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
Environmental Fate and Effects Division, 7507C

Through: Arnet Jones, Branch Chief
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.

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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: Brian Montague **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: [signature] **Date:** 4/14/99

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

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

5. **APPROVED BY:**

Signature: **Date:**

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 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).

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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
Species A wild waterfowl species, preferably the mallard (*Anas platyrhynchos*), or an upland game species, preferably the northern bobwhite (*Colinus virginianus*)	Northern bobwhite (*Colinus virginianus*)

11. MATERIALS AND METHODS:

A. Test Organisms

Guideline Criteria	Reported Information
Species A wild waterfowl species, preferably the mallard (*Anas platyrhynchos*), or an upland game species, preferably the northern bobwhite (*Colinus virginianus*)	Northern bobwhite (*Colinus virginianus*)
Age at beginning of test Birds should be approaching their first breeding season.	25 weeks old
Supplier All birds should be from the same source.	Stevenson Game Bird Farm, Riverside, TX
Were birds pen-reared?	Not reported
Were birds phenotypically indistinguishable from wild birds?	Yes
Health observation period 2 to 6 weeks.	8 weeks
Were birds healthy and without excessive mortality prior to the test?	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.

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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
Temperature Approx. 21°C (70°F)	Average: 21°C
Relative humidity Approx. 55%	Average: 52%
Lighting 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
Diet 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.
Preparation of test diet A premixed 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
Replenishment of feed	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. In addition, feed and water were provided *ad libitum* for the adults and offspring.

C. **Test Design**

Guideline Criteria	Reported Information
Nominal concentrations At least two concentrations other than the control are required; three or more are strongly recommended. The highest test concentrations should show a significant effect or be at or above the maximum field residue level.	Nominal concentrations: Control, 100, 300, and 900 ppm, corrected for 88.7% purity. Max. residue level: Not reported
Control Vehicle control.	Vehicle control
Vehicle Corn oil or other appropriate vehicle.	Acetone
Vehicle amount (% of diet by weight) Not more than 2%.	Amount of acetone was 1% of final diet.

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Guideline Criteria	Reported Information
Number of birds per pen One male and 1 female per pen is strongly recommended. For quail, 1 male and 2 females may be acceptable. For ducks, 2 males and 5 females may be acceptable.	1 male and 1 female per pen
Number of pens per group At least 5 replicate pens are required for mallards housed in groups of 7. For other arrangements, at least 12 pens are required, but considerably more may be needed if birds are kept in pairs.	16 pens per group
Pre-laying exposure duration At least 10 weeks prior to the onset of egg-laying.	10 weeks
Exposure duration with egg-laying At least 10 weeks.	12 weeks
Withdrawal period If reduced reproduction is evident, a withdrawal period of up to 3 weeks may be added to the test phase.	N/A

D. Egg Collection and Incubation

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

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Guideline Criteria	Reported Information
Candling for fertility Quail: approx. Day 11 Ducks: approx. Day 14	Eggs were candled on Day 11 for fertility and on day 18 for embryo viability.
Transfer of eggs to hatcher Bobwhite: Day 21 Mallard: Day 23	Eggs were transferred on Day 21.
Hatching temperature 39°C (102°F) is recommended	Range: 36.4 - 37.8°C
Hatching humidity 70% is recommended	Range: 75-77%
Day after egg set that chicks were removed and counted Bobwhite: Day 24 Mallard: Day 27	Chicks were removed and counted on Days 24 and 25.

E. Eggshell Thickness Measurement

Guideline Criteria	Reported Information
Collection Schedule 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.
Measurement 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
Reproductive Endpoints The following endpoints should be reported: • Eggs laid • Eggs cracked • Eggs set • Viable embryos • Live 3-week embryos • Normal hatchlings • 14-day-old survivors • Weights of 14-day-old survivors • Egg shell thickness • Total food consumption • Initial and final body weights, by sex	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.

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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.

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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.

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE

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OBS	LEVEL	EL	EC	ES	VE	LE	NH	HS	THICK	HATWT
1	CONTROL	62	1	56	56	54	52	51	0.242	7.80
2	CONTROL	57	1	33	32	30	26	26	0.242	7.47
3	CONTROL	61	0	58	58	58	55	54	0.229	6.81
4	CONTROL	18	1	16	16	13	10	10	0.233	6.89
5	CONTROL	59	4	52	48	48	45	44	0.241	8.02
6	CONTROL	64	0	60	60	60	60	57	0.235	7.75
7	CONTROL	66	1	62	62	62	62	58	0.241	6.87
8	CONTROL	0	0	0	0	0	0	0	.	.
9	CONTROL	65	0	63	60	60	58	54	0.233	7.26
10	CONTROL	.	.	.	.	.	.	.	.	.
11	CONTROL	70	1	65	63	61	39	32	0.234	7.57
12	CONTROL	73	2	67	62	61	59	54	0.251	6.90
13	CONTROL	43	1	40	40	39	38	37	0.234	7.16
14	CONTROL	65	0	62	61	60	54	47	0.248	7.73
15	CONTROL	7	0	7	7	7	6	6	.	7.08
16	CONTROL	52	8	29	29	28	25	24	0.232	7.60
17	TRT1	63	2	56	54	54	53	53	0.229	7.64
18	TRT1	53	6	43	40	39	32	31	0.258	7.87
19	TRT1	60	0	57	55	55	41	39	0.238	8.09
20	TRT1	62	3	56	48	46	39	39	0.246	7.49
21	TRT1	43	0	42	42	40	39	35	0.240	6.84
22	TRT1	49	1	46	40	40	29	26	0.243	7.60
23	TRT1	.	.	.	.	.	.	.	.	.
24	TRT1	72	3	64	62	61	58	54	0.251	7.38
25	TRT1	67	1	61	55	55	32	31	0.231	7.16
26	TRT1	62	3	55	40	25	7	6	0.230	7.20
27	TRT1	56	1	51	51	51	42	37	0.251	7.80
28	TRT1	45	0	42	42	42	41	27	0.231	6.41
29	TRT1	56	0	51	42	37	36	29	0.230	7.07
30	TRT1	66	2	61	45	44	42	36	0.227	6.73

OBS	SURVWT	FOOD	PREM	POSTM	PREF	POSTF
1	35.82	19.4	215.3	276.1	184.8	234.8
2	33.53	18.8	206.1	245.4	210.9	285.9
3	32.36	16.9	193.5	210.5	201.6	249.6
4	32.16	16.1	198.6	237.5	206.6	205.1
5	31.23	18.7	184.9	206.7	209.4	269.7
6	31.91	18.2	209.6	241.0	212.0	249.5
7	32.12	18.4	199.0	232.5	199.0	260.6
8	.	16.7	205.3	225.7	204.7	239.0
9	32.69	18.2	204.2	230.2	224.0	283.9
10	.	.	200.2	.	203.1	.
11	30.55	18.4	196.4	203.6	199.0	264.3
12	31.92	19.7	210.3	243.3	206.1	253.9
13	32.41	17.8	189.8	223.4	194.0	247.0
14	34.01	20.5	221.3	251.2	210.8	291.1
15	31.04	15.0	207.8	233.2	175.6	195.3
16	33.12	18.6	189.4	214.5	179.8	259.2
17	34.46	18.0	186.8	190.2	193.3	261.3
18	35.28	19.1	209.3	226.1	206.8	263.7
19	35.47	18.9	214.1	255.0	205.2	271.5
20	34.30	19.0	200.7	223.1	202.3	297.2
21	33.46	17.8	213.4	236.6	212.2	247.6
22	31.84	17.8	212.3	238.4	203.4	270.2
23	.	.	197.5	.	196.5	.
24	38.23	18.5	208.7	229.5	199.9	287.4
25	30.52	18.0	218.8	245.2	191.0	223.4
26	29.43	17.6	190.0	204.2	197.3	261.3
27	32.36	21.3	218.4	252.1	191.8	267.7
28	28.49	16.7	192.7	216.8	197.6	241.6
29	34.32	20.8	218.4	269.8	202.4	261.9
30	35.58	17.3	207.1	228.3	176.6	225.7

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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	.	.	.	.	.	.	.	.	.
35	TRT2	0	0	0	0	0	0	0	.	.
36	TRT2	29	4	22	22	20	18	16	0.245	7.11
37	TRT2	58	1	54	54	54	54	54	0.274	7.75
38	TRT2	56	1	51	0	0	0	0	0.226	.
39	TRT2	66	8	53	52	52	51	50	0.235	8.07
40	TRT2	64	1	58	49	49	49	40	0.240	7.31
41	TRT2	52	2	47	47	47	47	45	0.250	8.01
42	TRT2	53	4	47	46	46	43	39	0.240	7.59
43	TRT2	64	0	60	59	58	57	54	0.241	7.34
44	TRT2	.	.	.	.	.	.	.	.	.
45	TRT2	67	5	56	56	55	52	48	0.230	7.15
46	TRT2	58	3	51	51	51	51	36	0.263	7.12
47	TRT2	61	1	55	55	54	49	43	0.233	7.25
48	TRT2	61	3	53	53	52	47	41	0.234	7.66
49	TRT3	55	4	48	48	48	47	45	0.239	7.28
50	TRT3	63	1	59	57	57	56	52	0.246	7.58
51	TRT3	28	0	26	25	22	20	15	0.248	6.30
52	TRT3	68	4	59	58	56	50	45	0.247	7.30
53	TRT3	67	8	54	31	31	28	26	0.254	8.04
54	TRT3	63	7	54	54	53	52	47	0.223	7.25
55	TRT3	72	1	66	62	62	60	54	0.231	7.77
56	TRT3	56	4	50	49	48	46	39	0.215	7.03
57	TRT3	60	2	55	55	54	54	53	0.234	7.42
58	TRT3	57	0	53	53	53	51	46	0.251	7.21
59	TRT3	56	5	33	2	1	1	1	0.193	6.30
60	TRT3	.	.	.	.	.	.	.	.	.

OBS	SURVWT	FOOD	PREM	POSTM	PREF	POSTF
31	31.32	17.8	185.2	210.8	181.5	237.7
32	33.68	20.4	188.3	218.4	195.6	281.9
33	31.68	17.9	186.9	206.7	194.8	270.3
34	.	.	197.2	.	205.4	.
35	.	18.0	203.2	260.5	181.4	233.7
36	30.19	15.8	191.9	224.0	187.1	216.9
37	33.87	17.9	207.0	228.9	202.0	284.4
38	.	18.4	191.0	202.3	203.4	263.6
39	34.90	19.1	213.5	227.2	215.1	295.4
40	30.74	17.2	193.8	212.4	187.2	268.5
41	31.92	18.7	186.4	227.3	193.6	272.8
42	33.42	18.9	205.8	234.0	195.1	220.1
43	30.23	17.8	218.6	235.2	192.6	244.2
44	.	.	203.9	.	191.4	.
45	30.53	17.8	196.0	234.9	204.9	261.8
46	28.13	18.1	192.2	156.9	196.7	243.4
47	33.54	17.9	214.4	224.8	199.8	255.5
48	28.48	18.3	207.3	236.1	192.6	246.1
49	32.07	18.0	210.7	227.8	202.1	281.6
50	34.82	20.2	178.1	214.3	210.9	253.8
51	29.25	17.3	213.6	257.8	189.2	207.6
52	30.50	18.6	193.1	221.6	200.5	285.6
53	28.57	19.7	193.9	259.9	207.5	286.8
54	30.12	18.3	206.3	232.6	195.5	251.2
55	32.22	21.0	215.1	235.9	211.6	280.6
56	35.20	18.4	213.6	229.7	206.2	265.2
57	35.65	18.7	207.1	234.2	203.0	276.2
58	34.23	18.5	224.1	250.6	191.2	254.0
59	27.20	17.4	195.4	221.7	194.4	248.4
60	.	.	202.9	.	197.6	.

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

OBS	SURVWT	FOOD	PREM	POSTM	PREF	POSTF
61	33.03	19.6	196.6	211.8	194.8	269.8
62	33.71	17.7	190.8	217.9	176.1	221.3
63	32.03	16.2	183.0	209.8	185.7	224.6
64	34.49	17.8	211.5	224.8	188.3	262.3

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LEVEL

	CONTROL	TRT1	TRT2	TRT3
	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
SURVWT	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	CV
EL		15	50.800	23.364	45.993
EC		15	1.333	2.127	159.519
ES		15	44.667	22.493	50.358
VE		15	43.600	21.774	49.941
LE		15	42.733	21.878	51.196
NH		15	39.267	21.100	53.735
HS		15	36.933	19.689	53.308
THICK		13	0.238	0.007	2.783
HATWT		14	7.351	0.405	5.512
SURVWT		14	32.491	1.339	4.121
FOOD		15	18.093	1.425	7.873
PREM		16	201.981	9.898	4.901
POSTM		15	231.653	19.019	8.210
PREF		16	201.338	12.656	6.286
POSTF		15	252.593	26.993	10.686
ES_EL	ES/EL (%)	14	88.125	13.618	15.453
NH_EL	NH/EL (%)	14	76.441	17.376	22.732
EC_EL	(EL-EC)/EL (%)	14	97.207	4.181	4.301
VE_ES	VE/ES (%)	14	98.026	2.832	2.889
NH_ES	NH/ES (%)	14	86.404	12.148	14.060
HS_ES	HS/ES (%)	14	82.211	12.882	15.670
LE_VE	LE/VE (%)	14	97.075	4.939	5.088
NH_LE	NH/LE (%)	14	90.587	9.990	11.028
HS_NH	HS/NH (%)	14	94.976	5.246	5.523

LEVEL=TRT1

Variable	Label	N	Mean	Std Dev	CV
EL		15	58.400	8.814	15.092
EC		15	1.600	1.639	102.426
ES		15	53.200	7.975	14.991
VE		15	48.400	8.210	16.962
LE		15	46.600	10.336	22.180
NH		15	39.733	12.959	32.614
HS		15	35.400	12.240	34.578
THICK		15	0.239	0.011	4.422
HATWT		15	7.396	0.503	6.800
SURVWT		15	33.249	2.597	7.811
FOOD		15	18.600	1.331	7.159
PREM		16	203.856	12.179	5.975
POSTM		15	229.633	20.760	9.040
PREF		16	197.088	9.080	4.607
POSTF		15	260.007	21.441	8.246
ES_EL	ES/EL (%)	15	91.207	3.769	4.132
NH_EL	NH/EL (%)	15	68.702	20.647	30.053
EC_EL	(EL-EC)/EL (%)	15	97.331	2.928	3.009
VE_ES	VE/ES (%)	15	91.249	9.139	10.016
NH_ES	NH/ES (%)	15	75.146	21.989	29.262
HS_ES	HS/ES (%)	15	66.550	19.493	29.292
LE_VE	LE/VE (%)	15	95.689	9.721	10.159
NH_LE	NH/LE (%)	15	83.630	19.441	23.246
HS_NH	HS/NH (%)	15	88.946	8.948	10.060

LEVEL=TRT2

Variable	Label	N	Mean	Std Dev	CV
EL		14	52.357	18.092	34.555
EC		14	2.429	2.243	92.376
ES		14	46.214	16.320	35.313
VE		14	41.214	19.981	48.482
LE		14	40.786	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	23.586	10.613
PREF		16	196.444	8.395	4.273
POSTF		14	255.479	22.872	8.953
ES_EL	ES/EL (%)	13	87.942	5.180	5.891
NH_EL	NH/EL (%)	13	73.899	23.869	32.300
ENC_EL	(EL-EC)/EL (%)	13	95.089	4.267	4.487
VE_ES	VE/ES (%)	13	89.331	27.505	30.790
NH_ES	NH/ES (%)	13	84.203	26.398	31.350
HS_ES	HS/ES (%)	13	76.277	25.022	32.805
LE_VE	LE/VE (%)	12	98.644	2.585	2.620
NH_LE	NH/LE (%)	12	95.534	4.269	4.469
HS_NH	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	24.457	9.482
ES_EL	ES/EL (%)	15	87.901	8.794	10.004
NH_EL	NH/EL (%)	15	74.369	23.905	32.144
ENC_EL	(EL-EC)/EL (%)	15	95.769	4.173	4.358
VE_ES	VE/ES (%)	15	89.210	25.352	28.419
NH_ES	NH/ES (%)	15	82.445	25.421	30.834
HS_ES	HS/ES (%)	15	74.098	23.544	31.774
LE_VE	LE/VE (%)	15	94.289	12.702	13.471
NH_LE	NH/LE (%)	15	95.182	5.907	6.206
HS_NH	HS/NH (%)	15	90.479	6.252	6.910

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
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

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
1. ANALYSIS OF EGGS LAID
****
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
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	C.V.	Root MSE	EL Mean
0.051763	29.36012	16.213	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 BOBWHITE
1. ANALYSIS OF EGGS LAID
****
11:26 Thursday, April 8, 1999

General Linear Models Procedure
Least Squares Means

LEVEL	EL LSMEAN	Pr > |T| HO: LSMEAN(i)=LSMEAN(j) i/j	1	2	3	4
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 Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT3	- TRT1	-14.951	0.733	16.418
TRT3	- TRT2	-9.186	6.776	22.738
TRT3	- CONTROL	-7.351	8.333	24.018
TRT1	- TRT3	-16.418	-0.733	14.951
TRT1	- TRT2	-9.919	6.043	22.005
TRT1	- CONTROL	-8.084	7.600	23.284
TRT2	- TRT3	-22.738	-6.776	9.186
TRT2	- TRT1	-22.005	-6.043	9.919
TRT2	- CONTROL	-14.405	1.557	17.519
CONTROL	- TRT3	-24.018	-8.333	7.351
CONTROL	- TRT1	-23.284	-7.600	8.084
CONTROL	- TRT2	-17.519	-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

Dunnett'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 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	-4.153	8.333	20.820
TRT1	- CONTROL	-4.887	7.600	20.087
TRT2	- CONTROL	-11.150	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

Effect		Coefficients
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

Dependent Variable: EC

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

mparisons 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

mparisons 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
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

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	783.82365	261.27455	1.11	0.3528
Error	55	12943.02381	235.32771		
Corrected Total	58	13726.84746			

R-Square	C.V.	Root MSE	ES Mean
0.057102	31.27447	15.340	49.051

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	783.82365	261.27455	1.11	0.3528

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
3. ANALYSIS OF EGGS SET
****
11:26 Thursday, April 8, 1999

General Linear Models Procedure
Least Squares Means

LEVEL	ES LSMEAN	Pr > |T| HO: LSMEAN(i)=LSMEAN(j) i/j	1	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 BOBWHITE
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	Simultaneous 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 BOBWHITE
3. ANALYSIS OF EGGS SET
****
11:26 Thursday, April 8, 1999

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General Linear Models Procedure

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

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

Alpha= 0.05 Confidence= 0.95 df= 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	Simultaneous 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 BOBWHITE
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 BOBWHITE
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 BOBWHITE
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

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	VE LSMEAN	Pr > |T| i/j	HO: LSMEAN(i)=LSMEAN(j) 1	2	3	4
CONTROL	43.6000000	1	.	0.4497	0.7114	0.5492
TRT1	48.4000000	2	0.4497	.	0.2676	0.8746
TRT2	41.2142857	3	0.7114	0.2676	.	0.3392
TRT3	47.4000000	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
TRT1	- TRT3	-15.703	1.000	17.703
TRT1	- CONTROL	-11.903	4.800	21.503
TRT1	- TRT2	-9.813	7.186	24.184
TRT3	- TRT1	-17.703	-1.000	15.703
TRT3	- CONTROL	-12.903	3.800	20.503
TRT3	- TRT2	-10.813	6.186	23.184
CONTROL	- TRT1	-21.503	-4.800	11.903
CONTROL	- TRT3	-20.503	-3.800	12.903
CONTROL	- TRT2	-14.613	2.386	19.384

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TRT2	- TRT1	-24.184	-7.186	9.813
TRT2	- TRT3	-23.184	-6.186	10.813
TRT2	- CONTROL	-19.384	-2.386	14.613

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
TRT1	- CONTROL	-8.497	4.800	18.097
TRT3	- CONTROL	-9.497	3.800	17.097
TRT2	- CONTROL	-15.918	-2.386	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

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
5. ANALYSIS OF LIVE 3-WEEK EMBRYOS
****
11:26 Thursday, April 8, 1999

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	C.V.	Root MSE	LE Mean
0.019909	39.84662	17.593	44.153

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	345.80331	115.26777	0.37	0.7732

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	LE LSMEAN	Pr > |T| i/j	1	2	3	4
CONTROL	42.7333333	1	.	0.5497	0.7669	0.5845
TRT1	46.6000000	2	0.5497	.	0.3777	0.9588
TRT2	40.7857143	3	0.7669	0.3777	.	0.4055
TRT3	46.2666667	4	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

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 '***'.

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT1 - TRT3	-16.687	0.333	17.353
TRT1 - CONTROL	-13.153	3.867	20.887
TRT1 - 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
5. ANALYSIS OF LIVE 3-WEEK EMBRYOS
****
11:26 Thursday, April 8, 1999

General Linear Models Procedure

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

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= 309.5241
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	-9.683	3.867	17.417
TRT3 - CONTROL	-10.017	3.533	17.083
TRT2 - CONTROL	-15.737	-1.948	11.842

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

Type I Estimable Functions for: LEVEL

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

General Linear Models Procedure

Dependent 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	C.V.	Root MSE	NH Mean
0.013960	43.37130	17.591	40.559

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

General Linear Models Procedure
Least Squares Means

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

General Linear Models Procedure

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

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

Alpha= 0.05 Confidence= 0.95 df= 55 MSE= 309.4469
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 - TRT1	-12.751	4.267	21.285
TRT3 - CONTROL	-12.285	4.733	21.751
TRT3 - TRT2	-12.462	4.857	22.176
TRT1 - TRT3	-21.285	-4.267	12.751
TRT1 - CONTROL	-16.551	0.467	17.485
TRT1 - TRT2	-16.729	0.590	17.910
CONTROL - TRT3	-21.751	-4.733	12.285
CONTROL - TRT1	-17.485	-0.467	16.551
CONTROL - TRT2	-17.195	0.124	17.443
TRT2 - TRT3	-22.176	-4.857	12.462
TRT2 - TRT1	-17.910	-0.590	16.729
TRT2 - CONTROL	-17.443	-0.124	17.195

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 '***'.

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT3 - CONTROL	-8.815	4.733	18.282
TRT1 - CONTROL	-13.082	0.467	14.015
TRT2 - CONTROL	-13.912	-0.124	13.664

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 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

	DF	Sum of Squares	Mean Square	F Value	Pr > F
	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	HS LSMEAN	Pr > |T| HO: LSMEAN(i)=LSMEAN(j) i/j	1	2	3	4
CONTROL	36.9333333	1	.	0.7991	0.8062	0.6345
TRT1	35.4000000	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	11.367
TRT1	- CONTROL	-14.181	-1.533	11.114

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

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

OTE: 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
****

11:26 Thursday, April 8, 1999

General Linear Models Procedure
Type I Estimable Functions for: LEVEL

ffect	Coefficients
NTERCEPT	0
EVEL CONTROL	L2
TRT1	L3
TRT2	L4
TRT3	-L2-L3-L4

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

11:26 Thursday, April 8, 1999

General Linear Models Procedure

ependent Variable: RESPONSE

ource	DF	Sum of Squares	Mean Square	F Value	Pr > F
odel	3	90.633696	30.211232	0.62	0.6036
rror	53	2572.148821	48.531110		
orrected Total	56	2662.782517			

R-Square	C.V.	Root MSE	RESPONSE Mean
0.034037	9.759194	6.9664	71.383

ource	DF	Type I SS	Mean Square	F Value	Pr > F
EVEL	3	90.633696	30.211232	0.62	0.6036

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

11:26 Thursday, April 8, 1999

General Linear Models Procedure
Least Squares Means

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

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= 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	Simultaneous Upper Confidence Limit
TRT1 - CONTROL	-5.808	1.059	7.925
TRT1 - TRT3	-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	5.165
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
****

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= 48.53111
Critical Value of Dunnett's T= 2.108

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

	Simultaneous Lower	Difference	Simultaneous 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

OTE: 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

ffect	Coefficients
NTERCEPT	0
EVEL CONTROL	L2
TRT1	L3
TRT2	L4
TRT3	-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

ependent Variable: RESPONSE

ource	DF	Sum of Squares	Mean Square	F Value	Pr > F
odel	3	717.38647	239.12882	0.83	0.4836
rror	53	15279.07315	288.28440		
orrected Total	56	15996.45962			

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

ource	DF	Type I SS	Mean Square	F Value	Pr > F
EVEL	3	717.38647	239.12882	0.83	0.4836

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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| i/j	HO: LSMEAN(i)=LSMEAN(j) 1	2	3	4
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 Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
CONTROL	- TRT2	-10.058	7.288	24.634
CONTROL	- TRT3	-9.099	7.636	24.371
CONTROL	- TRT1	-7.551	9.184	25.920
TRT2	- CONTROL	-24.634	-7.288	10.058
TRT2	- TRT3	-16.717	0.348	17.413
TRT2	- TRT1	-15.169	1.896	18.961
TRT3	- CONTROL	-24.371	-7.636	9.099
TRT3	- TRT2	-17.413	-0.348	16.717
TRT3	- TRT1	-14.896	1.549	17.993
TRT1	- CONTROL	-25.920	-9.184	7.551
TRT1	- TRT2	-18.961	-1.896	15.169
TRT1	- TRT3	-17.993	-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

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= 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	Difference Between Means	Simultaneous Upper Confidence Limit
TRT2	- CONTROL	-21.076	-7.288	6.499
TRT3	- CONTROL	-20.938	-7.636	5.666
TRT1	- CONTROL	-22.487	-9.184	4.118

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.

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

General Linear Models Procedure

Dependent Variable: RESPONSE

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		
Corrected Total	55	4806.28966			

R-Square	C.V.	Root MSE	RESPONSE Mean
0.036487	11.36607	9.4370	83.027

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

General Linear Models Procedure
Least Squares Means

LEVEL	RESPONSE LSMEAN	Pr > |T| H0: LSMEAN(i)=LSMEAN(j) i/j	1	2	3	4
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.

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

TRT3	- TRT1	-11.138	-1.993	7.153

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

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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	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
****
11:26 Thursday, April 8, 1999

General Linear Models Procedure
Least Squares Means

LEVEL	RESPONSE LSMEAN	Pr > |T| i/j	HO: LSMEAN(i)=LSMEAN(j) 1	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	79.8736282	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
****
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= 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	Simultaneous 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	-16.832	-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

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= 112.2335
Critical Value of Dunnett's T= 2.111

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

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

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

ct 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 LSMEAN	Pr > |T| HO: LSMEAN(i)=LSMEAN(j) i/j	1	2	3	4
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 Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
CONTROL - TRT3	-13.115	2.086	17.286
* CONTROL - TRT2	-12.614	3.141	18.896
CONTROL - TRT1	-9.622	5.578	20.779
TRT3 - CONTROL	-17.286	-2.086	13.115
TRT3 - TRT2	-14.444	1.056	16.556
TRT3 - TRT1	-11.444	3.493	18.429
TRT2 - CONTROL	-18.896	-3.141	12.614
TRT2 - TRT3	-16.556	-1.056	14.444
TRT2 - TRT1	-13.063	2.437	17.937
TRT1 - CONTROL	-20.779	-5.578	9.622
TRT1 - TRT3	-18.429	-3.493	11.444
TRT1 - TRT2	-17.937	-2.437	13.063

METALAXYL TECHNICAL: REPRO. STUDY WITH THE BOBWHITE
12. ANALYSIS OF NORMAL HATCHLINGS/EGGS LAID
****
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= 237.8333
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
TRT3 - CONTROL	-14.168	-2.086	9.997
TRT2 - CONTROL	-15.664	-3.141	9.382
TRT1 - CONTROL	-17.661	-5.578	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

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

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= 72.5467
Critical Value of Studentized Range= 3.753

omparisons 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

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= 72.5467
Critical Value of Dunnett's T= 2.111

omparisons 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

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
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
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	RESPONSE Mean
0.068666	8.064298	6.5363	81.052

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

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
CONTROL - TRT1	-5.852	0.590	7.033
CONTROL - TRT3	-3.871	2.572	9.015
CONTROL - TRT2	-2.234	4.443	11.121
TRT1 - CONTROL	-7.033	-0.590	5.852
TRT1 - TRT3	-4.349	1.982	8.312
TRT1 - TRT2	-2.717	3.853	10.422
TRT3 - CONTROL	-9.015	-2.572	3.871
TRT3 - TRT1	-8.312	-1.982	4.349
TRT3 - TRT2	-4.698	1.871	8.441
TRT2 - CONTROL	-11.121	-4.443	2.234
TRT2 - TRT1	-10.422	-3.853	2.717
TRT2 - TRT3	-8.441	-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 tests 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

TRT1	- CONTROL	-5.711	-0.590	4.531
TRT3	- CONTROL	-7.693	-2.572	2.549
TRT2	- CONTROL	-9.751	-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
INTERCEPT		0
LEVEL	CONTROL	L2
	TRT1	L3
	TRT2	L4
	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	C.V.	Root MSE	RESPONSE Mean
0.041562	26.27347	17.715	67.425

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
****

11:26 Thursday, April 8, 1999

General Linear Models Procedure
Least Squares Means

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

omparisons 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.

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
TRT2 - CONTROL	-15.465	-1.080	13.305
TRT3 - CONTROL	-16.503	-2.624	11.254
TRT1 - CONTROL	-22.940	-9.061	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

Dependent Variable: RESPONSE

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			

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

ce	DF	Type I SS	Mean Square	F Value	Pr > F
L	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 LSMEAN	Pr > |T| i/j	HO: LSMEAN(i)=LSMEAN(j) 1	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

omparisons 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 - TRT3	-13.819	1.659	17.137
TRT2 - TRT1	-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

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

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	Simultaneous 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

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

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	0.4873	7.3861

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	0.4090179	0.1363393	0.57	0.6346

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| i/j	HO: LSMEAN(i)=LSMEAN(j) 1	2	3	4
CONTROL	7.35071429	1	.	0.8035	0.3474	0.7471
TRT1	7.39600000	2	0.8035	.	0.4728	0.5614
TRT2	7.53250000	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	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous 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 '***'.

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous 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

19. ANALYSIS OF 14-DAY SURVIVOR WEIGHT

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

General Linear Models Procedure

Dependent Variable: SURVWT

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

General Linear Models Procedure
Least Squares Means

LEVEL	SURVWT LSMEAN	Pr > |T| HO: LSMEAN(i)=LSMEAN(j) i/j	1	2	3	4
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.

General Linear Models Procedure

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

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

Alpha= 0.05 Confidence= 0.95 df= 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	- TRT3	-1.1342	1.0433	3.2209
TRT1	- TRT2	-0.5295	1.7802	4.0898
CONTROL	- TRT1	-2.9747	-0.7586	1.4575
CONTROL	- TRT3	-1.9314	0.2847	2.5008
CONTROL	- TRT2	-1.3244	1.0215	3.3675
TRT3	- TRT1	-3.2209	-1.0433	1.1342
TRT3	- CONTROL	-2.5008	-0.2847	1.9314
TRT3	- TRT2	-1.5728	0.7368	3.0465
TRT2	- TRT1	-4.0898	-1.7802	0.5295
TRT2	- CONTROL	-3.3675	-1.0215	1.3244
TRT2	- TRT3	-3.0465	-0.7368	1.5728

General Linear Models Procedure

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

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

Alpha= 0.05 Confidence= 0.95 df= 52 MSE= 5.048431
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
TRT1	- CONTROL	-1.0039	0.7586	2.5211
TRT3	- CONTROL	-2.0472	-0.2847	1.4778
TRT2	- CONTROL	-2.8874	-1.0215	0.8443

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

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

TRT3	230.166529	3.822871	0.0001	4

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
CONTROL - TRT3	-12.705	1.627	15.958
CONTROL - TRT1	-12.311	2.020	16.351
CONTROL - TRT2	-5.160	9.425	24.010
TRT3 - CONTROL	-15.958	-1.627	12.705
TRT3 - TRT1	-13.938	0.393	14.725
TRT3 - TRT2	-6.787	7.798	22.383
TRT1 - CONTROL	-16.351	-2.020	12.311
TRT1 - TRT3	-14.725	-0.393	13.938
TRT1 - TRT2	-7.180	7.405	21.990
TRT2 - CONTROL	-24.010	-9.425	5.160
TRT2 - TRT3	-22.383	-7.798	6.787
TRT2 - TRT1	-21.990	-7.405	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 Comparison		Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT3	- CONTROL	-13.034	-1.627	9.781
TRT1	- CONTROL	-13.428	-2.020	9.388
TRT2	- CONTROL	-21.034	-9.425	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

Dependent Variable: POSTF

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

29

Least Squares Means

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

NOTE: This tests controlc 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

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

LEVEL Comparison		Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT1	- CONTROL	-7.405	7.413	22.232
TRT3	- CONTROL	-9.479	5.340	20.159
TRT2	- CONTROL	-12.196	2.885	17.966