide. Results indicate that there were no statistically significant effects to bobwhite or mallard growth or reproduction at the maximum tested rate of 900 mg ai in the diet. These studies are adequate to support the registration of metalaxyl for seed treatments at this dietary level or for single field application rates of up to 3.75 lb ai/A.

Further questions regarding these reviews may be directed to Brian Montague at 305-6438 or Arnet Jones at 305-7416.

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

1. CHEMICAL: Metalaxyl PC Code No.: 113501

2. TEST MATERIAL: Metalaxyl Technical Purity: 88.7% based on analysis

3. CITATION:
Author: Carol A. Pedersen
Title: Avian Reproductive Toxicity Study with Metalaxyl Technical in Bobwhite Quail
Study Completion Date: February 3, 1999
Laboratory: Bio-life® Associates, Ltd., Neillsville, WI
Sponsor: Nation's Ag, L.L.C., Isle of Palms, SC
Laboratory Report ID: 164-003-07
MRID No.: 447550-01
DP Barcode: D254022 and 253399

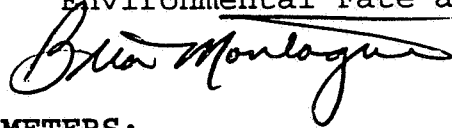
4. REVIEWED BY: Max Feken, M.S., Environmental Toxicologist, Golder Associates, Inc.

Signature: Date:

APPROVED BY: Pim Kosalwat, Ph.D, Senior Scientist, Golder Associates, Inc.

Signature: Date:

5. APPROVED BY: Brian Montague, Biologist
Environmental Fate and Effects Division, 7507C

Signature:  Date: Nov. 2, 1999

6. STUDY PARAMETERS:
Scientific Name of Test Organism: *Colinus virginianus*
Age of Test Organisms at Test Initiation: 25 weeks
Definitive Study Duration: 22 weeks

7. CONCLUSIONS: This study is scientifically sound but does not meet the guideline requirements for an avian reproduction study as no NOEC or LOEC was achieved. When compared to the controls, there were no significant treatment related effects on any of the parameters measured at any concentrations tested (i.e., 100, 300, and 900 ppm ai). The test was conducted with the highest dosage level at or above the maximum field residue level expected for a single application of up to 3.75 lb ai/A.

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Signature:  **Date:** 4/14/99

APPROVED BY: Pim Kosalwat, Ph.D, Senior Scientist, Golder Associates, Inc.

Signature: P. Kosalwat **Date:** 4/14/99

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Definitive Study Duration: 22 weeks

7. **CONCLUSIONS:** This study is scientifically sound but does not meet the guideline requirements for an avian reproduction study using bobwhite quail. When compared to the controls, there were no significant treatment related effects on any of the parameters measured at any concentrations tested (i.e., 100, 300, and 900 ppm ai). It is not stated whether the test was conducted with the highest dosage level at or above the maximum field residue level (i.e., the expected concentration on avian food items when treated at recommended label rates).

Results Synopsis

Most sensitive endpoints: None were affected

NOEC: 900 ppm ai

LOEC: Not determined

8. ADEQUACY OF THE STUDY:

- A. **Classification:** Core for application rates or scenarios which will not exceed 900 ppm on vegetation in actual field use.
- B. **Rationale:** None of the parameters were affected at any test concentrations; however, it is not stated whether the test was conducted with the highest dosage level at or above the maximum field residue level (i.e., the expected concentration on avian food items when treated at recommended label rates).
- C. **Repairability:** Not applicable if the expected maximum field residue level is 900 ppm or lower.

9. GUIDELINE DEVIATIONS:

- 1. Neither the highest test concentration showed any significant effect nor the maximum field residue level was reported.
- 2. The number of eggshell thickness measurements per egg was not reported.

10. **SUBMISSION PURPOSE:** This study was conducted to support the continued registration of metalaxyl by Nation's Ag, LLC of Isle of Palms, S.C.

11. MATERIALS AND METHODS:

A. Test Organisms

Guideline Criteria	Reported Information
<p>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>)</p>	<p>Northern bobwhite (<i>Colinus virginianus</i>)</p>

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<p><u>Age at beginning of test</u> Birds should be approaching their first breeding season.</p>	25 weeks old
<p><u>Supplier</u> All birds should be from the same source.</p>	Stevenson Game Bird Farm, Riverside, TX
<p>Were birds pen-reared?</p>	Not reported
<p>Were birds phenotypically indistinguishable from wild birds?</p>	Yes
<p><u>Health observation period</u> 2 to 6 weeks.</p>	8 weeks
<p>Were birds healthy and without excessive mortality prior to the test?</p>	No excessive mortality was observed prior to the test. During the 58-day quarantine, birds received deworming medication and antibiotics in both feed and water. Fowl pox vaccinations were also administered. Deworming medication included amprolium, fenbendazole, and nitarsone. Antibiotics included Bacitracin, Lincomycin, and Spectinomycin.

B. Test System

Guideline Criteria	Reported Information
Were pens for adult birds of adequate size and designed to conform to good husbandry practices?	Yes
Were pens for chicks of adequate size and designed to conform to good husbandry practices?	Yes
Were pens constructed of a nonbinding material such as galvanized or stainless steel?	Yes
Was adequate ventilation provided?	Yes
<u>Temperature</u> Approx. 21°C (70°F)	Average: 21°C
<u>Relative humidity</u> Approx. 55%	Average: 52%
<u>Lighting</u> First 8 weeks: 7 h per day. Thereafter: 16-17 h per day. At least 6 footcandles at bird level.	First 8 weeks: 7 h per day. Thereafter: 17 h per day. Mean illumination: 9.1 foot candles
<u>Diet</u> A commercial breeder feed (or its equivalent) that is appropriate for the test species.	Adults received Purina Custom Game Bird Layena 28%: 28% protein minimum 2.5% fat minimum 7% crude fiber maximum 2.4 - 3.4% calcium Chicks received Purina Startena.
<u>Preparation of test diet</u> A premix containing the test substance should be mechanically mixed with basal diet. If an evaporative vehicle is used, it must be completely evaporated prior to feeding.	Test diets were prepared by mixing the test compound, acetone, and stock diet to form premix. Additional stock diet was added to the premix to form the final diet.

Guideline Criteria	Reported Information
Was the premix stored under conditions which maintain stability?	Yes, the diets were kept frozen at all times, except when being fed to the birds.
Was the diet analyzed to verify homogeneity and stability of the test substance?	Yes
<u>Replenishment of feed</u>	<p>Adult diets were prepared weekly. Treated diets was offered at the beginning of each week and was completely replaced for each pen at mid-week.</p> <p>In addition, feed and water were provided <i>ad libitum</i> for the adults and offspring.</p>

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: Control, 100, 300, and 900 ppm, corrected for 88.7% purity.</p> <p>Max. residue level: Not reported</p>
<p><u>Control</u> Vehicle control.</p>	Vehicle control
<p><u>Vehicle</u> Corn oil or other appropriate vehicle.</p>	Acetone
<p><u>Vehicle amount (% of diet by weight)</u> Not more than 2%.</p>	Amount of acetone was 1% of final diet.

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Guideline Criteria	Reported Information
<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>10 weeks</p>
<p><u>Exposure duration with egg-laying</u> At least 10 weeks.</p>	<p>12 weeks</p>
<p><u>Withdrawal period</u> If reduced reproduction is evident, a withdrawal period of up to 3 weeks may be added to the test phase.</p>	<p>N/A</p>

D. Egg Collection and Incubation

Guideline Criteria	Reported Information
<p>Were eggs collected daily?</p>	<p>Yes</p>
<p><u>Egg storage temperature</u> Approximately 16°C (61°F)</p>	<p>Range: 17-19°C</p>
<p><u>Egg storage humidity</u> Approximately 65%</p>	<p>Average: 64%</p>
<p>Were eggs set weekly?</p>	<p>Yes</p>
<p>Were eggs candled for cracks prior to being set for incubation on Day 0?</p>	<p>Yes</p>

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Guideline Criteria	Reported Information
<u>Candling for fertility</u> Quail: approx. Day 11 Ducks: approx. Day 14	Eggs were candled on Day 11 for fertility and on day 18 for embryo viability.
<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	Range: 36.4 - 37.8°C
<u>Hatching humidity</u> 70% is recommended	Range: 75-77%
<u>Day after egg set that chicks were removed and counted</u> Bobwhite: Day 24 Mallard: Day 27	Chicks were removed and counted on Days 24 and 25.

E. Eggshell Thickness Measurement

Guideline Criteria	Reported Information
<u>Collection Schedule</u> At least once every two weeks (Week 1, 3, 5, 7 and 9).	Eggs collected on the first day of Weeks 12, 14, 16, 18, 20, and 22 were used for eggshell thickness measurement.
Were shells opened, washed, and air dry for at least 48 hours before measuring?	Yes, shells were air dried for at least 48 hours.
<u>Measurement</u> 3-4 measurements per eggs to the nearest 0.01 mm.	The number of measurements per egg was not reported. Measurements were recorded to the nearest 0.01 mm.

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?	Test samples were 67.0 to 121% of the nominal concentrations. This was comparable to QC samples analyzed concurrently with test samples (84.3 to 114%).
Did diet analysis show that the test substance was stable and homogeneous?	Test samples appeared to degrade slightly at room temperature over time (samples were taken at Day 9). Concentrations of metalaxyl measured in test samples ranged from 46.0 to 58.7% of nominal concentrations compared to 86.6 to 99.8% for QC samples analyzed concurrently with the test samples. Consequently, treated diet was offered at the beginning of each test week and was completely replaced for each pen at mid-week for each test week. Diets were kept frozen at all times, except when being fed to the birds.
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 	All endpoints listed at left plus hatchling weight.
Were data reported by pen for all endpoints?	Yes

Significant Results: There were no overt signs of toxicity or treatment related reductions in food consumption or body weight at any test concentration (100, 300 and 900 ppm ai) when compared to the control. There were no statistically significant effects on any reproductive parameter measured at any test concentration when compared to the control.

13. VERIFIED STATISTICAL RESULTS:Means of Endpoints

Endpoint	Control	100 ppm	300 ppm	900 ppm
Eggs laid (EL)	51 (23)	58 (9)	52 (18)	59 (10)
Eggs cracked (EC)	1.3 (2.1)	1.6 (1.6)	2.4 (2.2)	2.6 (2.6)
Eggs set (ES)	45 (22)	53 (8)	46 (16)	52 (10)
Viable embryos (VE)	44 (22)	48 (8)	41 (20)	47 (16)
Live 3-wk embryos (LE)	43 (22)	47 (10)	41 (20)	46 (16)
Normal hatchlings (NH)	39 (21)	40 (13)	39 (19)	44 (16)
14-day-old survivors (HS)	37 (20)	35 (12)	35 (18)	40 (15)
Egg shell thickness (THICK)	0.238 (0.007)	0.239 (0.011)	0.242 (0.013)	0.235 (0.016)
Hatchling weight (HATWT)	7.35 (0.40)	7.40 (0.50)	7.53 (0.37)	7.29 (0.61)
14-day-old survivor weight (SURVWT)	32.5 (1.3)	33.2 (2.6)	31.5 (2.1)	32.2 (2.6)
Mean food consumption (FOOD)	18.1 (1.4)	18.6 (1.3)	18.0 (0.8)	18.5 (1.2)
Final weight of males (POSTM)	232 (19)	230 (21)	222 (24)	230 (16)
Final weight of females (POSTF)	253 (27)	260 (21)	255 (23)	258 (24)

Statistically Significant Endpoints: No statistically significant effects.

14. **REVIEWER'S COMMENTS:** When compared to the controls, there were no significant treatment related effects on any of the parameters measured at any concentrations tested (i.e., 100, 300, and 900 ppm ai). Since the expected maximum field residue level was not reported, it is unclear if the highest dosage level (900 ppm ai) was at or above the maximum field residue level. This study will be classified as **Supplemental** pending the registrant's response.

OBS	LEVEL	EL	EC	ES	VE	LE	NH	HS	THICK	HATWT
31	TRT1	52	1	47	45	45	43	35	0.227	7.47
32	TRT1	70	1	66	65	65	62	53	0.252	8.19
33	TRT2	44	1	40	33	33	30	30	0.240	8.03
34	TRT2	0	0	0	0	0	0	0		
35	TRT2	29	4	22	22	20	18	16	0.245	7.11
36	TRT2	58	4	54	54	54	54	54	0.274	7.75
37	TRT2	56	1	51	0	0	0	0	0.226	
38	TRT2	66	8	53	52	52	51	50	0.235	8.07
39	TRT2	64	1	58	49	49	49	40	0.240	7.31
40	TRT2	52	2	47	47	47	47	45	0.250	8.01
41	TRT2	53	4	47	46	46	43	39	0.240	7.59
42	TRT2	64	0	60	59	58	57	54	0.241	7.34
43	TRT2	67	5	56	56	55	52	48	0.230	7.15
44	TRT2	58	3	51	51	51	51	36	0.263	7.12
45	TRT2	61	1	55	55	54	49	43	0.233	7.25
46	TRT2	61	3	53	53	52	47	41	0.234	7.66
47	TRT2	55	4	48	48	48	47	45	0.239	7.28
48	TRT3	63	1	59	57	57	56	52	0.246	7.58
49	TRT3	28	0	25	25	22	20	15	0.248	6.30
50	TRT3	68	4	59	58	56	50	45	0.247	7.30
51	TRT3	67	8	54	54	53	52	47	0.223	8.04
52	TRT3	72	1	66	62	62	60	54	0.231	7.77
53	TRT3	56	4	55	49	48	46	39	0.215	7.03
54	TRT3	57	0	53	53	53	51	46	0.251	7.21
55	TRT3	56	5	33	2	1	1	1	0.193	6.30

OBS	SURVWT	FOOD	PREM	POSTM	PREF	POSTF	HATWT
31	17.8	185.2	185.2	210.8	181.5	237.7	7.80
32	20.4	188.3	188.3	218.4	195.6	281.9	7.47
33	17.9	186.9	186.9	206.7	194.8	270.3	6.81
34	18.0	197.2	197.2	260.5	205.4	233.7	6.89
35	15.8	191.9	191.9	224.0	187.1	216.9	8.02
36	17.9	207.0	207.0	228.9	202.0	284.4	7.75
37	18.4	191.0	191.0	203.4	202.0	263.6	6.87
38	19.1	213.5	213.5	227.2	215.1	295.4	7.26
39	30.74	187.2	187.2	212.4	187.2	268.5	7.57
40	31.92	183.8	183.8	227.3	193.6	272.8	7.08
41	33.42	189.9	189.9	234.0	195.1	220.1	7.60
42	30.23	17.8	218.6	235.2	192.6	244.2	7.38
43	30.53	17.8	203.9	234.9	191.4	261.8	7.16
44	28.13	18.1	196.0	234.9	204.9	243.4	7.20
45	33.54	17.9	192.2	224.8	196.7	255.5	7.80
47	32.48	18.3	214.4	236.1	199.8	246.1	6.41
48	28.07	18.0	210.7	237.8	192.6	281.6	7.15
49	34.82	20.2	178.1	214.3	210.9	253.8	7.07
50	30.25	17.3	213.6	257.8	189.2	207.6	6.73
51	30.50	18.6	193.1	231.6	200.5	285.6	
52	28.57	19.7	193.9	259.9	207.5	286.8	
53	30.12	18.3	206.3	232.6	195.3	251.2	
54	32.22	21.0	213.6	235.9	211.6	280.6	
55	35.20	18.4	213.6	229.7	206.2	265.2	
56	35.65	18.7	207.1	234.2	203.0	276.2	
57	34.23	18.5	224.1	250.6	191.2	254.0	
58	27.20	17.4	195.4	221.7	194.4	248.4	
59	27.20	17.4	195.4	221.7	194.4	248.4	
60	202.9	202.9	202.9	197.6	197.6	197.6	

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OBS	LEVEL	EL	EC	ES	VE	LE	NH	HS	THICK	HATWT
61	TRT3	67	2	60	57	55	43	40	0.238	8.71
62	TRT3	58	0	53	53	49	47	43	0.247	6.91
63	TRT3	53	1	49	49	49	49	40	0.223	7.29
64	TRT3	64	0	60	58	56	56	51	0.237	6.99

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LEVEL	CONTROL		TRT1		TRT2		TRT3	
	MEAN	MEAN	MEAN	MEAN	MEAN	MEAN	MEAN	MEAN
EL	50.80	58.40	52.36	59.13				
EC	1.33	1.60	2.43	2.60				
ES	44.67	53.20	46.21	51.93				
VE	43.60	48.40	41.21	47.40				
LE	42.73	46.60	40.79	46.27				
NH	39.27	39.73	39.14	44.00				
HS	36.93	35.40	35.43	39.80				
ES/EL (%)	88.13	91.21	87.94	87.90				
(EL-EC)/EL (%)	97.21	97.33	95.09	95.77				
VE/ES (%)	98.03	91.25	89.33	89.21				
LE/VE (%)	97.08	95.69	98.64	94.29				
NH/EL (%)	76.44	68.70	73.90	74.37				
NH/ES (%)	86.40	75.15	84.20	82.45				
NH/LE (%)	90.59	83.63	95.53	95.18				
HS/ES (%)	82.21	66.55	76.28	74.10				
HS/NH (%)	94.98	88.95	90.64	90.48				
THICK	0.24	0.24	0.24	0.24				
HATWT	7.35	7.40	7.53	7.29				
SURVMT	32.49	33.25	31.47	32.21				
FOOD	18.09	18.60	17.99	18.49				
POSTM	231.65	229.63	222.23	230.03				
POSTF	252.59	260.01	255.48	257.93				

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LEVEL=CONTROL				
Variable	Label	N	Mean	Std Dev
EL		15	50.800	23.364
EC		15	1.333	2.127
ES		15	44.667	22.493
VE		15	43.600	21.774
LE		15	42.733	21.878
NH		15	39.267	21.100
HS		15	36.933	19.689
THICK		13	0.238	0.007
HATWT		14	7.351	0.405
SURVMT		14	32.491	1.339
FOOD		14	18.093	1.425
PREM		15	201.981	9.898
POSTM		15	231.653	19.019
PREF		16	201.338	12.656
POSTF		15	252.593	26.993
ES_EL		15	88.125	13.618
NH_EL		14	76.441	17.376
ENC_EL		14	97.207	4.181
VE_ES		14	98.026	2.832
NH_ES		14	86.404	12.148
HS_ES		14	82.211	12.882
LE_VE		14	97.075	4.939
NH_LE		14	90.587	9.990
HS_NH		14	94.976	5.246

LEVEL=TRT1				
Variable	Label	N	Mean	Std Dev
EL		15	58.400	8.814
EC		15	1.600	1.639
ES		15	53.200	7.975
VE		15	48.400	8.210
LE		15	46.600	10.336
NH		15	39.733	12.939
HS		15	35.400	12.240
THICK		15	0.239	0.011
HATWT		15	7.396	0.503
SURVMT		15	33.249	2.597
FOOD		15	18.600	1.331
PREM		16	203.856	12.179
POSTM		15	229.633	20.760
PREF		16	197.088	9.080
POSTF		15	260.007	21.441
ES_EL		15	91.207	3.769
NH_EL		15	68.702	20.647
ENC_EL		15	97.331	2.928
VE_ES		15	91.249	9.139
NH_ES		15	75.146	21.989
HS_ES		15	66.550	19.493
LE_VE		15	95.689	9.721
NH_LE		15	83.630	19.441
HS_NH		15	88.946	8.948

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LEVEL=TRT2

Variable Label	N	Mean	Std Dev	CV
EL	14	52.357	18.092	34.555
EC	14	2.243	2.243	92.376
ES	14	46.214	16.320	35.315
VE	14	41.214	19.981	48.482
LE	14	19.916	19.916	48.831
NH	14	39.143	19.442	49.668
HS	14	35.429	17.956	50.682
THICK	13	0.242	0.013	5.513
HATWT	12	7.533	0.368	4.890
SURVWT	12	31.469	2.144	6.812
FOOD	14	17.986	0.802	4.458
PREM	16	200.569	10.060	5.016
POSTM	14	222.229	23.386	10.613
PREF	16	196.444	8.395	4.273
POSTF	14	255.479	22.872	8.953
ES_EL	13	87.942	5.180	5.891
NH_EL	13	73.899	23.869	32.300
ENC_EL	13	95.089	4.267	4.487
VE_ES	13	89.331	27.305	30.790
NH_ES	13	84.203	26.398	31.350
HS_ES	13	76.277	25.022	32.805
LE_VE	12	98.644	2.385	2.620
NH_LE	12	95.534	4.269	4.469
HS_NH	12	90.635	8.430	9.301

LEVEL=TRT3

Variable Label	N	Mean	Std Dev	CV
EL	15	59.133	10.253	17.339
EC	15	2.600	2.613	100.506
ES	15	51.933	10.375	19.977
VE	15	47.400	16.088	33.941
LE	15	46.267	16.193	34.999
NH	15	44.000	15.861	36.048
HS	15	39.800	14.920	37.487
THICK	15	0.235	0.016	6.909
HATWT	15	7.292	0.608	8.342
SURVWT	15	32.206	2.595	8.056
FOOD	15	18.493	1.231	6.656
PREM	16	202.238	12.688	6.274
POSTM	15	230.027	15.707	6.828
PREF	16	197.163	9.743	4.942
POSTF	15	257.933	24.437	9.482
ES_EL	15	87.901	8.794	10.004
NH_EL	15	74.369	23.905	32.144
ENC_EL	15	95.769	4.173	4.358
VE_ES	15	89.210	25.352	28.419
NH_ES	15	82.445	25.421	30.834
HS_ES	15	74.098	23.544	31.774
LE_VE	15	94.289	12.702	13.471
NH_LE	15	95.182	5.907	6.206
HS_NH	15	90.479	6.252	6.910

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWWHITE

1. ANALYSIS OF EGGS LAID

11:26 Thursday, April 8, 1999

General Linear Models Procedure
Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

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Number of observations in data set = 64

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWWHITE

1. ANALYSIS OF EGGS LAID

11:26 Thursday, April 8, 1999

General Linear Models Procedure
Type I Estimable Functions for: LEVEL

Effect

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWWHITE

1. ANALYSIS OF EGGS LAID

11:26 Thursday, April 8, 1999

General Linear Models Procedure

Dependent Variable: EL

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	789.18797	263.06266	1.00	0.3995
Error	55	14456.94762	262.85359		
Corrected Total	58	15246.13559			

R-Square 0.051763
C.V. 29.36012
Root MSE 16.213
EL Mean 55.220

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	789.18797	263.06266	1.00	0.3995

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWWHITE

1. ANALYSIS OF EGGS LAID

11:26 Thursday, April 8, 1999

General Linear Models Procedure
Least Squares Means

LEVEL	LSMEAN	EL	Pr > T	HO: LSMEAN(I)=LSMEAN(J)
CONTROL	50.8000000	1	0.2046	0.7970 0.1649
TRT1	58.4000000	2	0.2046	0.3203 0.9019
TRT2	52.3571429	3	0.7970	0.3203 0.2656
TRT3	59.1333333	4	0.1649	0.9019 0.2656

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE

1. ANALYSIS OF EGGS LAID

11:26 Thursday, April 8, 1999

General Linear Models Procedure

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

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

Alpha= 0.05 Confidence= 0.95 df= 55 MSE= 262.8536
Critical Value of Studentized Range= 3.747

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	-14.951	0.733	0.733	16.418	
TRT3 - TRT2	-9.186	6.776	6.776	22.738	
TRT3 - CONTROL	-7.351	8.333	8.333	24.018	
TRT1 - TRT2	-16.418	-0.733	-0.733	14.951	
TRT1 - TRT3	-9.919	6.043	6.043	22.005	
TRT1 - CONTROL	-8.084	7.600	7.600	23.284	
TRT2 - TRT3	-22.738	-6.776	-6.776	9.186	
TRT2 - TRT1	-22.005	-6.043	-6.043	9.919	
TRT2 - CONTROL	-14.405	1.557	1.557	17.519	
CONTROL - TRT3	-24.018	-8.333	-8.333	7.351	
CONTROL - TRT1	-23.284	-7.600	-7.600	8.084	
CONTROL - TRT2	-17.519	-1.557	-1.557	14.405	

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE

1. ANALYSIS OF EGGS LAID

11:26 Thursday, April 8, 1999

General Linear Models Procedure

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

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

Alpha= 0.05 Confidence= 0.95 df= 55 MSE= 262.8536
Critical Value of Dunnnett's T= 2.109

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

LEVEL Comparison	Simultaneous		Difference Between Means	Simultaneous	
	Lower Confidence Limit	Upper Confidence Limit		Lower Confidence Limit	Upper Confidence Limit
TRT3 - CONTROL	-4.153	8.333	8.333	20.820	
TRT1 - CONTROL	-4.887	7.600	7.600	20.087	
TRT2 - CONTROL	-11.150	1.557	1.557	14.265	

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE

2. ANALYSIS OF EGGS CRACKED

11:26 Thursday, April 8, 1999

General Linear Models Procedure
Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE

2. ANALYSIS OF EGGS CRACKED

11:26 Thursday, April 8, 1999

General Linear Models Procedure
Type I Estimable Functions for: LEVEL

Coefficients

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE

2. ANALYSIS OF EGGS CRACKED

11:26 Thursday, April 8, 1999

General Linear Models Procedure

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	17.021146	5.673715	1.19	0.3216
Error	55	261.961905	4.762944		
Corrected Total	58	278.983051			

R-Square	C.V.	Root MSE	EC Mean
0.061011	110.0535	2.1824	1.9831

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	17.021146	5.673715	1.19	0.3216

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE

2. ANALYSIS OF EGGS CRACKED

11:26 Thursday, April 8, 1999

General Linear Models Procedure
Least Squares Means

LEVEL	EC	Pr > T	HO: LSMEAN(i)=LSMEAN(j)
	LSMEAN	i/j	1 2 3 4
CONTROL	1.33333333	1	0.7392 0.1824 0.1177
TRT1	1.60000000	2	0.7392 0.3114 0.2148
TRT2	2.42857143	3	0.1824 0.3114 0.8334
TRT3	2.60000000	4	0.1177 0.2148 0.8334

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
2. ANALYSIS OF EGGS CRACKED

11:26 Thursday, April 8, 1999

General Linear Models Procedure

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

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

Alpha= 0.05 Confidence= 0.95 df= 55 MSE= 4.762944
Critical Value of Studentized Range= 3.747

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

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT3 - TRT2	-1.9772	0.1714	2.3201
TRT3 - TRT1	-1.1113	1.0000	3.1113
TRT3 - CONTROL	-0.8446	1.2667	3.3780
TRT2 - TRT3	-2.3201	-0.1714	1.9772
TRT2 - TRT1	-1.3201	0.8286	2.9772
TRT2 - CONTROL	-1.0534	1.0952	3.2439
TRT1 - TRT3	-3.1113	-1.0000	1.1113
TRT1 - TRT2	-2.9772	-0.8286	1.3201
TRT1 - CONTROL	-1.8446	0.2667	2.3780
CONTROL - TRT3	-3.3780	-1.2667	0.8446
CONTROL - TRT2	-3.2439	-1.0952	1.0534
CONTROL - TRT1	-2.3780	-0.2667	1.8446

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
2. ANALYSIS OF EGGS CRACKED

11:26 Thursday, April 8, 1999

General Linear Models Procedure

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

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

Alpha= 0.05 Confidence= 0.95 df= 55 MSE= 4.762944
Critical Value of Dunnett's T= 2.109

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

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LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT3 - CONTROL	-0.4142	1.2667	2.9475
TRT2 - CONTROL	-0.6154	1.0952	2.8058
TRT1 - CONTROL	-1.4142	0.2667	1.9475

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
3. ANALYSIS OF EGGS SET

11:26 Thursday, April 8, 1999

General Linear Models Procedure
Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
3. ANALYSIS OF EGGS SET

11:26 Thursday, April 8, 1999

General Linear Models Procedure
Type I Estimable Functions for: LEVEL

Effect Coefficients

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
3. ANALYSIS OF EGGS SET

11:26 Thursday, April 8, 1999

General Linear Models Procedure

Dependent Variable: ES	DF	Sum of Squares	Mean Square	F Value	Pr > F
Source	3	783.82365	261.27455	1.11	0.3528
Model	55	12943.02381	235.32771		
Error	58	13726.84746			
Corrected Total					
R-Square	0.057102	31.27447	Root MSE	15.340	ES Mean
					49.051

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWWHITE
 3. ANALYSIS OF EGGS SET

11:26 Thursday, April 8, 1999
 General Linear Models Procedure
 Least Squares Means

LEVEL	ES	Pr > T	H0: LSMEAN(i)=LSMEAN(j)
	LSMEAN	i/j	2 3 4
CONTROL	44.6666667	1	0.1334 0.7870 0.2000
TRT1	53.2000000	2	0.1334 0.2256 0.8219
TRT2	46.2142857	3	0.7870 0.2256 0.3201
TRT3	51.9333333	4	0.2000 0.8219 0.3201

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWWHITE
 3. ANALYSIS OF EGGS SET

11:26 Thursday, April 8, 1999
 General Linear Models Procedure

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

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

Alpha= 0.05 Confidence= 0.95 df= 55 MSE= 235.3277
 Critical Value of Studentized Range= 3.747

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

LEVEL Comparison	Simultaneous		
	Lower Confidence Limit	Difference Between Means	Upper Confidence Limit
TRT1 - TRT3	-13.574	1.267	16.107
TRT1 - TRT2	-8.117	6.986	22.089
TRT1 - CONTROL	-6.307	8.533	23.374
TRT3 - TRT1	-16.107	-1.267	13.574
TRT3 - TRT2	-9.384	5.719	20.822
TRT3 - CONTROL	-7.574	7.267	22.107
TRT2 - TRT1	-22.089	-6.986	8.117
TRT2 - TRT3	-20.822	-5.719	9.384
TRT2 - CONTROL	-13.556	1.548	16.651
CONTROL - TRT1	-23.374	-8.533	6.307
CONTROL - TRT3	-22.107	-7.267	7.574
CONTROL - TRT2	-16.651	-1.548	13.556

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWWHITE
 3. ANALYSIS OF EGGS SET

11:26 Thursday, April 8, 1999

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

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.
 Alpha= 0.05 Confidence= 0.95 df= 55 MSE= 235.3277
 Critical Value of Dunnett's T= 2.109

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

LEVEL Comparison	Simultaneous		
	Lower Confidence Limit	Difference Between Means	Upper Confidence Limit
TRT1 - CONTROL	-3.281	8.533	20.348
TRT3 - CONTROL	-4.548	7.267	19.081
TRT2 - CONTROL	-10.476	1.548	13.571

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWWHITE
 4. ANALYSIS OF VIABLE EMBRYOS

11:26 Thursday, April 8, 1999
 General Linear Models Procedure
 Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWWHITE
 4. ANALYSIS OF VIABLE EMBRYOS

11:26 Thursday, April 8, 1999
 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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWWHITE
 4. ANALYSIS OF VIABLE EMBRYOS

11:26 Thursday, April 8, 1999

General Linear Models Procedure
 Dependent Variable: VE

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
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TRT2 - TRT1 -24.184 9.813
 TRT2 - TRT3 -23.184 10.813
 TRT2 - CONTROL -19.384 -2.386

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 4. ANALYSIS OF VIABLE EMBRYOS

 11:26 Thursday, April 8, 1999

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= 55 MSE= 298.0938
 Critical Value of Dunnett's T= 2.109

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

LEVEL Comparison	Simultaneous Lower Confidence Limit		Difference Between Means	Simultaneous Upper Confidence Limit	
	Lower Limit	Upper Limit		Lower Limit	Upper Limit
CONTROL	-8.497	4.800	4.800	-8.497	18.097
TRT1	-9.497	3.800	3.800	-9.497	17.097
TRT2	-15.918	-2.386	-2.386	-15.918	11.147

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 5. ANALYSIS OF LIVE 3-WEEK EMBRYOS

 11:26 Thursday, April 8, 1999

General Linear Models Procedure
 Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 5. ANALYSIS OF LIVE 3-WEEK EMBRYOS

 11:26 Thursday, April 8, 1999

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

File:44755001.sas Page 13
 Model 3 486.97845 162.32615 0.54 0.6539
 Error 55 16395.15714 298.09377
 Corrected Total 58 16882.13559

R-Square C.V. Root MSE VE Mean
 0.028846 38.18059 17.265 45.220

Source DF Type I SS Mean Square F Value Pr > F
 .LEVEL 3 486.97845 162.32615 0.54 0.6539

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 4. ANALYSIS OF VIABLE EMBRYOS

 11:26 Thursday, April 8, 1999

General Linear Models Procedure
 Least Squares Means

LEVEL	LSMEAN	Pr > T H0: LSMEAN(i)=LSMEAN(j)			
		1	2	3	4
CONTROL	43.600000	1	0.4497	0.7114	0.5492
TRT1	48.400000	2	0.4497	0.2676	0.8746
TRT2	41.2142857	3	0.7114	0.2676	0.5392
TRT3	47.400000	4	0.5492	0.8746	0.3392

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 4. ANALYSIS OF VIABLE EMBRYOS

 11:26 Thursday, April 8, 1999

General Linear Models Procedure

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

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

Alpha= 0.05 Confidence= 0.95 df= 55 MSE= 298.0938
 Critical Value of Studentized Range= 3.747

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

LEVEL Comparison	Simultaneous Lower Confidence Limit		Difference Between Means	Simultaneous Upper Confidence Limit	
	Lower Limit	Upper Limit		Lower Limit	Upper Limit
TRT1 - TRT3	-15.703	17.703	1.000	-15.703	17.703
TRT1 - CONTROL	-11.903	21.503	4.800	-11.903	21.503
TRT1 - TRT2	-9.813	24.184	7.186	-9.813	24.184
TRT3 - TRT1	-17.703	15.703	-1.000	-17.703	15.703
TRT3 - CONTROL	-12.903	20.503	3.800	-12.903	20.503
TRT3 - TRT2	-10.813	23.184	6.186	-10.813	23.184
CONTROL - TRT1	-21.503	11.903	-4.800	-21.503	11.903
CONTROL - TRT3	-20.503	12.903	-3.800	-20.503	12.903
CONTROL - TRT2	-14.613	19.384	2.386	-14.613	19.384

General Linear Models Procedure

Dependent Variable: LE

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	345.80331	115.26777	0.37	0.7732
Error	55	17023.82381	309.52407		
Corrected Total	58	17369.62712			

R-Square 0.019909 C.V. 39.84662 Root MSE 17.593 LE Mean 44.153

General Linear Models Procedure

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

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

Alpha= 0.05 Confidence= 0.95 df= 55 MSE= 309.5241
 Critical Value of Dunnett's T= 2.109

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 5. ANALYSIS OF LIVE 3-WEEK EMBRYOS

 11:26 Thursday, April 8, 1999

General Linear Models Procedure

LEVEL	Comparison	Simultaneous Lower Limit	Difference Between Means	Simultaneous Upper Confidence Limit
CONTROL	- TRT1	-16.687	0.333	17.353
CONTROL	- CONTROL	-13.153	3.867	20.887
CONTROL	- TRT2	-11.507	5.814	23.136
TRT3	- TRT1	-17.353	-0.333	16.687
TRT3	- CONTROL	-13.487	3.533	20.553
TRT3	- TRT2	-11.840	5.481	22.802
CONTROL	- TRT1	-20.887	-3.867	13.153
CONTROL	- TRT3	-20.553	-3.533	13.487
CONTROL	- TRT2	-15.374	1.948	19.269
TRT2	- TRT1	-23.136	-5.814	11.507
TRT2	- TRT3	-22.802	-5.481	11.840
TRT2	- CONTROL	-19.269	-1.948	15.374

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 6. ANALYSIS OF NORMAL HATCHLINGS

 11:26 Thursday, April 8, 1999

General Linear Models Procedure

Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 6. ANALYSIS OF NORMAL HATCHLINGS

 11:26 Thursday, April 8, 1999

General Linear Models Procedure

LEVEL	Comparison	Simultaneous Lower Limit	Difference Between Means	Simultaneous Upper Confidence Limit
CONTROL	- TRT1	-9.683	3.867	17.417
CONTROL	- CONTROL	-10.017	3.533	17.083
CONTROL	- TRT2	-15.737	-1.948	11.842

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 5. ANALYSIS OF LIVE 3-WEEK EMBRYOS

 11:26 Thursday, April 8, 1999

General Linear Models Procedure

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

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

Alpha= 0.05 Confidence= 0.95 df= 55 MSE= 309.5241
 Critical Value of Studentized Range= 3.747

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

General Linear Models Procedure

LEVEL	Comparison	Simultaneous Lower Limit	Difference Between Means	Simultaneous Upper Confidence Limit
CONTROL	- TRT1	42.7333333	0.5497	0.7669 0.5845
CONTROL	- CONTROL	46.6000000	0.5497	0.3777 0.9588
CONTROL	- TRT2	40.7857143	0.7669	0.3777 0.4055
CONTROL	- TRT3	46.2666667	0.5845	0.9588 0.4055

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 5. ANALYSIS OF LIVE 3-WEEK EMBRYOS

 11:26 Thursday, April 8, 1999

General Linear Models Procedure

Least Squares Means

LEVEL	LSMEAN	Pr > T	H0: LSMEAN(i)=LSMEAN(j)
CONTROL	42.7333333	1	0.5497 0.7669 0.5845
CONTROL	46.6000000	2	0.5497 0.3777 0.9588
CONTROL	40.7857143	3	0.7669 0.3777 0.4055
CONTROL	46.2666667	4	0.5845 0.9588 0.4055

Type I Estimable Functions for: LEVEL

Coefficients

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
6. ANALYSIS OF NORMAL HATCHLINGS

11:26 Thursday, April 8, 1999

General Linear Models Procedure

Independent Variable: NH
Source DF Sum of Squares Mean Square F Value Pr > F
Model 3 240.96142 80.32047 0.26 0.8542
Error 55 17019.58095 309.44693
Corrected Total 58 17260.54237

R-Square 0.13960
C.V. 17.591
Root MSE 40.559

Source DF Type I SS Mean Square F Value Pr > F
LEVEL 3 240.96142 80.32047 0.26 0.8542

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
6. ANALYSIS OF NORMAL HATCHLINGS

11:26 Thursday, April 8, 1999

General Linear Models Procedure
Least Squares Means

LEVEL NH PR > |T| HO: LSMEAN(i)=LSMEAN(j)
LSMEAN i/j 1 2 3 4
CONTROL 39.2666667 1 0.9423 0.9850 0.4643
TRT1 39.7333333 2 0.9423 0.9284 0.5093
TRT2 39.1428571 3 0.9850 0.9284 0.4606
TRT3 44.0000000 4 0.4643 0.5093 0.4606

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
6. ANALYSIS OF NORMAL HATCHLINGS

11:26 Thursday, April 8, 1999

General Linear Models Procedure

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

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

Handwritten mark resembling the number '22'.

Alpha= 0.05 Confidence= 0.95 df= 55 MSE= 309.4469
Critical Value of Studentized Range= 3.747

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

Table with columns: LEVEL Comparison, Simultaneous Lower Confidence Limit, Difference Between Means, Simultaneous Upper Confidence Limit. Rows include TRT3, TRT1, CONTROL, and TRT2 comparisons.

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
6. ANALYSIS OF NORMAL HATCHLINGS

11:26 Thursday, April 8, 1999

General Linear Models Procedure

Dunnett'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= 55 MSE= 309.4469
Critical Value of Dunnett's T= 2.109

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

Table with columns: LEVEL Comparison, Simultaneous Lower Confidence Limit, Difference Between Means, Simultaneous Upper Confidence Limit. Rows include CONTROL, TRT1, and TRT2 comparisons.

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
7. ANALYSIS OF 14-DAY-OLD SURVIVORS

11:26 Thursday, April 8, 1999

General Linear Models Procedure
Class Level Information

Table with columns: Class Levels Values, LEVEL. Shows 4 levels for CONTROL, TRT1, TRT2, TRT3.

Number of observations in data set = 64

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
7. ANALYSIS OF 14-DAY-OLD SURVIVORS

11:26 Thursday, April 8, 1999

General Linear Models Procedure
Type I Estimable Functions for: LEVEL

Coefficients

EPT	0
CONTROL L2	
TRT1 L3	
TRT2 L4	
TRT3 -L2-L3-L4	

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
7. ANALYSIS OF 14-DAY-OLD SURVIVORS

11:26 Thursday, April 8, 1999

General Linear Models Procedure

ent Variable:	HS	Sum of Squares	Mean Square	F Value	Pr > F
DF	3	190.21437	63.40479	0.24	0.8715
55	14832.36190	269.67931			
ted Total	58	15022.57627			

R-Square	C.V.	Root MSE	HS Mean
0.012662	44.48545	16.422	36.915

DF	Type I SS	Mean Square	F Value	Pr > F
3	190.21437	63.40479	0.24	0.8715

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
7. ANALYSIS OF 14-DAY-OLD SURVIVORS

11:26 Thursday, April 8, 1999

General Linear Models Procedure
Least Squares Means

LEVEL	LSMEAN	HS Pr > T	H0: LSMEAN(i)=LSMEAN(j)
CONTROL	36.933333	1	0.7991 0.8062 0.6345
TRT1	35.400000	2	0.7991 0.9963 0.4662
TRT2	35.4285714	3	0.8062 0.9963 0.4768
TRT3	39.8000000	4	0.6345 0.4662 0.4768

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
7. ANALYSIS OF 14-DAY-OLD SURVIVORS

11:26 Thursday, April 8, 1999

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= 55 MSE= 269.6793
Critical Value of Studentized Range= 3.747

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

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT3 - CONTROL	-13.020	2.867	18.753
TRT3 - TRT2	-11.797	4.371	20.539
TRT3 - TRT1	-11.487	4.400	20.287
CONTROL - TRT3	-18.753	-2.867	13.020
CONTROL - TRT2	-14.663	1.505	17.673
CONTROL - TRT1	-14.353	1.533	17.420
TRT2 - TRT3	-20.539	-4.371	11.797
TRT2 - CONTROL	-17.673	-1.505	14.663
TRT2 - TRT1	-16.139	0.029	16.197
TRT1 - TRT3	-20.287	-4.400	11.487
TRT1 - CONTROL	-17.420	-1.533	14.353
TRT1 - TRT2	-16.197	-0.029	16.139

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
7. ANALYSIS OF 14-DAY-OLD SURVIVORS

11:26 Thursday, April 8, 1999

General Linear Models Procedure

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

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

Alpha= 0.05 Confidence= 0.95 df= 55 MSE= 269.6793
Critical Value of Dunnett's t= 2.109

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

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT3 - CONTROL	-9.781	2.867	15.514
TRT2 - CONTROL	-14.376	-1.505	11.567
TRT1 - CONTROL	-14.181	-1.533	11.114

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
8. ANALYSIS OF EGGS SET/EGGS LAID

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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 57 observations can be used in this analysis.

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
8. ANALYSIS OF EGGS SET/EGGS LAID

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
8. ANALYSIS OF EGGS SET/EGGS LAID

General Linear Models Procedure

Dependent Variable: RESPONSE

Source DF Sum of Squares Mean Square F Value Pr > F
Model 3 90.633696 30.211232 0.62 0.6036
Error 53 2572.148821 48.531110
Corrected Total 56 2662.782517

R-Square C.V. Root MSE RESPONSE Mean
0.034037 9.759194 6.9654 71.383

Source DF Type I SS Mean Square F Value Pr > F
LEVEL 3 90.633696 30.211232 0.62 0.6036

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
8. ANALYSIS OF EGGS SET/EGGS LAID

General Linear Models Procedure
Least Squares Means

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CONTROL 72.0127234 1 0.6842 0.4552 0.5138
TRT1 73.0716574 2 0.6842 0.2489 0.2827
TRT2 69.9943150 3 0.4552 0.2489 0.9050
TRT3 70.3109701 4 0.5138 0.2827 0.9050

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
8. ANALYSIS OF EGGS SET/EGGS LAID

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= 53 MSE= 48.53111
Critical Value of Studentized Range= 3.751

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

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

CONTROL - CONTROL -5.808 1.059 7.925
TRT1 - TRT5 -3.986 2.761 9.508
TRT1 - TRT2 -3.924 3.077 10.079

CONTROL - TRT1 -7.925 -1.059 5.808
CONTROL - TRT3 -5.165 1.702 8.568
CONTROL - TRT2 -5.099 2.018 9.135

TRT3 - TRT1 -9.508 -2.761 3.986
TRT3 - CONTROL -8.568 -1.702 3.165
TRT3 - TRT2 -6.685 0.317 7.318

TRT2 - TRT1 -10.079 -3.077 3.924
TRT2 - CONTROL -9.135 -2.018 5.099
TRT2 - TRT3 -7.318 -0.317 6.685

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
8. ANALYSIS OF EGGS SET/EGGS LAID

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= 53 MSE= 48.53111
Critical Value of Dunnett's T= 2.108

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

Simultaneous Lower Difference Upper

LEVEL Comparison	Confidence Limit	Between Means	Confidence Limit
TRT1 - CONTROL	-4.399	1.059	6.517
TRT3 - CONTROL	-7.160	-1.702	3.756
TRT2 - CONTROL	-7.675	-2.018	3.639

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 9. ANALYSIS OF VIABLE EMBRYOS/EGGS SETS

 11:26 Thursday, April 8, 1999

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 57 observations can be used in this analysis.

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 9. ANALYSIS OF VIABLE EMBRYOS/EGGS SETS

 11:26 Thursday, April 8, 1999

General Linear Models Procedure
 Type I Estimable Functions for: LEVEL

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 9. ANALYSIS OF VIABLE EMBRYOS/EGGS SETS

 11:26 Thursday, April 8, 1999

General Linear Models Procedure

Dependent Variable: RESPONSE	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	717.38647	239.12882	0.83	0.4836
Error	53	15279.07315	288.28440		
Corrected Total	56	15996.45962			

R-Square	C.V.	Root MSE	RESPONSE Mean
0.044847	21.56453	16.979	78.735

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	717.38647	239.12882	0.83	0.4836

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 9. ANALYSIS OF VIABLE EMBRYOS/EGGS SETS

 11:26 Thursday, April 8, 1999

General Linear Models Procedure
 Least Squares Means

LEVEL	RESPONSE	LSMEAN	Pr > T	H0: LSMEAN(i)=LSMEAN(j)
CONTROL	84.8241508	1	0.1514	0.2701 0.2316
TRT1	75.6396649	2	0.1514	0.7694 0.8037
TRT2	77.5358796	3	0.2701	0.7694 0.9571
TRT3	77.1882006	4	0.2316	0.8037 0.9571

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 9. ANALYSIS OF VIABLE EMBRYOS/EGGS SETS

 11:26 Thursday, April 8, 1999

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= 53 MSE= 288.2844
 Critical Value of Studentized Range= 3.751

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

LEVEL Comparison	Simultaneous Confidence Limit		Difference Between Means	Simultaneous Confidence Limit	
	Lower Limit	Upper Limit		Lower Limit	Upper Limit
CONTROL - TRT2	-10.058	7.288	7.288	24.634	
CONTROL - TRT3	-9.099	7.636	7.636	24.371	
CONTROL - TRT1	-7.551	9.184	9.184	25.920	
TRT2 - CONTROL	-24.634	-7.288	-7.288	10.058	
TRT3 - CONTROL	-16.717	0.348	0.348	17.413	
TRT2 - TRT1	-15.169	1.896	1.896	18.961	
TRT3 - CONTROL	-24.371	-7.636	-7.636	9.099	
TRT3 - TRT2	-17.413	-0.348	-0.348	16.717	
TRT3 - TRT1	-14.896	1.549	1.549	17.993	
TRT1 - CONTROL	-25.920	-9.184	-9.184	7.551	
TRT2 - CONTROL	-18.961	-1.896	-1.896	15.169	
TRT1 - TRT3	-17.993	-1.549	-1.549	14.896	

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 9. ANALYSIS OF VIABLE EMBRYOS/EGGS SETS

 11:26 Thursday, April 8, 1999

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= 53 MSE= 288.2844
Critical Value of Dunnett's T= 2.108

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

LEVEL Comparison	Simultaneous Lower Confidence Limit		Simultaneous Upper Confidence Limit	
	Lower	Upper	Lower	Upper
TRT2 - CONTROL	-21.076	-7.288	6.499	6.499
TRT3 - CONTROL	-20.938	-7.636	5.666	5.666
TRT1 - CONTROL	-22.487	-9.184	4.118	4.118

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
10. ANALYSIS OF LIVE 3-WEEK EMBRYOS/VIALE EMBRYOS

11:26 Thursday, April 8, 1999

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 56 observations can be used in this analysis.

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
10. ANALYSIS OF LIVE 3-WEEK EMBRYOS/VIALE EMBRYOS

11:26 Thursday, April 8, 1999

General Linear Models Procedure
Type I Estimable Functions for: LEVEL

Coefficients

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
10. ANALYSIS OF LIVE 3-WEEK EMBRYOS/VIALE EMBRYOS

11:26 Thursday, April 8, 1999

General Linear Models Procedure

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	175.36706	58.45569	0.66	0.5826
Error	52	4630.92260	89.05620		

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Corrected Total 55 4806.28966
R-Square 0.036487
C.V. 11.36607
Root MSE 9.4370
RESPONSE Mean 83.027

Source DF Type I SS Mean Square F Value Pr > F
LEVEL 3 175.36706 58.45569 0.66 0.5826

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
10. ANALYSIS OF LIVE 3-WEEK EMBRYOS/VIALE EMBRYOS

11:26 Thursday, April 8, 1999

General Linear Models Procedure
Least Squares Means

LEVEL	RESPONSE LSMEAN	Pr > T	H0: LSMEAN(i)=LSMEAN(j)
CONTROL	83.1276274	1	0.9290 0.4528 0.5136
TRT1	82.8137027	2	0.9290 0.3969 0.5656
TRT2	85.9360057	3	0.4528 0.3969 0.1676
TRT3	80.8210218	4	0.5136 0.5656 0.1676

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
10. ANALYSIS OF LIVE 3-WEEK EMBRYOS/VIALE EMBRYOS

11:26 Thursday, April 8, 1999

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= 52 MSE= 89.0562
Critical Value of Studentized Range= 3.753

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

LEVEL Comparison	Simultaneous Lower Confidence Limit		Simultaneous Upper Confidence Limit	
	Lower	Upper	Lower	Upper
TRT2 - CONTROL	-7.045	2.808	12.662	12.662
TRT1 - TRT1	-6.578	3.122	12.823	12.823
TRT2 - TRT3	-4.586	5.115	14.815	14.815
CONTROL - TRT2	-12.662	-2.808	7.045	7.045
CONTROL - TRT1	-8.994	0.314	9.622	9.622
CONTROL - TRT3	-7.001	2.307	11.614	11.614
TRT1 - TRT2	-12.823	-3.122	6.578	6.578
TRT1 - CONTROL	-9.622	-0.314	8.994	8.994
TRT1 - TRT3	-7.153	1.993	11.138	11.138
TRT3 - TRT2	-14.815	-5.115	4.586	4.586
TRT3 - CONTROL	-11.614	-2.307	7.001	7.001

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 10. ANALYSIS OF LIVE 3-WEEK EMBRYOS/VIALE EMBRYOS

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= 52 MSE= 89.0562
 Critical Value of Dunnett's T= 2.111

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

LEVEL Comparison	Simultaneous		
	Lower Confidence Limit	Difference Between Means	Upper Confidence Limit
TRT2 - CONTROL	-5.028	2.808	10.645
TRT1 - CONTROL	-7.717	-0.314	7.089
TRT3 - CONTROL	-9.709	-2.307	5.096

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 11. ANALYSIS OF NORMAL HATCHLINGS/3-WEEK LIVE EMBRYOS

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 56 observations can be used in this analysis.

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 11. ANALYSIS OF NORMAL HATCHLINGS/3-WEEK LIVE EMBRYOS

General Linear Models Procedure
 Type I Estimable Functions for: LEVEL

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 11. ANALYSIS OF NORMAL HATCHLINGS/3-WEEK LIVE EMBRYOS

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General Linear Models Procedure

Dependent Variable: RESPONSE

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	1258.3549	419.4516	3.74	0.0166
Error	52	5836.1437	112.2335		
Corrected Total	55	7094.4986			
R-Square		C.V.	Root MSE	RESPONSE Mean	
	0.177371	14.00026	10.594	75.670	

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	1258.3549	419.4516	3.74	0.0166

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 11. ANALYSIS OF NORMAL HATCHLINGS/3-WEEK LIVE EMBRYOS

General Linear Models Procedure

Least Squares Means

LEVEL	RESPONSE	Pr > T	H0: LSMEAN(i)=LSMEAN(j)
	LSMEAN	i/j	2 3 4
CONTROL	74.5649302	1	0.1468 0.1721 0.1834
TRT1	68.7660987	2	0.1468 0.0068 0.0059
TRT2	80.3358622	3	0.1721 0.0068 0.9107
TRT3	79.8756282	4	0.1834 0.0059 0.9107

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 11. ANALYSIS OF NORMAL HATCHLINGS/3-WEEK LIVE EMBRYOS

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= 52 MSE= 112.2335
 Critical Value of Studentized Range= 3.753

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

LEVEL Comparison	Simultaneous		
	Lower Confidence Limit	Difference Between Means	Upper Confidence Limit
TRT2 - TRT3	-10.428	0.462	11.352
TRT2 - CONTROL	-5.290	5.771	16.832
TRT2 - TRT1	0.680	11.570	22.460

TRT3	- TRT2	-11.352	-0.462	10.428	***
TRT3	- CONTROL	-5.140	5.309	15.758	
TRT3	- TRT1	0.840	11.108	21.375	***
CONTROL	- TRT2	-15.832	-5.771	5.290	***
CONTROL	- TRT3	-15.758	-5.309	5.140	***
CONTROL	- TRT1	-4.650	5.799	16.248	***
TRT1	- TRT2	-22.460	-11.570	-0.680	***
TRT1	- TRT3	-21.375	-11.108	-0.840	***
TRT1	- CONTROL	-16.248	-5.799	4.650	

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 11. ANALYSIS OF NORMAL HATCHLINGS/3-WEEK LIVE EMBRYOS

 11:26 Thursday, April 8, 1999

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= 52 MSE= 112.2335
 Critical Value of Dunnett's T= 2.111

comparisons significant at the 0.05 level are indicated by ****/.

LEVEL Comparison	Simultaneous Lower Confidence Limit		Difference Between Means		Simultaneous Upper Confidence Limit	
	Lower Limit	Upper Limit	Difference	Between Means	Upper Limit	Lower Limit
TRT2 - CONTROL	-3.027	5.771	5.771		14.568	
TRT3 - CONTROL	-3.002	5.309	5.309		13.619	
TRT1 - CONTROL	-14.109	-5.799	-5.799		2.511	

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 12. ANALYSIS OF NORMAL HATCHLINGS/EGGS LAID

 11:26 Thursday, April 8, 1999

General Linear Models Procedure
 Class Level Information

Class Levels	Values
LEVEL 4	CONTROL TRT1 TRT2 TR3

Number of observations in data set = 64

: Due to missing values, only 57 observations can be used in this analysis.

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 12. ANALYSIS OF NORMAL HATCHLINGS/EGGS LAID

 11:26 Thursday, April 8, 1999

General Linear Models Procedure
 Type I Estimable Functions for: LEVEL

Coefficients

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 12. ANALYSIS OF NORMAL HATCHLINGS/EGGS LAID

 11:26 Thursday, April 8, 1999

General Linear Models Procedure

Dependent Variable: RESPONSE

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	234.45775	78.15258	0.33	0.8047
Error	53	12605.16717	237.83334		

Corrected Total	56	12839.62492			
R-Square	C.V.	Root MSE	RESPONSE Mean		
0.018260	25.92425	15.422	59.488		

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	234.45775	78.15258	0.33	0.8047

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 12. ANALYSIS OF NORMAL HATCHLINGS/EGGS LAID

 11:26 Thursday, April 8, 1999

General Linear Models Procedure
 Least Squares Means

LEVEL	RESPONSE	Pr > T HO: LSMEAN(i)=LSMEAN(j)			
		i/j	1	2	3
CONTROL	62.2213275	1	0.3348	0.5991	0.7174
TRT1	56.6430846	2	0.3348	0.6784	0.5378
TRT2	59.0799762	3	0.5991	0.6784	0.8573
TRT3	60.1358274	4	0.7174	0.5378	0.8573

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 12. ANALYSIS OF NORMAL HATCHLINGS/EGGS LAID

 11:26 Thursday, April 8, 1999

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= 53 MSE= 237.8333
 Critical Value of Studentized Range= 3.751

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 - TRT3	-13.115	17.286	2.086	17.286	17.286
CONTROL - TRT2	-12.614	18.896	3.141	18.896	18.896
CONTROL - TRT1	-9.622	20.779	5.578	20.779	20.779
TRT3 - CONTROL	-17.286	13.115	-2.086	13.115	13.115
TRT3 - TRT2	-14.444	16.556	1.056	16.556	16.556
TRT3 - TRT1	-11.444	18.429	3.493	18.429	18.429
TRT2 - CONTROL	-18.896	12.614	-3.141	12.614	12.614
TRT2 - TRT3	-16.556	14.444	-1.056	14.444	14.444
TRT2 - TRT1	-13.063	17.937	2.437	17.937	17.937
TRT1 - CONTROL	-20.779	9.622	-5.578	9.622	9.622
TRT1 - TRT3	-18.429	11.444	-3.493	11.444	11.444
TRT1 - TRT2	-17.937	13.063	-2.437	13.063	13.063

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE

12. ANALYSIS OF NORMAL HATCHLING SURVIVORS/EGGS LAID

11:26 Thursday, April 8, 1999

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= 53 MSE= 237.8333
Critical Value of Dunnett's T= 2.108

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

LEVEL Comparison	Simultaneous		Difference Between Means	Simultaneous	
	Lower Confidence Limit	Upper Confidence Limit		Lower Confidence Limit	Upper Confidence Limit
TRT3 - CONTROL	-14.168	9.997	-2.086	9.997	9.997
TRT2 - CONTROL	-15.654	9.382	-3.141	9.382	9.382
TRT1 - CONTROL	-17.661	6.504	-5.578	6.504	6.504

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE

13. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/NORMAL HATCHLINGS

11:26 Thursday, April 8, 1999

General Linear Models Procedure

Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

Due to missing values, only 56 observations can be used in this

analysis.

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE

13. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/NORMAL HATCHLINGS

11:26 Thursday, April 8, 1999

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE

13. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/NORMAL HATCHLINGS

11:26 Thursday, April 8, 1999

General Linear Models Procedure

Dependent Variable: RESPONSE

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	380.06436	126.68812	1.75	0.1690
Error	52	3772.42843	72.54670		
Corrected Total	55	4152.49279			

R-Square	C.V.	Root MSE	RESPONSE Mean
0.091527	11.38683	8.5174	74.801

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	380.06436	126.68812	1.75	0.1690

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE

13. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/NORMAL HATCHLINGS

11:26 Thursday, April 8, 1999

General Linear Models Procedure

Least Squares Means

LEVEL	RESPONSE	Pr > T	H0: LSMEAN(i)=LSMEAN(j)
CONTROL	79.1738469	1	0.0434 0.1650 0.0637
TRT1	72.6202314	2	0.0434 0.5805 0.8587
TRT2	74.4546794	3	0.1650 0.5805 0.7000
TRT3	73.1765251	4	0.0637 0.8587 0.7000

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE

13. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/NORMAL HATCHLINGS

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Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 57 observations can be used in this analysis.

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 14. ANALYSIS OF EGGS NOT CRACKED/EGGS LAID

 11:26 Thursday, April 8, 1999

General Linear Models Procedure
 Type I Estimable Functions for: LEVEL

Effect Coefficients

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 14. ANALYSIS OF EGGS NOT CRACKED/EGGS LAID

 11:26 Thursday, April 8, 1999

General Linear Models Procedure

Dependent Variable: RESPONSE

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	166.94600	55.64867	1.30	0.2833
Error	53	2264.33897	42.72338		
Corrected Total	56	2431.28497			

R-Square C.V. Root MSE
 0.068666 8.064298 6.5363

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	166.94600	55.64867	1.30	0.2833

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 14. ANALYSIS OF EGGS NOT CRACKED/EGGS LAID

 11:26 Thursday, April 8, 1999

General Linear Models Procedure
 Least Squares Means

LEVEL	RESPONSE	Pr > T	HO: LSMEAN(1)=LSMEAN(J)
	LSMEAN	i/j	1 2 3 4

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= 52 MSE= 72.5467
 Critical Value of Studentized Range= 3.753

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

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
CONTROL - TRT2	-4.174	4.719	13.612
CONTROL - TRT3	-2.403	5.997	14.398
CONTROL - TRT1	-1.847	6.554	14.954
TRT2 - CONTROL	-13.612	-4.719	4.174
TRT2 - TRT3	-7.477	1.278	10.033
TRT2 - TRT1	-6.921	1.834	10.590
TRT3 - CONTROL	-14.398	-5.997	2.403
TRT3 - TRT2	-10.033	-1.278	7.477
TRT3 - TRT1	-7.698	0.556	8.811
TRT1 - CONTROL	-14.954	-6.554	1.847
TRT1 - TRT2	-10.590	-1.834	6.921
TRT1 - TRT3	-8.811	-0.556	7.698

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 13. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/NORMAL HATCHLINGS

 11:26 Thursday, April 8, 1999

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= 52 MSE= 72.5467
 Critical Value of Dunnnett's T= 2.111

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

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT2 - CONTROL	-11.792	-4.719	2.354
TRT3 - CONTROL	-12.679	-5.997	0.684
TRT1 - CONTROL	-13.235	-6.554	0.128

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 14. ANALYSIS OF EGGS NOT CRACKED/EGGS LAID

 11:26 Thursday, April 8, 1999

General Linear Models Procedure

CONTROL 82.8979900 1 0.8089 0.0834 0.2945
 TRT1 82.3076351 2 0.8089 0.1258 0.4101
 TRT2 78.4549175 3 0.0834 0.1258 0.4533
 TRT3 80.3259915 4 0.2945 0.4101 0.4533

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE

14. ANALYSIS OF EGGS NOT CRACKED/EGGS LAID

 11:26 Thursday, April 8, 1999

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= 53 MSE= 42.72338
 Critical Value of Studentized Range= 3.751

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

LEVEL Comparison	Simultaneous Lower Confidence Limit		Difference Between Means	Simultaneous Upper Confidence Limit	
	Lower Limit	Upper Limit		Lower Limit	Upper Limit
CONTROL - TRT1	-5.852	7.033	0.590	7.033	
CONTROL - TRT3	-3.871	9.015	2.572	9.015	
CONTROL - TRT2	-2.234	11.121	4.443	11.121	
TRT1 - CONTROL	-7.033	0.590	-0.590	0.590	
TRT1 - TRT3	-4.319	8.312	1.982	8.312	
TRT1 - TRT2	-2.717	10.422	3.853	10.422	
TRT3 - CONTROL	-9.015	3.871	-2.572	3.871	
TRT3 - TRT1	-8.312	4.319	-1.982	4.319	
TRT3 - TRT2	-4.698	8.441	1.871	8.441	
TRT2 - CONTROL	-11.121	2.234	-4.443	2.234	
TRT2 - TRT1	-10.422	3.853	-3.853	3.853	
TRT2 - TRT3	-8.441	4.698	-1.871	4.698	

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE

14. ANALYSIS OF EGGS NOT CRACKED/EGGS LAID

 11:26 Thursday, April 8, 1999

General Linear Models Procedure

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

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

Alpha= 0.05 Confidence= 0.95 df= 53 MSE= 42.72338
 Critical Value of Dunnett's T= 2.108

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

LEVEL Comparison	Simultaneous Lower Confidence Limit		Difference Between Means	Simultaneous Upper Confidence Limit	
	Lower Limit	Upper Limit		Lower Limit	Upper Limit
CONTROL - TRT1	-5.852	7.033	0.590	7.033	
CONTROL - TRT3	-3.871	9.015	2.572	9.015	
CONTROL - TRT2	-2.234	11.121	4.443	11.121	

TRT1 - CONTROL -0.590 4.531
 TRT3 - CONTROL -2.572 2.549
 TRT2 - CONTROL -4.443 0.865

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE

15. ANALYSIS OF NORMAL HATCHLINGS/EGGS SET

 11:26 Thursday, April 8, 1999

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 57 observations can be used in this analysis.

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE

15. ANALYSIS OF NORMAL HATCHLINGS/EGGS SET

 11:26 Thursday, April 8, 1999

General Linear Models Procedure

Type I Estimable Functions for: LEVEL

Effect Coefficients

Effect	Sum of Squares	DF	Mean Square	F Value	Pr > F
INTERCEPT	0				
LEVEL					
CONTROL					
TRT1					
TRT2					
TRT3					
-L2-L3-L4					

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE

15. ANALYSIS OF NORMAL HATCHLINGS/EGGS SET

 11:26 Thursday, April 8, 1999

General Linear Models Procedure

Dependent Variable: RESPONSE

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	721.24451	240.41484	0.77	0.5181
Error	53	16632.35948	313.81810		
Corrected Total	56	17353.60399			

R-Square 0.041562
 C.V. 17.715
 Root MSE 17.715

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	721.24451	240.41484	0.77	0.5181

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 15. ANALYSIS OF NORMAL HATCHLINGS/EGGS SET

 Alpha= 0.05 Confidence= 0.95 df= 53 MSE= 313.8181
 Critical Value of Dunnett's T= 2.108

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

LEVEL Comparison	Simultaneous Lower Confidence Limit		Difference Between Means		Simultaneous Upper Confidence Limit	
	Lower Limit	Upper Limit	Difference	Means	Lower Limit	Upper Limit
CONTROL	-15.465	13.305	-1.080		-15.465	13.305
TRT2	-16.503	11.254	-2.624		-16.503	11.254
TRT3	-22.940	4.817	-9.061		-22.940	4.817

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 16. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/EGGS SET

11:26 Thursday, April 8, 1999

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 57 observations can be used in this analysis.

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 16. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/EGGS SET

11:26 Thursday, April 8, 1999

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 16. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/EGGS SET

11:26 Thursday, April 8, 1999

General Linear Models Procedure

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	892.35716	297.45239	1.25	0.2995
Error	53	12568.77714	237.14674		
Corrected Total	56	13461.13430			

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 15. ANALYSIS OF NORMAL HATCHLINGS/EGGS SET

 Alpha= 0.05 Confidence= 0.95 df= 53 MSE= 313.8181
 Critical Value of Studentized Range= 3.751

11:26 Thursday, April 8, 1999

General Linear Models Procedure
 Least Squares Means

LEVEL	RESPONSE	Pr > T	H0: LSMEAN(i)=LSMEAN(j)		
LSMEAN	i/j	1	2	3	4
CONTROL	70.7466795	1	0.1745	0.8748	0.6917
TRT1	61.6852761	2	0.1745	0.2398	0.3242
TRT2	69.6664918	3	0.8748	0.2398	0.8189
TRT3	68.1222596	4	0.6917	0.3242	0.8189

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 15. ANALYSIS OF NORMAL HATCHLINGS/EGGS SET

11:26 Thursday, April 8, 1999

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= 53 MSE= 313.8181
 Critical Value of Studentized Range= 3.751

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

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
CONTROL - TRT2	-17.017	1.080	19.178
CONTROL - TRT3	-14.836	2.624	20.085
CONTROL - TRT1	-8.399	9.061	26.522
TRT2 - CONTROL	-19.178	-1.080	17.017
TRT2 - TRT3	-16.261	1.544	19.349
TRT2 - TRT1	-9.824	7.981	25.786
TRT3 - CONTROL	-20.085	-2.624	14.836
TRT3 - TRT2	-19.349	-1.544	16.261
TRT3 - TRT1	-10.720	6.437	23.594
TRT1 - CONTROL	-26.522	-9.061	8.399
TRT1 - TRT2	-25.786	-7.981	9.824
TRT1 - TRT3	-23.594	-6.437	10.720

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 15. ANALYSIS OF NORMAL HATCHLINGS/EGGS SET

11:26 Thursday, April 8, 1999

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.

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ce	R-Square	C.V.	Root MSE	RESPONSE Mean
L	0.066291	25.36719	15.400	60.707

DF	Type I SS	Mean Square	F Value	Pr > F
3	892.35716	297.45239	1.25	0.2995

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 16. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/EGGS SET

 11:26 Thursday, April 8, 1999

General Linear Models Procedure
 Least Squares Means

LEVEL	RESPONSE	Pr > T	H0: LSMEAN(i)=LSMEAN(j)
	LSMEAN	i/j	2 3 4
CONTROL	66.0871689	1	0.0611 0.4822 0.3108
TRT1	55.1360487	2	0.0611 0.2523 0.3691
TRT2	61.8892772	3	0.4822 0.2523 0.7773
TRT3	60.2304477	4	0.3108 0.3691 0.7773

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 16. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/EGGS SET

 11:26 Thursday, April 8, 1999

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= 53 MSE= 237.1467
 Critical Value of Studentized Range= 3.751

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

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
CONTROL - TRT2	-11.534	4.198	19.930
CONTROL - TRT3	-9.322	5.857	21.035
CONTROL - TRT1	-4.228	10.951	26.130
TRT2 - CONTROL	-19.930	-4.198	11.534
TRT2 - TRT1	-13.819	1.659	17.137
TRT2 - TRT3	-8.725	6.753	22.231
TRT3 - CONTROL	-21.035	-5.857	9.322
TRT3 - TRT2	-17.137	-1.659	13.819
TRT3 - TRT1	-9.820	5.094	20.009
TRT1 - CONTROL	-26.130	-10.951	4.228
TRT1 - TRT2	-22.231	-6.753	8.725
TRT1 - TRT3	-20.009	-5.094	9.820

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METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 16. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/EGGS SET

 11:26 Thursday, April 8, 1999

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= 53 MSE= 237.1467
 Critical Value of Dunnett's T= 2.108

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

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT2 - CONTROL	-16.703	-4.198	8.307
TRT3 - CONTROL	-17.922	-5.857	6.208
TRT1 - CONTROL	-23.016	-10.951	1.114

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 17. ANALYSIS OF EGGSHELL THICKNESS

 11:26 Thursday, April 8, 1999

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 56 observations can be used in this analysis.

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 17. ANALYSIS OF EGGSHELL THICKNESS

 11:26 Thursday, April 8, 1999

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 17. ANALYSIS OF EGGSHELL THICKNESS

 11:26 Thursday, April 8, 1999

General Linear Models Procedure

Dependent Variable: THICK

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	0.0003781	0.0001260	0.83	0.4850
Error	52	0.0079259	0.0001524		
Corrected Total	55	0.0083040			

R-Square	C.V.	Root MSE	THICK Mean
0.045536	5.176466	0.0123	0.2385

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	0.0003781	0.0001260	0.83	0.4850

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 17. ANALYSIS OF EGGSHELL THICKNESS

 11:26 Thursday, April 8, 1999

General Linear Models Procedure
 Least Squares Means

LEVEL	THICK	Pr > t	H0: LSMEAN(i)=LSMEAN(j)
	LSMEAN	i/j	1 2 3 4
CONTROL	0.23807692	1	0.8555 0.3778 0.5228
TRT1	0.23893333	2	0.8555 0.4640 0.3950
TRT2	0.24238462	3	0.3778 0.4640 0.1238
TRT3	0.23506667	4	0.5228 0.3950 0.1238

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 17. ANALYSIS OF EGGSHELL THICKNESS

 11:26 Thursday, April 8, 1999

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: THICK
 NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 52 MSE= 0.000152
 Critical Value of Studentized Range= 3.753

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

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Upper Confidence Limit
TRT2 - TRT1	-0.008965	0.003451	0.015868
TRT2 - CONTROL	-0.008545	0.004308	0.017160
TRT2 - TRT3	-0.005099	0.007318	0.019734
TRT1 - TRT2	-0.015868	-0.003451	0.008965
TRT1 - CONTROL	-0.011560	0.000856	0.013273

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Upper Confidence Limit
TRT1 - TRT3	-0.008098	0.003867	0.015832
CONTROL - TRT2	-0.017160	-0.004308	0.008545
CONTROL - TRT1	-0.013273	-0.000856	0.011560
CONTROL - TRT3	-0.009406	0.003010	0.015427
TRT3 - TRT2	-0.019734	-0.007318	0.005099
TRT3 - TRT1	-0.015832	-0.003867	0.008098
TRT3 - CONTROL	-0.015427	-0.003010	0.009406

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 17. ANALYSIS OF EGGSHELL THICKNESS

 11:26 Thursday, April 8, 1999

General Linear Models Procedure

Dunnett'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= 52 MSE= 0.000152
 Critical Value of Dunnett's T= 2.104

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

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Upper Confidence Limit
TRT2 - CONTROL	-0.005883	0.004308	0.014498
TRT1 - CONTROL	-0.008989	0.000856	0.010702
TRT3 - CONTROL	-0.012855	-0.003010	0.006835

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 18. ANALYSIS OF HATCHLING WEIGHT

 11:26 Thursday, April 8, 1999

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 56 observations can be used in this analysis.

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 18. ANALYSIS OF HATCHLING WEIGHT

 11:26 Thursday, April 8, 1999

General Linear Models Procedure
 Type I Estimable Functions for: LEVEL

Effect	Coefficients
INTERCEPT	0

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METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 18. ANALYSIS OF HATCHLING WEIGHT

 11:26 Thursday, April 8, 1999

General Linear Models Procedure

Dependent Variable: HATWT

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	0.4090179	0.1363393	0.57	0.6346
Error	52	12.3485179	0.2374715		
Corrected Total	55	12.7575357			

R-Square	C.V.	Root MSE	HATWT Mean
0.032061	6.597695	0.48173	7.3861

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 18. ANALYSIS OF HATCHLING WEIGHT

 11:26 Thursday, April 8, 1999

General Linear Models Procedure
 Least Squares Means

LEVEL	HATWT	LSMEAN	Pr > T	H0: LSMEAN(i)=LSMEAN(j)
CONTROL	7.35071429	1	0.8035	0.3474 0.7471
TRT1	7.39600000	2	0.8035	0.4728 0.5614
TRT2	7.52250000	3	0.3474	0.4728 0.2082
TRT3	7.29200000	4	0.7471	0.5614 0.2082

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 18. ANALYSIS OF HATCHLING WEIGHT

 11:26 Thursday, April 8, 1999

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= 52 MSE= 0.237471
 Critical Value of Studentized Range= 3.753

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

LEVEL Comparison	Lower Confidence Limit	Difference Between Means	Upper Confidence Limit
TRT2 - TRT1	-0.3644	0.1365	0.6374
TRT2 - CONTROL	-0.3270	0.1818	0.6906
TRT2 - TRT3	-0.2604	0.2405	0.7414
TRT1 - TRT2	-0.6374	-0.1365	0.3644
TRT1 - CONTROL	-0.4353	0.0453	0.5259
TRT1 - TRT3	-0.3683	0.1040	0.5763
CONTROL - TRT2	-0.6906	-0.1818	0.3270
CONTROL - TRT1	-0.5259	-0.0453	0.4353
CONTROL - TRT3	-0.4219	0.0587	0.5393
TRT3 - TRT2	-0.7414	-0.2405	0.2604
TRT3 - TRT1	-0.5763	-0.1040	0.3683
TRT3 - CONTROL	-0.5393	-0.0587	0.4219

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 18. ANALYSIS OF HATCHLING WEIGHT

 11:26 Thursday, April 8, 1999

General Linear Models Procedure
 Dunnett'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= 52 MSE= 0.237471
 Critical Value of Dunnett's T= 2.111

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

Simultaneous Lower Confidence Limit
 Difference Between Means
 Simultaneous Upper Confidence Limit

LEVEL Comparison	Lower Confidence Limit	Difference Between Means	Upper Confidence Limit
TRT2 - CONTROL	-0.2229	0.1818	0.5865
TRT1 - CONTROL	-0.3370	0.0453	0.4275
TRT3 - CONTROL	-0.4410	-0.0587	0.3235

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 19. ANALYSIS OF 14-DAY SURVIVOR WEIGHT

 11:26 Thursday, April 8, 1999

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 56 observations can be used in this analysis.

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE

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NOTE: This test controls the type I experimentwise error rate.
 Alpha= 0.05 Confidence= 0.95 df= 52 MSE= 5.048431
 Critical Value of Studentized Range= 3.753

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	-1.4575	0.7586	2.9747
TRT1 - TRT2	-1.1342	1.0433	3.2209
TRT1 - TRT3	-0.5295	1.7802	4.0898
CONTROL - TRT1	-2.9747	-0.7586	1.4575
CONTROL - TRT2	-1.9314	0.2847	2.5008
CONTROL - TRT3	-1.3244	1.0215	3.3675
TRT2 - TRT1	-3.2209	-1.0433	1.1342
TRT2 - CONTROL	-2.5008	-0.2847	1.9314
TRT2 - TRT3	-1.5728	0.7368	3.0465
TRT3 - TRT1	-4.0898	-1.7802	0.5295
TRT3 - CONTROL	-3.3675	-1.0215	1.3244
TRT3 - TRT2	-3.0465	-0.7368	1.5728

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 19. ANALYSIS OF 14-DAY SURVIVOR WEIGHT

 11:26 Thursday, April 8, 1999

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

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

Alpha= 0.05 Confidence= 0.95 df= 52 MSE= 5.048431
 Critical Value of Dunnett's T= 2.11

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	-1.0039	0.7586	2.5211
TRT3 - CONTROL	-2.0472	-0.2847	1.4778
TRT2 - CONTROL	-2.8874	-1.0215	0.8443

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 20. ANALYSIS OF FOOD CONSUMPTION

 11:26 Thursday, April 8, 1999

General Linear Models Procedure
 Class Level Information
 Class Levels Values

General Linear Models Procedure
 Type I Estimable Functions for: LEVEL

Coefficients

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 19. ANALYSIS OF 14-DAY SURVIVOR WEIGHT

 11:26 Thursday, April 8, 1999

General Linear Models Procedure

Dependent Variable: SURVWT	Sum of Squares	Mean Square	F Value	Pr > F
Source	DF			
Model	3	21.897575	7.299192	1.45 0.2401
Error	52	262.518438	5.048431	
Corrected Total	55	284.416012		

R-Square	C.V.	Root MSE	SURVWT Mean
0.076991	6.935056	2.2469	32.399

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	21.897575	7.299192	1.45	0.2401

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 19. ANALYSIS OF 14-DAY SURVIVOR WEIGHT

 11:26 Thursday, April 8, 1999

General Linear Models Procedure
 Least Squares Means

LEVEL	SURVWT LSMEAN	Pr > T H0: LSMEAN(i)=LSMEAN(j)
CONTROL	32.4907143	1 0.3678 0.2531 0.7345
TRT1	33.2493333	2 0.3678 0.0459 0.2091
TRT2	31.4691667	3 0.2531 0.0459 0.4010
TRT3	32.2060000	4 0.7345 0.2091 0.4010

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 19. ANALYSIS OF 14-DAY SURVIVOR WEIGHT

 11:26 Thursday, April 8, 1999

LEVEL 4 CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
20. ANALYSIS OF FOOD CONSUMPTION

11:26 Thursday, April 8, 1999

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
20. ANALYSIS OF FOOD CONSUMPTION

11:26 Thursday, April 8, 1999

General Linear Models Procedure

Dependent Variable: FOOD

Source DF Sum of Squares Mean Square F Value Pr > F
Model 3 3.9340210 1.3113403 0.87 0.4617
Error 55 82.7958095 1.5053784
Corrected Total 58 86.7298305

R-Square C.V. Root MSE FOOD Mean
0.045359 6.705204 1.2269 18.298

Source DF Type I SS Mean Square F Value Pr > F
LEVEL 3 3.9340210 1.3113403 0.87 0.4617

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
20. ANALYSIS OF FOOD CONSUMPTION

11:26 Thursday, April 8, 1999

General Linear Models Procedure
Least Squares Means

LEVEL FOOD Pr > |T| H0: LSMEAN(I)=LSMEAN(J)
LSMEAN i/j 1 2 3 4
CONTROL 18.0933333 1 0.2630 0.8143 0.3758
TRT1 18.6000000 2 0.2630 0.1834 0.8127
TRT2 17.9857143 3 0.8143 0.1834 0.2704

TRT3 18.4933333 4 0.3758 0.8127 0.2704

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
20. ANALYSIS OF FOOD CONSUMPTION

11:26 Thursday, April 8, 1999

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= 55 MSE= 1.505378
Critical Value of Studentized Range= 3.747

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

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT1 - TRT3	-1.0803	0.1067	1.2936
TRT1 - CONTROL	-0.6803	0.5067	1.6936
TRT1 - TRT2	-0.5937	0.6143	1.8223
TRT3 - TRT1	-1.2936	-0.1067	1.0803
TRT3 - CONTROL	-0.7870	0.4000	1.5870
TRT3 - TRT2	-0.7003	0.5076	1.7156
CONTROL - TRT1	-1.6936	-0.5067	0.6803
CONTROL - TRT3	-1.5870	-0.4000	0.7870
CONTROL - TRT2	-1.1003	0.1076	1.3156
TRT2 - TRT1	-1.8223	-0.6143	0.5937
TRT2 - TRT3	-1.7156	-0.5076	0.7003
TRT2 - CONTROL	-1.3156	-0.1076	1.1003

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
20. ANALYSIS OF FOOD CONSUMPTION

11:26 Thursday, April 8, 1999

General Linear Models Procedure

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

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

Alpha= 0.05 Confidence= 0.95 df= 55 MSE= 1.505378
Critical Value of Dunnett's T= 2.109

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	-0.4383	0.5067	1.4516
TRT3 - CONTROL	-0.5450	0.4000	1.3450
TRT2 - CONTROL	-1.0693	-0.1076	0.8541

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METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
21. COVARIATE ANALYSIS OF MALE BODY WEIGHT

11:26 Thursday, April 8, 1999

General Linear Models Procedure
Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
21. COVARIATE ANALYSIS OF MALE BODY WEIGHT

11:26 Thursday, April 8, 1999

General Linear Models Procedure

Dependent Variable: POSTM

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	10700.206	2675.051	12.20	0.0001
Error	54	11837.268	219.209		
Corrected Total	58	22537.474			

R-Square C.V. Root MSE POSTM Mean
0.474774 6.479806 14.806 228.49

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	754.0053	251.3351	1.15	0.3387
PREM	1	9946.2006	9946.2006	45.37	0.0001
Source	DF	Type III SS	Mean Square	F Value	Pr > F
LEVEL	3	488.8657	162.9552	0.74	0.5309
PREM	1	9946.2006	9946.2006	45.37	0.0001

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
21. COVARIATE ANALYSIS OF MALE BODY WEIGHT

11:26 Thursday, April 8, 1999

General Linear Models Procedure
Least Squares Means

LEVEL	POSTM LSMEAN	Std Err LSMEAN	Pr > T HO:LSMEAN=0	LSMEAN Number
CONTROL	231.900264	3.822990	0.0001	1
TRT1	227.379459	3.837430	0.0001	2
TRT2	224.229016	3.968118	0.0001	3

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

i/j	1	2	3	4
1		0.4078	0.1694	0.7497
2	0.4078		0.5718	0.6091
3	0.1694	0.5718		0.2859
4	0.7497	0.6091	0.2859	

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
21. COVARIATE ANALYSIS OF MALE BODY WEIGHT

11:26 Thursday, April 8, 1999

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= 54 MSE= 219.2087
Critical Value of Studentized Range= 3.749

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

LEVEL Comparison	Simultaneous Lower Confidence Limit		Difference Between Means	Simultaneous Upper Confidence Limit	
	Lower Limit	Upper Limit		Lower Limit	Upper Limit
CONTROL - TRT3	-12.705	-12.705	1.627	15.958	15.958
CONTROL - TRT1	-12.311	-12.311	2.020	16.351	16.351
CONTROL - TRT2	-5.160	-5.160	9.425	24.010	24.010
TRT3 - CONTROL	-15.958	-15.958	-1.627	12.705	12.705
TRT1 - CONTROL	-13.938	-13.938	0.393	14.725	14.725
TRT2 - CONTROL	-6.787	-6.787	7.798	22.383	22.383
TRT1 - TRT3	-16.351	-16.351	-2.020	12.311	12.311
TRT1 - TRT1	-14.725	-14.725	-0.393	13.938	13.938
TRT1 - TRT2	-7.180	-7.180	7.405	21.990	21.990
TRT2 - TRT3	-24.010	-24.010	-9.425	5.160	5.160
TRT2 - TRT1	-22.383	-22.383	-7.798	6.787	6.787
TRT2 - TRT2	-21.990	-21.990	-7.405	7.180	7.180

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
21. COVARIATE ANALYSIS OF MALE BODY WEIGHT

11:26 Thursday, April 8, 1999

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= 54 MSE= 219.2087
Critical Value of Dunnett's T= 2.110

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

LEVEL	POSTF LSMEAN	Std Err LSMEAN	Pr > T HO:LSMEAN=0	LSMEAN Number
CONTROL	247.990999	5.032131	0.0001	1
TRT1	261.149083	4.970030	0.0001	2
TRT2	257.971633	5.159080	0.0001	3
TRT3	259.066394	4.969963	0.0001	4

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

i/j	1	2	3	4
1		0.0692	0.1747	0.1244
2	0.0692		0.6586	0.7679
3	0.1747	0.6586		0.8789
4	0.1244	0.7679	0.8789	

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 22. COVARIATE ANALYSIS OF FEMALE BODY WEIGHT

 11:26 Thursday, April 8, 1999

General Linear Models Procedure

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

NOTE: This test controls the type I experimentwise error rate.
 Alpha= 0.05 Confidence= 0.95 df= 54 MSE= 369.9062
 Critical Value of Studentized Range= 3.749

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

LEVEL Comparison	Simultaneous Lower Limit		Difference Between Means	Simultaneous Upper Confidence Limit	
	Lower Limit	Upper Confidence Limit		Lower Limit	Upper Confidence Limit
TRT1 - TRT3	-16.543	2.073	2.073	20.690	20.690
TRT1 - TRT2	-14.418	4.528	4.528	23.474	23.474
TRT1 - CONTROL	-11.203	7.413	7.413	26.030	26.030
TRT3 - TRT1	-20.690	-2.073	-2.073	16.543	16.543
TRT3 - TRT2	-16.491	2.455	2.455	21.401	21.401
TRT3 - CONTROL	-13.277	5.340	5.340	23.957	23.957
TRT2 - TRT1	-23.474	-4.528	-4.528	14.418	14.418
TRT2 - TRT3	-21.401	-2.455	-2.455	16.491	16.491
TRT2 - CONTROL	-16.061	2.885	2.885	21.831	21.831
CONTROL - TRT1	-26.030	-7.413	-7.413	11.203	11.203
CONTROL - TRT3	-23.957	-5.340	-5.340	13.277	13.277
CONTROL - TRT2	-21.831	-2.885	-2.885	16.061	16.061

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 22. COVARIATE ANALYSIS OF FEMALE BODY WEIGHT

 11:26 Thursday, April 8, 1999

General Linear Models Procedure

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

LEVEL Comparison	Simultaneous Lower Confidence Limit		Difference Between Means	Simultaneous Upper Confidence Limit	
	Lower Confidence Limit	Upper Confidence Limit		Lower Confidence Limit	Upper Confidence Limit
TRT3 - CONTROL	-13.034	9.781	-1.627	9.781	9.781
TRT1 - CONTROL	-13.428	9.388	-2.020	9.388	9.388
TRT2 - CONTROL	-21.034	2.185	-9.425	2.185	2.185

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 22. COVARIATE ANALYSIS OF FEMALE BODY WEIGHT

 11:26 Thursday, April 8, 1999

General Linear Models Procedure
 Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 22. COVARIATE ANALYSIS OF FEMALE BODY WEIGHT

 11:26 Thursday, April 8, 1999

General Linear Models Procedure

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	12295.641	3073.910	8.31	0.0001
Error	54	19974.935	369.906		
Corrected Total	58	32270.576			
R-Square		C.V.	Root MSE	POSTF Mean	
	0.381017	7.497630	19.233	256.52	

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	458.780	152.927	0.41	0.7440
PREF	1	11836.861	11836.861	32.00	0.0001
Source	DF	Type III SS	Mean Square	F Value	Pr > F
LEVEL	3	1492.056	497.352	1.34	0.2696
PREF	1	11836.861	11836.861	32.00	0.0001

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
 22. COVARIATE ANALYSIS OF FEMALE BODY WEIGHT

 11:26 Thursday, April 8, 1999

General Linear Models Procedure

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

Alpha= 0.05 Confidence= 0.95 df= 54 MSE= 369.9062
Critical Value of Dunnett's T= 2.110

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	-7.405	7.413	7.413	22.232	
TRT3 - CONTROL	-9.479	5.340	5.340	20.159	
TRT2 - CONTROL	-12.196	2.885	2.885	17.966	

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