

C₆ ACID:
A REPRODUCTION STUDY WITH THE
NORTHERN BOBWHITE

FINAL REPORT

WILDLIFE INTERNATIONAL, LTD. PROJECT NUMBER 632-102

U.S. Environmental Protection Agency
Series 850 – Ecological Effects Test Guidelines
OPPTS Number 850.2300

FIFRA Subdivision E Section 71-4
OECD Guideline 206

AUTHORS: Larry T. Frey
Kathy H. Martin
Joann B. Beavers
Mark Jaber

STUDY INITIATION DATE: October 5, 2009

STUDY COMPLETION DATE: September 23, 2010

Submitted to
Asahi Glass Co., Ltd.
Environment & Safety Office
10 Goikaigan, Ichihara-shi
Chiba 290-8566
Japan

Wildlife International, Ltd.

8598 Commerce Drive
Easton, Maryland 21601 USA
(410) 822-8600

- 2 -

STATEMENT OF NO DATA CONFIDENTIALITY CLAIMS

No claim of confidentiality is made for any information contained in this study on the basis of its falling within the scope of FIFRA section 10(d) (1)(A), (B), or (C).

Company: _____(Typed Name)

Company Agent: _____(Typed Name)

Title: _____

Signature: _____ Date: _____

GOOD LABORATORY PRACTICE COMPLIANCE STATEMENT

SPONSOR: Asahi Glass Co., Ltd.

TITLE: C₆ Acid: A Reproduction Study with the Northern Bobwhite

WILDLIFE INTERNATIONAL, LTD. PROJECT NUMBER 632-102

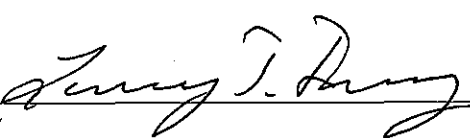
STUDY COMPLETION: September 23, 2010

The study was conducted in compliance with Good Laboratory Practice Standards as published by the U.S. Environmental Protection Agency, 40 CFR Part 160, 17 August 1989; OECD Principles of Good Laboratory Practice (ENV/MC/CHEM (98) 17); and Japan MAFF, 11 NohSan Notification No. 6283, Agricultural Production Bureau, 1 October 1999, with the following exceptions:

Characterization of the test substance and the stability of the test substance under the conditions of storage at the test site were not determined in accordance with Good Laboratory Practice Standards.

Periodic analyses of water and feed for potential contaminants were not performed according to Good Laboratory Practice standards, but were performed using a certified laboratory and standard U.S. EPA analytical methods.

STUDY DIRECTOR:



Larry T. Frey
Senior Biologist

23 Sep 2010
DATE

SPONSOR APPROVAL:

Sponsor Representative

DATE

Applicant/Submitter

DATE

QUALITY ASSURANCE STATEMENT

This study was examined for compliance with Good Laboratory Practice Standards as published by the U.S. Environmental Protection Agency, 40 CFR Part 160, 17 August 1989; OECD Principles of Good Laboratory Practice (ENV/MC/CHEM (98) 17); and Japan MAFF, 11 NohSan, Notification No. 6283, Agricultural Production Bureau, 1 October 1999. The dates of all audits and inspections and the dates any findings were reported to the Study Director and Laboratory Management were as follows:

<i>Activity Audited</i>	<i>Audit Dates</i>	<i>Dates Findings Reported to Study Director</i>	<i>Dates Findings Reported to Management</i>
Protocol	August 18, 2009	August 18, 2009	November 24, 2009
Test substance preparation	October 6, 2009	October 6, 2009	October 7, 2009
Body weights	November 4, 2009	November 4, 2009	November 4, 2009
Feed consumption	November 18, 2009	November 18, 2009	November 19, 2009
Observations	January 12, 2010	January 12, 2010	January 12, 2010
Necropsy	March 3, 2010	March 3, 2010	March 4, 2010
Data Entry on body weight, feed consumption and egg data (lots A-E)	April 3 - 5, 2010	April 5, 2010	May 25, 2010
Data Entry on egg data (lots F-J) and adult daily observations	May 6 - 9, 2010	May 10, 2010	May 25, 2010
Analytical data and draft report (avian feed)	June 23, 2010	June 23, 2010	July 1, 2010
Biological data and draft report	June 25 - July 1, 2010	July 1, 2010	July 27, 2010
Analytical data and draft report (blood plasma)	July 2-6, 2010	July 6, 2010	July 22, 2010
Final Report	September 23, 2010	September 23, 2010	September 23, 2010

All inspections were study based unless otherwise noted.

 Jeff H. Suzuki
 Quality Assurance Representative

September 23, 2010

 DATE

- 5 -

REPORT APPROVAL

SPONSOR: Asahi Glass Co., Ltd.

TITLE: C₆ Acid: A Reproduction Study with the Northern Bobwhite

WILDLIFE INTERNATIONAL, LTD. PROJECT NUMBER 632-102

STUDY DIRECTOR:

Larry T. Frey
Senior Biologist

DATE

PRINCIPAL INVESTIGATOR:

Kathy H. Martin
Scientist

DATE

MANAGEMENT:

Joann B. Beavers
Director of Avian Toxicology

DATE

Willard B. Nixon, Ph.D.
Director of Chemistry

DATE

TABLE OF CONTENTS

Title Page 1

Statement of No Data Confidentiality Claims 2

Good Laboratory Practice Compliance Statement 3

Quality Assurance Statement 4

Report Approval..... 5

Table of Contents 6

Summary 11

Introduction..... 12

Objectives 12

Experimental Design..... 12

Materials and Methods..... 13

 Test Substance 14

 Test Organisms..... 14

 Identification 14

 Avian Feed and Water 15

 Diet Preparation..... 15

 Diet Sampling..... 15

 Blood Collection..... 16

 Analytical Method – Avian Diet 16

 Analytical Method – Avian Blood 17

 Study Phases..... 19

 Housing and Environmental Conditions 19

 Observations..... 20

 Necropsy..... 20

 Adult Body Weight and Feed Consumption 20

 Egg Collection and Storage 21

 Candling and Incubation 21

 Hatching and Brooding 22

 Egg Shell Thickness Measurements..... 22

 Statistical Analyses..... 23

Results and Discussion 24

 Analytical Results – Avian Diets 25

 Analytical Results – Avian Blood..... 25

 Mortalities 25

 Clinical Observations 26

 Gross Necropsy 27

 Adult Body Weight 27

 Adult Feed Consumption..... 27

 Reproductive Results..... 28

 Egg Shell Thickness 29

 Offspring Body Weights 29

Conclusion 29

References..... 30

TABLE OF CONTENTS
PAGE 2
SECTION A
TABLES AND FIGURES

Table 1. Mean Adult Body Weight (g) from a Northern Bobwhite
Reproduction Study with C₆ Acid..... 32

Figure 1. Mean Adult Male Body Weight (g) from a Northern
Bobwhite Reproduction Study with C₆ Acid 33

Figure 2. Mean Adult Female Body Weight (g) from a Northern
Bobwhite Reproduction Study with C₆ Acid 34

Table 2. Mean Feed Consumption (g/bird/day) from a Northern
Bobwhite Reproduction Study with C₆ Acid 35

Figure 3. Mean Feed Consumption (g/bird/day) from a Northern
Bobwhite Reproduction Study with C₆ Acid 36

Table 3. Summary of Reproductive Performance from a Northern
Bobwhite Reproduction Study with C₆ Acid 37

Figure 4. Mean Reproductive Performance from a Northern
Bobwhite Reproduction Study with C₆ Acid 38

Table 4. Summary of Reproductive Performance, Normalized as
Percentages (%), from a Northern Bobwhite Reproduction Study with C₆ Acid 39

Figure 5. Mean Reproductive Performance, Normalized as Percentages (%),
from a Northern Bobwhite Reproduction Study with C₆ Acid 40

Table 5. Mean Egg Shell Thickness Measurements (mm) from a Northern Bobwhite
Reproduction Study with C₆ Acid..... 41

Table 6. Mean Body Weight (g) of Hatchlings and 14-Day Old Survivors
from a Northern Bobwhite Reproduction Study with C₆ Acid 42

Table 7. Summary of Gross Pathological Observations from a Northern
Bobwhite Reproduction Study with C₆ Acid 43

TABLE OF CONTENTS
PAGE 3
SECTION A
APPENDICES

Appendix	I.	Diet and Supplement Formulations	44
Appendix	II.	Diet Preparation.....	46
Appendix	III.	The Analysis of C6 Acid in Avian Diet	47
Appendix	IV.	Daily Clinical Observations from a Northern Bobwhite Reproduction Study with C ₆ Acid.....	64
Appendix	V.	Adult Body Weight (g) from a Northern Bobwhite Reproduction Study with C ₆ Acid.....	110
Appendix	VI.	Feed Consumption (g/bird/day) from a Northern Bobwhite Reproduction Study with C ₆ Acid.....	118
Appendix	VII.	Reproductive Performance by Pen from a Northern Bobwhite Reproduction Study with C ₆ Acid.....	122
Appendix	VIII.	Reproductive Performance by Week and Pen from a Northern Bobwhite Reproduction Study with C ₆ Acid	156
Appendix	IX.	Egg Shell Thickness (mm) per Pen by Week from a Northern Bobwhite Reproduction Study with C ₆ Acid	187
Appendix	X.	Mean Hatchling Body Weight (g) per Pen by Week from a Northern Bobwhite Reproduction Study with C ₆ Acid.....	191
Appendix	XI.	Mean 14-Day Old Survivor Body Weight (g) per Pen by Week from a Northern Bobwhite Reproduction Study with C ₆ Acid	195
Appendix	XII.	The Analysis of C6 Acid in Avian Blood	199
Appendix	XIII.	Diagram of Test Layout	218
Appendix	XIV.	Reproductive Parameters.....	219
Appendix	XV.	Individual Gross Pathological Observations from a Northern Bobwhite Reproduction Study with C ₆ Acid	222
Appendix	XVI.	Changes to Study Protocol	226
Appendix	XVII.	Personnel Involved in Study.....	227

TABLE OF CONTENTS
PAGE 4
SECTION B
TABLES AND FIGURES

Table 1. Mean Adult Body Weight (g) from a Northern Bobwhite Reproduction Study with C ₆ Acid.....	229
Table 2. Mean Feed Consumption (g/bird/day) from a Northern Bobwhite Reproduction Study with C ₆ Acid	230
Table 3. Summary of Reproductive Performance from a Northern Bobwhite Reproduction Study with C ₆ Acid	231
Table 4. Summary of Reproductive Performance, Normalized as Percentages (%), from a Northern Bobwhite Reproduction Study with C ₆ Acid	232
Table 5. Mean Egg Shell Thickness Measurements (mm) from a Northern Bobwhite Reproduction Study with C ₆ Acid.....	233
Table 6. Mean Body Weight (g) of Hatchlings and 14-Day Old Survivors from a Northern Bobwhite Reproduction Study with C ₆ Acid	234
Table 7. Summary of Gross Pathological Observations from a Northern Bobwhite Reproduction Study with C ₆ Acid	235

TABLE OF CONTENTS

PAGE 5

SECTION B

APPENDICES

Appendix	I.	Daily Clinical Observations from a Northern Bobwhite Reproduction Study with C ₆ Acid (Blood Sample Groups).....	236
Appendix	II.	Adult Body Weight (g) from a Northern Bobwhite Reproduction Study with C ₆ Acid (Blood Sample Groups).....	248
Appendix	III.	Feed Consumption (g/bird/day) from a Northern Bobwhite Reproduction Study with C ₆ Acid (Blood Sample Groups).....	256
Appendix	IV.	Reproductive Performance by Pen from a Northern Bobwhite Reproduction Study with C ₆ Acid (Blood Sample Groups).....	260
Appendix	V.	Reproductive Performance by Week and Pen from a Northern Bobwhite Reproduction Study with C ₆ Acid (Blood Sample Groups).....	270
Appendix	VI.	Egg Shell Thickness (mm) per Pen by Week from a Northern Bobwhite Reproduction Study with C ₆ Acid (Blood Sample Groups).....	298
Appendix	VII.	Mean Hatchling Body Weight (g) per Pen by Week from a Northern Bobwhite Reproduction Study with C ₆ Acid (Blood Sample Groups).....	302
Appendix	VIII.	Mean 14-Day Old Survivor Body Weight (g) per Pen by Week from a Northern Bobwhite Reproduction Study with C ₆ Acid (Blood Sample Groups).....	306
Appendix	IX.	Individual Gross Pathological Observations from a Northern Bobwhite Reproduction Study with C ₆ Acid (Blood Sample Groups).....	310

- 11 -

SUMMARY

STUDY: C₆ Acid: A Reproduction Study with the Northern Bobwhite

SPONSOR: Asahi Glass Co., Ltd.

WILDLIFE INTERNATIONAL, LTD. PROJECT NUMBER: 632-102

TEST DATES: Study Initiation – October 5, 2009
Experimental Start (OECD) – October 6, 2009
Experimental Start (EPA) – October 7, 2009
Photostimulation – November 25, 2009
First Eggs Set – December 31, 2009
Analytical Termination (avian diet) – February 19, 2010
Adult Termination – March 2 & 3, 2010
Biological Termination – April 12, 2010
Analytical Termination (blood plasma) – June 11, 2010
Experimental Termination – June 11, 2010

TEST ANIMALS: Northern bobwhite (*Colinus virginianus*)

AGE TEST ANIMALS: 20 weeks of age at the initiation of the test

SOURCE TEST ANIMALS: M & M Quail Farm
4090 Campbell Road
Gillsville, GA 30543
U.S.A.

NOMINAL TEST CONCENTRATIONS: 0, 1000, 5000, and 10,000 ppm

RESULTS: There were no treatment-related mortalities, overt signs of toxicity or treatment-related effects upon body weight or feed consumption at any of the concentrations tested. Additionally, there were no treatment-related effects upon any of the reproductive parameters measured at the 1000, 5000 or 10,000 ppm test concentrations. The no-observed-effect concentration for northern bobwhite exposed to C₆ acid in the diet during the study was 10,000 ppm (964 mg/kg/day), the highest concentration tested.

- 12 -

INTRODUCTION

This study was conducted by Wildlife International, Ltd. for Asahi Glass Co., Ltd. at the Wildlife International, Ltd. avian toxicology facility in Easton, Maryland 21601. The biological portion of the test was conducted from October 7, 2009 until April 12, 2010. Raw data generated at Wildlife International, Ltd. and of the final report are filed under Project Number 632-102 in archives located on the Wildlife International, Ltd. site.

OBJECTIVES

The objective of this study was to evaluate the effects upon the adult northern bobwhite (*Colinus virginianus*) of dietary exposure to C₆ acid over a period of 21 weeks. Effects on adult health, body weight, and feed consumption were evaluated. In addition, the effects of adult exposure to C₆ acid on the number of eggs laid, fertility, embryo viability, hatchability, offspring survival, and egg shell thickness were evaluated.

EXPERIMENTAL DESIGN

Northern bobwhite (80 males and 80 females) were randomly distributed into one control group and three treatment groups, with one male and one female per pen. Each group was further distributed into 16 pairs for the reproduction test (primary) and four pairs for a satellite group used for intra-test blood sampling. The test concentrations were selected in consultation with the Sponsor, based upon the results of a pilot reproduction study (Wildlife International, Ltd. Project Number 632-101) and additional toxicity information provided by the Sponsor. Three treatment groups were fed diets containing either 1000, 5000 or 10,000 ppm of C₆ acid for 21 weeks. The control group was fed diet comparable to the treatment groups, but without the addition of the test substance

C₆ Acid Treatment Groups

	Group	Nominal Concentration (ppm)	Pens per Group	Birds per Pen	
				Males	Females
Primary	1	(Control) 0	16	1	1
Test	2	1000	16	1	1
Groups	3	5000	16	1	1
	4	10,000	16	1	1
Blood Sample	1	(Control) 0	4	1	1
Satellite	2	1000	4	1	1
Groups	3	5000	4	1	1
	4	10,000	4	1	1

All adult birds were observed daily throughout the test for signs of toxicity or abnormal behavior. Adult body weights were measured at test initiation, at the end of Weeks 2, 4, 6, 8, and at adult termination and feed consumption was measured weekly throughout the test. After 5, 10 and 15 weeks of exposure, a blood sample was collected, if possible, from each bird in the satellite groups. At adult termination an attempt was made to collect a blood sample from each of the surviving birds. At the beginning of Week 8, the photoperiod was increased to induce egg production. Following the start of egg production, eggs were set weekly for incubation. Weekly, eggs were selected by indiscriminate draw for egg shell thickness measurement and all remaining eggs were candled prior to incubation to detect egg shell cracks or abnormal eggs. Eggs were also candled twice during incubation to detect infertile eggs or embryo mortality. On Day 21 of incubation, the eggs were placed in a hatcher and allowed to hatch. Once hatching was completed, hatchlings were removed from the hatcher and the group body weight of the hatchlings by pen was determined. At 14 days of age, the average body weight by parental pen of all surviving offspring was determined. Upon completion of the test, statistical analyses were performed to determine statistically significant differences among groups.

MATERIALS AND METHODS

The study was conducted according to the procedures outlined in the protocol, "C₆ Acid: A Reproduction Study with the Northern Bobwhite". The protocol was based on procedures outlined in the Environmental Protection Agency's Registration Guidelines *Pesticide Assessment Guidelines, FIFRA Subdivision E, Hazard Evaluation: Wildlife and Aquatic Organisms*, Subsection 71-4; OECD Guideline

- 14 -

206; ASTM "*Standard Practice for Conducting Reproductive Studies with Avian Species*"; and U.S. Environmental Protection Agency Series 850 – Ecological Effects Test Guidelines OPPTS Number 850.2300 (1,2,3 & 4).

Test Substance

The test substance, C₆ acid, was received from LSG Corporation on July 27, 2010 and January 15, 2010 and was assigned Wildlife International, Ltd. identification numbers 8193 and 9357 upon receipt, respectively. The test substance was a liquid and was identified as: perfluorohexanoic acid; Lot No.: 3357 and CAS No.: 307-24-4. The test substance was held under ambient conditions in locked storage at the Wildlife International, Ltd. facilities in Easton, Maryland. Concentrations of the test substance in the diet were not adjusted to 100% active ingredient. Therefore, dietary concentrations are expressed as parts per million (ppm) in the diet.

Test Organisms

Pen-reared northern bobwhite, 196 birds, were purchased from M & M Quail, 4090 Campbell Road, Gillsville, GA 30543, U.S.A. At the start of acclimation, the bobwhite were apparently healthy and phenotypically indistinguishable from wild type. The birds were from the same hatch, approaching their first breeding season and had not been used in any previous testing. At the start of acclimation, a random number generating function in a spreadsheet program was used to randomize pen assignment for each bird. Immediately prior to test initiation, all potential study birds were examined for physical injuries and general health. Birds that did not appear healthy, either due to injury or inability to acclimate to laboratory conditions, or were outside the weight range for the test, were excluded from the study. All birds were 20 weeks of age at test initiation (first day of exposure to test diet) and ranged in weight from 167 to 217 grams at test initiation. Sex of the birds was determined by a visual examination of the plumage.

Identification

Adult birds were identified by individual leg bands, each pen was identified with a unique number, and groups of pens were identified by project number and concentration. All eggs laid during the study were marked with the pen number using a permanent-ink marking pen for identification. Hatchlings were identified by leg bands so that they could be traced to their parental pen of origin.

- 15 -

Avian Feed and Water

All adult birds and their offspring were given feed and water *ad libitum* during acclimation and testing. The basal diet fed to both adults and offspring was formulated to Wildlife International, Ltd. specifications by Cargill Animal Nutrition, Shippensburg, PA (Appendix I, Table 1). The basal ration contained at least 27% protein and 2.5% crude fat, and no more than 3.8% crude fiber.

The basal diet contained approximately 1.34% calcium, derived from feedstuffs and the 0.62% limestone used in the formulation of the basal diet by Cargill. While this level of calcium is sufficient for growth and maintenance rations, additional calcium is required in the ration of breeding birds for egg shell formation. Therefore, an additional 5% (w/w) of limestone (approximately 38.5% Ca) was added to the basal diet for the adults. This raised the calcium level in the diet for the breeding birds to approximately 3%, slightly above the minimum recommended for quail (2.4%) (5). Offspring received basal diet without test substance and without the addition of 5% supplemental limestone.

Water was supplied by the town of Easton public water supply. All offspring received a water-soluble vitamin and electrolyte mix in their water (Appendix I, Table 2). Neither the adults nor offspring received any form of medication in their feed during the test. Feed and water were analyzed periodically in accordance with Wildlife International, Ltd. Standard Operating Procedures.

Diet Preparation

Test diets were prepared by mixing C₆ acid into a premix that was used for weekly preparation of the final diet. Control diet and each of the three treated diets were prepared weekly beginning on October 7, 2009 and presented to the birds on Wednesday of each week. Dietary concentrations were not adjusted for purity of the test substance and are presented as parts per million (ppm). Details of the weekly preparation of test and control diets are shown in Appendix II.

Diet Sampling

Homogeneity of the test substance in the diet was evaluated by collecting six samples from each of the treated diets and one sample from the control diet on Day 0 of Week 1. Samples were collected from the top, middle and bottom of the left and right sections of the mixing vessel. Control and treatment group diet samples were also collected from the feed troughs on Day 7 of Week 1 to assess stability of the test substance under actual test conditions. Additionally, a sample was collected from the control and

- 16 -

treatment group diets during Weeks 2, 3, 4, 8, 12, 16 and 20 of the test to measure/verify test concentrations. The diet samples were transferred to the Wildlife International, Ltd. chemistry facility and stored frozen prior analysis.

Blood Collection

The four extra pairs of adult birds for each test group, which were maintained for the collection of blood samples, received the same diet as the other birds in their group. Except for three of the four blood sampling events, the extra birds, their eggs and offspring were observed and handled in the same manner as the other birds. After 5, 10 and 15 weeks of exposure, a blood sample was collected, if possible, from each bird in the satellite groups. At adult termination an attempt was made to collect a blood sample from each of the surviving birds in both the satellite groups and the reproduction study groups (Appendix III).

Blood samples were collected by venipuncture of the brachial vein. Approximately 1 mL of blood was then transferred to a micro-centrifuge tube containing EDTA to prevent coagulation. The blood was separated into serum and hemocyte/platelet fractions by centrifuging. The serum was drawn off, transferred to another sample tube, and stored frozen for possible analysis.

Analytical Method – Avian Diet

The method used for the analysis C₆ acid in avian diet was based upon methodology developed by Wildlife International Ltd.

Samples were extracted with methanol. A method outline is provided in Appendix III, Figure 1. An Agilent Series 1100 High Performance Liquid Chromatograph with a Perkin-Elmer SCIEX API 100 Mass Spectrometer was used to determine concentrations of C₆ acid in extracts of the samples. High performance liquid chromatographic separations were achieved using a Thermo, Betasil C-8 analytical column (50 mm x 2.1 mm I.D., 5 µm particle size) and Thermo Betasil C-8 guard column (20 mm x 2.1 mm I.D.). The instrument parameters are summarized in Appendix III, Table 1.

Calibration standards of C₆ acid, ranging in concentration from 0.0100 to 0.100 µg/mL, were analyzed with each sample set. Linear regression equations were generated using the peak area responses versus the respective concentrations of the calibration standards. An example of a calibration curve is presented in Appendix III, Figure 2. The concentration of test substance in the samples was determined

- 17 -

by substituting the peak area responses of the samples into the applicable linear regression equation. Typical chromatograms of low-level and high-level calibration standards are shown in Appendix III, Figures 3 and 4, respectively. Examples of equations used in calculations are presented in Appendix III, Table 2.

The Limit of Detection (LOD) was set at the lowest analytical standard analyzed 0.0100 µg /mL C₆ acid (0.100 ng on column). The method limit of quantitation (LOQ) for these analyses was set at 20 ppm based upon product of the lowest analytical standard 0.0100 µg/mL and the dilution factor (2000) of the matrix blank extract. Measured values greater than or equal to the LOQ were reported.

Along with the sample analyses, seven matrix blanks were analyzed to determine possible interferences. No interferences were observed at or above the LOQ standard during the sample analyses (Appendix III, Table 3). A typical chromatogram of a matrix blank is presented in Appendix III, Figure 5.

Avian diet samples were fortified using a dry mix technique at 100 and 1200 ppm and analyzed concurrently with the samples to determine the mean procedural recovery. The method yielded mean procedural recoveries of 106%, 107%, 111%, 108%, 99% and 106%. These values correspond to each sample set analyzed during the definitive study (Appendix III, Table 3). Sample measured concentrations were not corrected for the mean procedural recoveries from each sample set. A typical chromatogram of a matrix fortification is presented in Appendix III, Figure 6.

Analytical Method – Avian Blood

The method used for the analysis C₆ acid in avian blood was based upon methodology developed by Wildlife International Ltd.

Samples were concentrated and cleaned up on C18 SPE column and eluted with methanol. A method outline is provided in Appendix XII, Figure 1. Concentrations of C₆ acid in extracts of the samples were determined by Agilent Series 1100 High Performance Liquid Chromatograph with a Perkin-Elmer SCIEX API 100 Mass Spectrometer or a Agilent Series 1100 High performance Liquid Chromatograph coupled with coupled with an Applied Biosystems/MSD Sciex API 3000 LC/MS/MS equipped with a Turbo Ion Spray ion source. High performance liquid chromatographic separations were

- 18 -

achieved using a Thermo, Betasil C-18 analytical column (50 mm x 2.1 mm I.D., 5 µm particle size) and Thermo Betasil C-18 guard column (20 mm x 2.1 mm I.D.), or (10 mm x 2.1 mm I.D.). The instrument parameters are summarized in Appendix XII, Table 1.

Calibration standards of C₆ acid, ranging in concentration from 0.100 to 1.00 µg/L or 10 to 500µg/L were analyzed with each sample set. Linear regression equations were generated using the peak area responses versus the respective concentrations of the calibration standards. An example of a calibration curve is presented in Appendix XII, Figure 2. The concentration of test substance in the samples was determined by substituting the peak area responses of the samples into the applicable linear regression equation. Typical chromatograms of low-level and high-level calibration standards are shown in Appendix XII, Figures 3 and 4, respectively. Examples of equations used in calculations are presented in Appendix XII, Table 2.

The Limit of Detection (LOD) was set at the lowest analytical standard analyzed 10.0 µg /L C₆ acid for the single quad instrument and 0.100 µg /L for the triple quad instrument. The method limit of quantitation (LOQ) for these analyses on the single quad instrument was set at 0.300 ppm based upon product of the lowest analytical standard 10 µg/L and the dilution factor (30) of the matrix blank extract. The method limit of quantitation (LOQ) for these analyses on the triple quad instrument was set at 0.003 ppm based upon product of the lowest analytical standard 0.100 µg/L and the dilution factor (30) of the matrix blank extract. Measured values greater than or equal to the LOQ were reported. The analyses of the sample were move to the single quad because levels that were seen in the samples alleviated the need to push the limits of the method.

Along with the sample analyses, seven matrix blanks were analyzed to determine possible interferences. No interferences were observed at or above the LOQ standard during the sample analyses (Appendix XII, Table 3). A typical chromatogram of a matrix blank is presented in Appendix XII, Figure 5.

Avian blood plasma samples were fortified at 0.0100, 0.500, 4.00, 50.0, 100, 200 or 300 ppm and analyzed concurrently with the samples to determine the mean procedural recovery. The method yielded mean procedural recoveries of 105%, 90%, 115%, 92%, 97%, 114% and 107%. These values correspond

to each sample set analyzed during the definitive study (Appendix XII, Table 3). Sample measured concentrations were not corrected for the mean procedural recoveries from each sample set. A typical chromatogram of a matrix fortification is presented in Appendix XII, Figure 6.

Study Phases

The primary phases of the study and their approximate durations were:

1. Acclimation - 6 weeks.
2. Pre-photostimulation - 7 weeks.
3. Pre-egg laying (with photostimulation) - 3 weeks.
4. Egg laying - Approximately 11 weeks.
5. Post-adult termination (final incubation, hatching, and 14-day offspring rearing period) – 6 weeks.

Housing and Environmental Conditions

Housing and husbandry practices were conducted so as to adhere to the guidelines established by the National Research Council (6). The adult birds were housed indoors in batteries of pens manufactured by Georgia Quail Farm Manufacturing (GQF Model No. 0330), measuring approximately 25 X 51 cm. The pens had sloping floors that resulted in ceiling height ranging from 20 to 26 cm. The pens were constructed of galvanized wire mesh and galvanized sheeting. Sisal ropes were added to each pen for animal enrichment. A diagram of the test layout is presented in Appendix XIII.

Each pen was equipped with feed and water troughs. Weekly, sufficient feed for the feeding period was placed in the trough for each pen and presented to the birds. During the feeding period additional feed was weighed and added to the troughs as needed. Water troughs were changed and water added as necessary to provide potable water (generally every 2-3 days).

Only birds associated with this study were maintained in the study room in order to avoid excessive disturbances. The average temperature in the adult northern bobwhite study room during the course of the test was $21.8 \pm 0.7^{\circ}\text{C}$ (SD) with an average relative humidity of $32 \pm 13\%$ (SD). The air handling system in the study room was designed to vent up to 15 room air volumes every hour and replace them with fresh air.

- 20 -

The photoperiod in the adult northern bobwhite room was maintained by a time clock. The photoperiod during acclimation and the first seven weeks of the test was eight hours of light per day. The photoperiod was increased to 17 hours of light per day at the beginning of Week 8 to induce egg laying and was maintained at that length until the adult birds were euthanized. Throughout the test, the birds received a mean of approximately 180 lux (~ 17 ft. candles) of illumination provided by fluorescent lights that closely approximated the color spectrum of noonday sunlight.

Observations

The test birds were acclimated to the facilities and study pens for six weeks prior to initiation of the test. During acclimation, all birds were observed daily. Birds exhibiting abnormal behavior or debilitating physical injuries were not used for the test. During the study, all adult birds were observed daily for signs of toxicity or abnormal behavior. Additionally, all offspring were observed daily from hatching until 14 days of age. A record was maintained of all mortalities and clinical observations.

Necropsy

Adult birds that died or were euthanized during the course of the study were subjected to a gross necropsy. At the conclusion of the exposure period, all surviving adult birds were euthanized with carbon dioxide gas, necropsied, and disposed of by incineration.

Adult Body Weight and Feed Consumption

Adult body weights were measured at test initiation, at the end of Weeks 2, 4, 6, 8, and just prior to adult termination. Body weights were not measured during egg laying because of the possible adverse effects handling may have on egg production.

Feed consumption for each pen was measured weekly throughout the test. Feed consumption was determined by weighing the freshly filled feeder on Day 0, recording the amount of any additional diet added during the week, and weighing the feeder and remaining feed at the end of the feeding period (Day 7). An attempt was made to minimize feed wastage by the birds by using externally mounted feeders designed with a “feed-saver” lip. Feed wastage was further reduced by placement of a piece of wire grid on the top of the feed. The wire grid allowed birds to feed unencumbered, but prevented the birds from “scooping” feed out of the feeder. The amount of feed wasted by the birds was not quantified,

- 21 -

since the wasted feed was normally scattered and mixed with water and excreta. Therefore, feed consumption is presented as an estimate of total feed consumption.

Egg Collection and Storage

Eggs were collected daily from all pens, when available. The eggs were stored in a cold room until incubation. The cold room was maintained at a mean temperature of $14.1 \pm 0.0^{\circ}\text{C}$ (SD) with a mean relative humidity of approximately $73 \pm 5\%$ (SD). Groups of eggs were identified by an alphabetic lot code. All eggs laid in a weekly interval were considered as one lot.

Candling and Incubation

At the end of the weekly interval, all eggs were removed from the cold room, counted and eggs selected by indiscriminate draw for egg shell thickness measurement. The remaining eggs were candled with a Speed King (Model No. 32) egg-candling lamp to detect egg shell cracks or abnormal eggs. Cracked or abnormal eggs were recorded and discarded. All eggs to be incubated were fumigated with formaldehyde gas in an airtight cabinet with a circulating fan for approximately two hours, to reduce the possibility of pathogen contamination prior to incubation. Formaldehyde gas was generated by combining 20 g of potassium permanganate and 19 ml of 37% commercial grade formalin in a porcelain bowl at the base of the airtight cabinet.

All eggs not discarded or used for egg shell thickness measurements were placed in a NatureForm Incubator (Model No. NMC 4000). In the incubator the temperature was maintained at an average $37.4 \pm 0.0^{\circ}\text{C}$ (SD) with an average relative humidity of $55 \pm 0\%$ (SD). The incubator was equipped with a pulsator fan and blades that produced a mild breathing air movement designed to eliminate intracabinet temperature and humidity variation during incubation. In order to prevent adhesion of the embryo to the shell membrane, the incubator was also equipped with an automatic egg rotation device, designed to rotate the eggs from 45° off of vertical in one direction to 45° off of vertical in the opposite direction (total arc of rotation was 90°) every hour through Day 21 of incubation. Eggs were candled on Day 11-12 of incubation to determine embryo viability and on Day 21 to determine embryo survival.

- 22 -

Hatching and Brooding

On Day 21 of incubation, the eggs were placed in a Petersime Hatcher (Model No. S6H) or a NatureForm Incubator (Model No. NMC-4000) and allowed to hatch. Pedigree baskets constructed of galvanized steel wire mesh were used to keep hatchlings separated by parental pen of origin. Eggs were not rotated in the hatcher. The average temperature in the Petersime Hatcher was $37.2 \pm 0.0^{\circ}\text{C}$ (SD) with a relative humidity of approximately 77% (average wet bulb temperature $33.3 \pm 0.0^{\circ}\text{C}$ (SD)). The temperature in NatureForm Incubator during hatching was maintained at an average $37.3 \pm 0.0^{\circ}\text{C}$ (SD) with an average relative humidity of $57 \pm 2\%$ (SD).

All hatchlings, unhatched eggs, and egg shells were removed from the hatcher on Day 25 or 26 of incubation. The body weights of surviving hatchlings were recorded and the group body weight by pen was determined. Hatchlings were leg banded for identification by pen of origin and then routinely housed according to the appropriate parental concentration grouping in brooding pens until 14 days of age. The hatchlings were fed untreated diet without the addition of 5% supplemental limestone. At 14 days of age, the body weights of surviving hatchlings were recorded and the average body weight by parental pen of all surviving chicks was determined. The chicks were euthanized with carbon dioxide and disposed of by incineration.

Hatchlings were housed in batteries of brooding pens manufactured by Beacon Steel Company (Model B735Q). Each pen measured approximately 72 X 90 X 23 cm high. The external walls and ceilings of each pen were constructed of galvanized wire mesh and galvanized sheeting. Floors were of galvanized wire mesh. Thermostats in the brooding compartment of each pen were set to maintain a temperature of approximately 38°C from the time of hatching until the birds were 14 days of age. The average ambient room temperature was $28.3 \pm 1.4^{\circ}\text{C}$ (SD) with an average relative humidity of $21 \pm 9\%$ (SD). The photoperiod for the hatchlings was maintained by a time clock at 16 hours of light per day.

Egg Shell Thickness Measurements

Weekly throughout the egg laying period, one egg was collected, when available, from each of the odd numbered pens during odd numbered weeks (1,3,5, etc.) and from each of the even numbered pens during the even numbered weeks (2,4,6, etc.). The eggs were opened at the waist, the contents removed, and the shells thoroughly rinsed with water. The shells were then allowed to air dry for at least one week

- 23 -

at room temperature. The average thickness of the dried shell plus the membrane was determined by measuring five points around the waist of the egg using a micrometer. Measurements were made to the nearest 0.002 mm.

Statistical Analyses

Upon completion of the test, an analysis of variance (ANOVA) was performed to determine statistically significant differences among groups, excluding the replicates used for intra-test blood sampling. Data from the blood sample satellite groups were summarized apart from the primary test replicates so the additional handling and blood sampling would not bias the results. Dunnett's multiple comparison procedure (7, 8) was used to compare the three treatment means with the control group mean and assess the statistical significance of the observed differences. Sample units were the individual pens within each experimental group, except adult body weights where the sample unit was the individual bird. In those pens with adult mortalities, adult body weight and feed consumption data were included in the analysis of those parameters up to the point of mortality. However, all of the reproductive data from pens with mortalities were excluded from analyses. One pen in the control group (Pen 201) was treated as a mortality when separation of the pair was necessitated by male aggression and conjugal visits were not successful. Percentage data were examined using Dunnett's method following arcsine square root transformation (see Appendix XIV) for reproductive parameters. Each of the following parameters was analyzed statistically:

1. Adult Body Weight - Individual body weight was measured at test initiation, Weeks 2, 4, 6, 8 and at adult termination. Statistical comparisons were made between the control group and each treatment group at each weighing interval by sex.
2. Adult Feed Consumption - Feed consumption expressed as grams of feed per bird per day was examined by pen weekly during the test. Statistical comparisons were made between the control and each treatment group.
3. Eggs Laid of Maximum Laid - The number of eggs laid per female divided by the largest number of eggs laid by any one female. This transformation was used to convert the number of eggs laid to a percentile value less than or equal to 100.
4. Eggs Cracked of Eggs Laid - The number of eggs determined by candling to be cracked divided by the number of eggs laid, per pen.

- 24 -

5. Viable Embryos of Eggs Set - The number of viable embryos at the Day 11-12 candling was divided by the number of eggs set, per pen.
6. Live 3-Week Embryos of Viable Embryos - The number of live embryos at the Day 21 candling was divided by the number of viable embryos, per pen.
7. Hatchlings of 3-Week Embryos - The number of hatchlings removed from the hatcher was divided by the number of live 3-week embryos, per pen.
8. 14-Day Old Survivors of Hatchlings - The number of 14-day old survivors was divided by the number of hatchlings, per pen.
9. Hatchlings of Eggs Set - The number of hatchlings was divided by the number of eggs set, per pen.
10. 14-Day Old Survivors of Eggs Set - The number of 14-day old survivors was divided by the number of eggs set, per pen.
11. Hatchlings of Maximum Set - The number of hatchlings per female divided by the largest number of eggs set from any one female. This transformation was used to convert the number of hatchlings to a percentile value equal to or less than 100.
12. 14-Day Old Survivors of Maximum Set - The number of 14-day old survivors per pen divided by the largest number of eggs set.
13. Egg Shell Thickness - The average egg shell thickness of indiscriminately selected eggs per pen was measured.
14. Offspring's Body Weight - The group body weights of surviving hatchlings and 14-day old survivors were measured by parental pen group.

RESULTS AND DISCUSSION

Mature northern bobwhite received C₆ acid at nominal dietary concentrations of 1000, 5000 or 10,000 ppm for 21 weeks. A control group was maintained concurrently with the treatment groups. Results for the primary groups (tables, figures, and appendices) are presented in Section A of the report. Satellite groups used for blood sampling and consisting of four extra pairs of birds for each treatment group and the control group were also maintained concurrently. Adult and reproduction data for the satellite groups were excluded from analysis as the additional handling and blood sampling may have had an impact on the birds. Data from the blood-sample satellite groups (tables and appendices) are presented in Section B. While not analyzed statistically, data from the satellite groups appeared to be comparable to their respective groups in the reproduction test.

Analytical Results – Avian Diet

None of the control samples showed any indication of the presence of the test substance or of the presence of a co-eluting substance at the characteristic retention time of the test substance. Diet samples were collected from the 1000, 5000 and 10000 ppm test concentrations, and were analyzed to evaluate the homogeneity of the test substance in the diet. Means and standard deviations for the test concentrations were 1080 ± 106 ppm, 5060 ± 184 ppm, and 10920 ± 458 ppm respectively. The coefficients of variation were 9.81%, 3.64% and 4.19%, respectively (Appendix III, Table 4). Samples collected during the test to verify test substance concentrations for the 1000, 5000 and 10000 ppm diets had means and standard deviations of 1050 ± 66.9 ppm, 5450 ± 410 ppm and 10700 ± 611 ppm, respectively. The coefficients of variation were 6.37%, 7.52% and 5.71%. These values represented 105, 109 and 107% of nominal concentrations (Appendix III, Table 5). Analysis of diet samples collected from feeders after being held at ambient temperature for 7 days averaged 100%, 101%, and 100% of the Day 0 values for the 1000, 5000 and 10000 ppm test concentrations, respectively (Appendix III, Table 6). A typical chromatogram of a test sample is shown in Appendix III, Figure 7.

Analytical Results – Avian Blood

None of the control samples showed any indication of the presence of the test substance or of the presence of a co-eluting substance at the characteristic retention time of the test substance. Blood plasma samples were collected from quail fed the 1000, 5000 and 10000 ppm test concentration in avian diet, and were analyzed to evaluate the presence of the test substance in the blood plasma. Means and standard deviations for the test concentrations were 16.3 ± 10.2 ppm, 58.5 ± 37.6 ppm and 97.9 ± 59.9 ppm, respectively. The coefficients of variation were 62.6%, 64.3% and 61.2% (Appendix XII, Table 4). A typical chromatogram of a test sample is shown in Appendix XII, Figure 7.

Mortalities

No mortalities occurred in the 1000 or 5000 ppm primary groups or in any of the blood-sample satellite groups. Two incidental mortalities occurred during the test, one each in the primary control group and primary 10,000 ppm treatment group.

The single mortality in the control group was the female in Pen 216, found dead on Day 3 of Week 10. Prior to death, the bird was observed with a head lesion and exhibited lethargy. At necropsy, the bird was thin, with a body weight of 149 g. Externally, there was a laceration on the dorsal surface of the head

- 26 -

and neck, the margins were necrotic, and the cranium and neck muscles were exposed. Internally, the spleen and kidneys were pale, the gizzard contents were bile-stained and the cecal contents pasty. The remainder of the gastrointestinal tract was primarily empty. The ovary was noted as slightly developed, but it was considered not remarkable for the phase of the study. No other lesions were noted and necropsy of the female's penmate was not remarkable.

The single mortality in the 10,000 ppm treatment group was the male in Pen 249, found dead on Day 7 of Week 17. No clinical signs were observed prior to death. At necropsy the bird weighed 199 g. Externally, there were no remarkable findings. Internally, the neck was fractured at vertebrae C3 and C4, with a hematoma at the site of the fracture. There were small areas of intracranial bleeding throughout the skull and a small (approximately 0.5 cm) bruise in the mid-chest. Necropsy of the male's penmate showed a small area of intracranial bleeding in the back-left quadrant of the skull, but was otherwise unremarkable.

The first mortality was not related to treatment as it was in the control group. Due to the nature of the lesions observed at necropsy, the mortality in the 10,000 ppm treatment group was not considered to be related to treatment.

Clinical Observations

No overt signs of toxicity were observed at any of the concentrations tested. Incidental clinical observations noted during the test included those that normally are associated with injuries and pen wear. Such signs included lesions on the head, vent, legs and feet, feather loss and a limb deviation. Clinical signs observed included ataxia, lameness and a ruffled appearance, but were typically associated with the incidental injuries. Two birds sustained leg fractures during body weight procedures. The affected legs were bandaged and the birds recovered.

During Week 13 the female in the control group (Pen 201) was observed with a head lesion on Day 0 and on Day 4 the male was observed showing aggressive behavior towards the female. Due to the severity the female's head lesion, a laceration on the head was sutured closed and the pair was housed in separate pens on Day 0 of Week 16. Periodically, during the remainder of the adult exposure phase the male was returned to the pen with the female for mating (Appendix IV). However, the male continued to show overly aggressive behavior on two of those conjugal visits. Statistical analysis of data from this pen

- 27 -

was handled as if mortality had occurred on Day 0 of week 16. Otherwise, all birds were noted as normal in appearance and behavior throughout the study (Appendix IV).

Gross Necropsy

All surviving adults were subjected to gross necropsy following adult termination. All findings were considered to be unrelated to treatment. Necropsy findings are reported in Table 7 and Appendix XV.

Adult Body Weight

There were no apparent treatment-related effects upon adult body weight at any of the concentrations tested. No statistically significant differences between the control group and the 1000, 5000 or 10,000 ppm treatment groups were observed at any of the body weight intervals. Mean body weight measurements are presented in Table 1, and Figures 1 and 2. Individual body weight measurements are presented in Appendix V.

Adult Feed Consumption

There were no apparent treatment-related effects upon feed consumption at the 1000, 5000 and 10,000 ppm test concentrations. No statistically significant differences between the control group and 1000 or 5000 ppm treatment groups were observed at any of the feed consumption intervals. There were increases in feed consumption in the 10,000 ppm treatment group during Weeks 4 and 7 that were statistically significant at $p < 0.05$. However, the differences were not considered to be related to treatment since they were slight and not consistent over time. Mean feed consumption measurements are shown in Table 2 and Figure 3. Feed consumption measurements by pen are presented in Appendix VI.

Estimated test substance intakes, daily dietary dose, for northern bobwhite were calculated by treatment group for the pre-egg production period, the egg production period and the overall adult period using the following formula:

$$\text{Daily Dietary Dose (mg/kg body weight/day)} = \frac{\text{Test Concentration (mg/kg)} \times \text{Daily Feed Consumption (g/bird/day)}}{\text{Body Weight (g/bird)}}$$

The mean body weight value is the mean of both male and female body weights. For the pre-egg production interval the body weights were averaged over Weeks 0, 2, 4, 6 and 8. For the egg-production interval body weights were averaged over Weeks 8 and 21 (adult termination). The accuracy of the estimated mean daily dietary dose may be impacted by differences in individual feed consumption, both within and between pens, and feed wastage. The estimated daily dietary doses are presented in the table below.

Estimated Maximum Mean Daily Dietary Dose of C₆ Acid (mg/kg body weight/day)

Test Interval (test weeks)	Test Concentration (ppm)	Mean Body Weight (g)	Mean Feed Consumption (g/bird/day)	Estimated Daily Dietary Dose ¹ (mg/kg/day)
Pre-Egg Production (Weeks 1 - 10)	0	194	14	0.0
	1000	197	14	71.2
	5000	197	14	358
	10,000	193	15	758
Egg Production (Weeks 11 - 21)	0	209	22	0
	1000	215	22	104
	5000	214	22	523
	10,000	208	23	1104
Overall (Weeks 1 - 21)	0	198	18	0
	1000	202	18	91.2
	5000	201	18	457
	10,000	197	19	964

¹Results were generated using Excel 2000 in full precision mode. Manual calculations may differ slightly.

Reproductive Results

There were no treatment-related effects upon reproductive performance at any of the concentrations tested. When compared to the control group, there were no statistically significant differences in any of the reproductive parameters measured in the 1000, 5000 or 10,000 ppm treatment groups. Summaries of the reproductive data are presented in Tables 3 and 4, and in Figures 4 and 5. Reproductive parameters by pen are presented in Appendices VII and VIII.

- 29 -

Egg Shell Thickness

There were no apparent treatment related effects upon egg shell thickness at any of the concentrations tested. When compared to the control group, there were no statistically significant differences in egg shell thickness in the 1000, 5000 or 10,000 ppm treatment groups. Egg shell thickness data are presented in Table 5 and Appendix IX.

Offspring Body Weights

There were no apparent treatment related effects upon offspring body weight at any of the concentrations tested. When compared to the control group, there were no statistically significant differences in the body weight of hatchlings or 14-day old survivors from the 1000, 5000 or 10,000 ppm treatment groups. Offspring body weight data are presented in Table 6, and Appendices X and XI.

CONCLUSION

There were no treatment-related mortalities, overt signs of toxicity or treatment-related effects upon body weight or feed consumption at any of the concentrations tested. Additionally, there were no treatment-related effects upon any of the reproductive parameters measured at the 1000, 5000 or 10,000 ppm test concentrations. The no-observed-effect concentration for northern bobwhite exposed to C₆ acid in the diet during the study was 10,000 ppm (964 mg/kg/day), the highest concentration tested.

REFERENCES

- 1 **U.S. Environmental Protection Agency.** 1982. *Pesticide Assessment Guidelines, FIFRA Subdivision E, Hazard Evaluation: Wildlife and Aquatic Organisms*, subsection 71-4, Environmental Protection Agency, Office of Pesticide Programs. Washington, D.C.
- 2 **Organization for Economic Cooperation and Development.** 1984. *Avian Reproduction Test*. OECD Guideline for Testing of Chemicals. Guideline 206. Paris.
- 3 **American Society for Testing and Materials.** 1986. *Standard Practice for Conducting Reproductive Studies with Avian Species*. ASTM Standard E1062-86. Annual Book of ASTM Standards. Vol. 11.04. Philadelphia, PA. 15 pp.
- 4 **U.S. Environmental Protection Agency.** 1996. Series 850-Ecological Effects Test Guidelines (*draft*), OPPTS Number 850.2300: *Avian Reproduction Test*.
- 5 **Merck & Co., Inc.** 1998. *The Merck Veterinary Manual*. Eighth Edition. Merck & Co. Whitehouse Station, NJ. 2305 pp.
- 6 **National Research Council.** 1996. *Guide for the Care and Use of Laboratory Animals*. Washington, DC. National Academy Press. 125 pp.
- 7 **Dunnett, C.W.** 1955. A Multiple Comparisons Procedure for Comparing Several Treatments with a Control. *Jour. Amer. Statis. Assoc.* 50: 1096-1121.
- 8 **Dunnett, C.W.** 1964. New Tables for Multiple Comparisons with a Control. *Biometrics* 20: 482-491.

- 31 -

SECTION A

Results Tables and Figures for the Primary Reproduction Test

Results Appendices for the Primary Reproduction Test

and

Informational Appendices in Common with the Blood Sample Satellite Groups

- 32 -

Table 1

Mean Adult Body Weight (g) from a Northern Bobwhite Reproduction Study with C6 Acid¹

Experimental		Week 0	Change	Week 2	Change	Week 4	Change	Week 6	Change	Week 8	Change	Test	Total
Group	Sex	Week 0-2	Week 0-2	Week 2-4	Week 2-4	Week 4-6	Week 4-6	Week 6-8	Week 6-8	Week 8-Term	Week 8-Term	Term	Change
Control	Male	191	2	192	3	195	4	199	1	200	2	202	11
	Female	190	1	191	2	192	3	195	3	198	36	233	43
1000	Male	193	0	193	4	197	4	201	5	206	4	210	16
	Female	191	1	192	3	195	2	198	3	201	41	241	51
5000	Male	193	2	194	3	197	3	200	6	205	2	207	14
	Female	191	2	193	3	196	2	198	5	202	38	241	49
10000	Male	188	1	189	3	192	3	196	4	200	3	203	14
	Female	189	1	190	3	192	2	194	2	196	34	231	42

The means for body weights and body weight changes are calculated and rounded separately.

Differences between control and each treatment group were not significant ($p > 0.05$).

¹ Only surviving birds were included in the calculations for each body weight interval.

- 33 -

Figure 1
 Mean Adult Male Body Weight (g) from a Northern Bobwhite
 Reproduction Study with C6 Acid

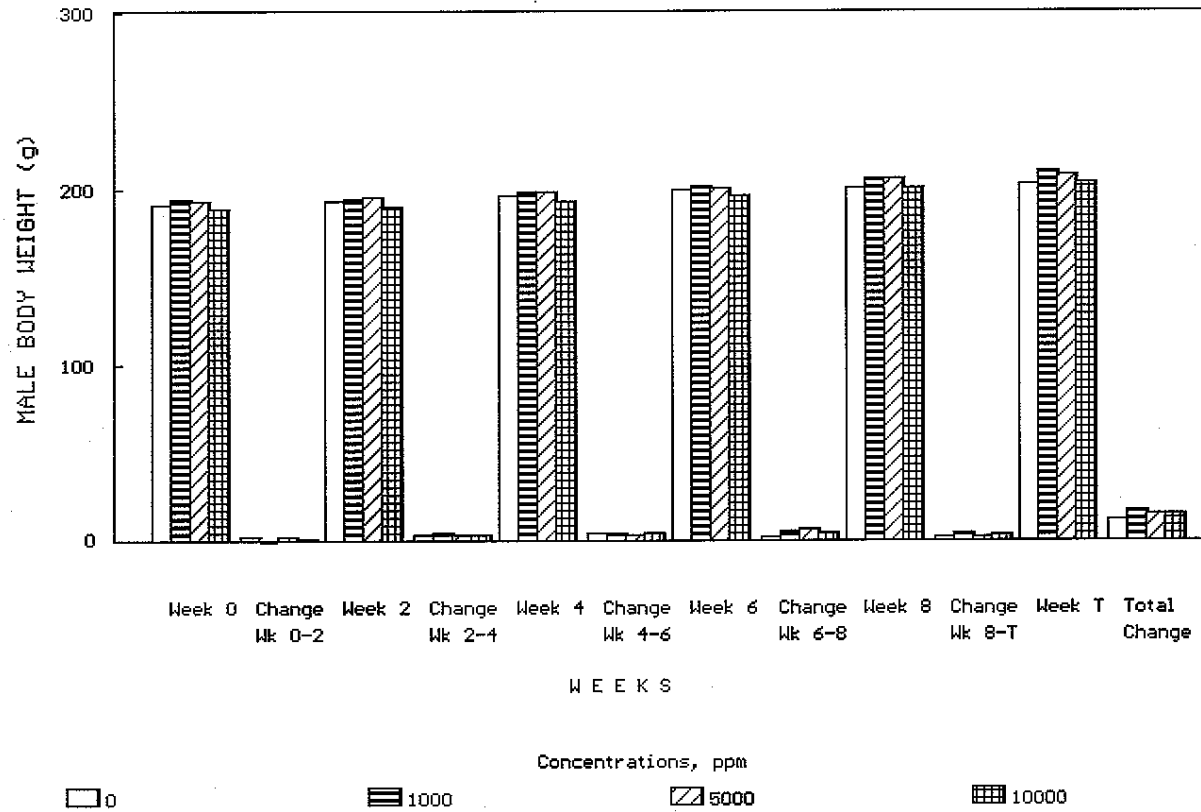
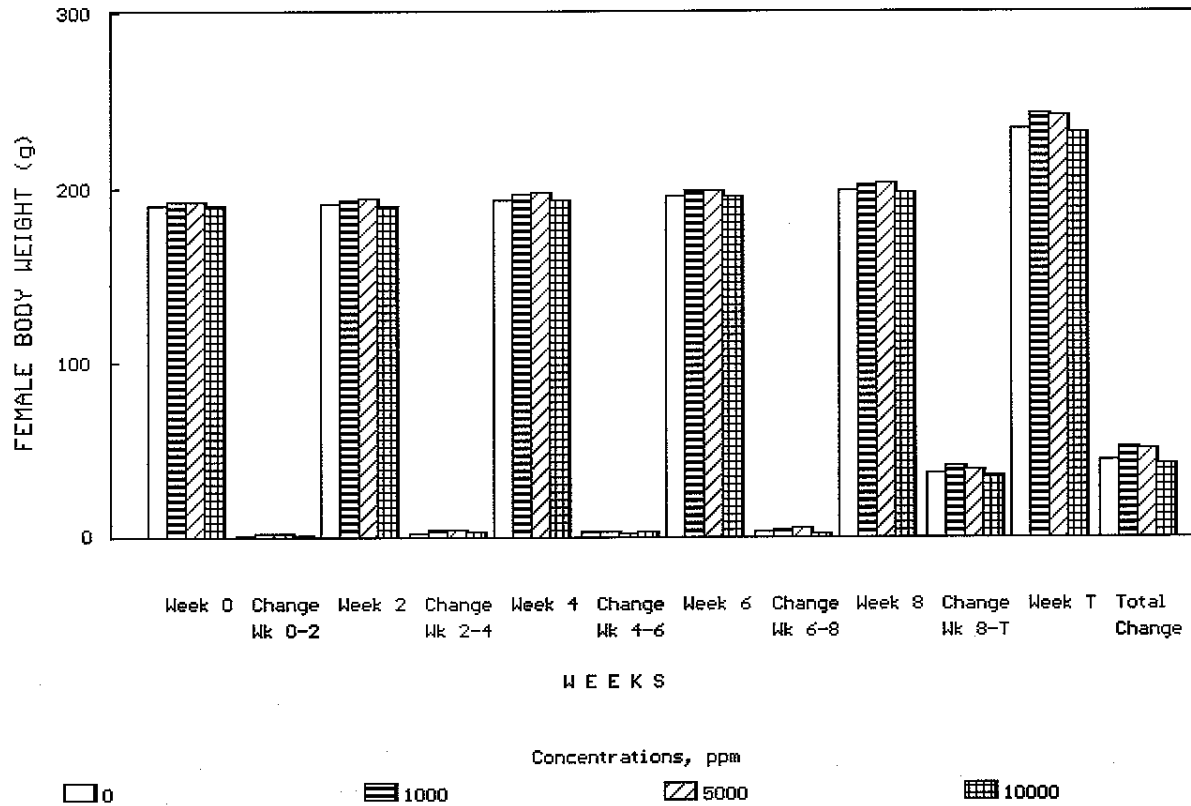


Figure 2
 Mean Adult Female Body Weight (g) from a Northern Bobwhite
 Reproduction Study with C6 Acid



- 35 -

Table 2

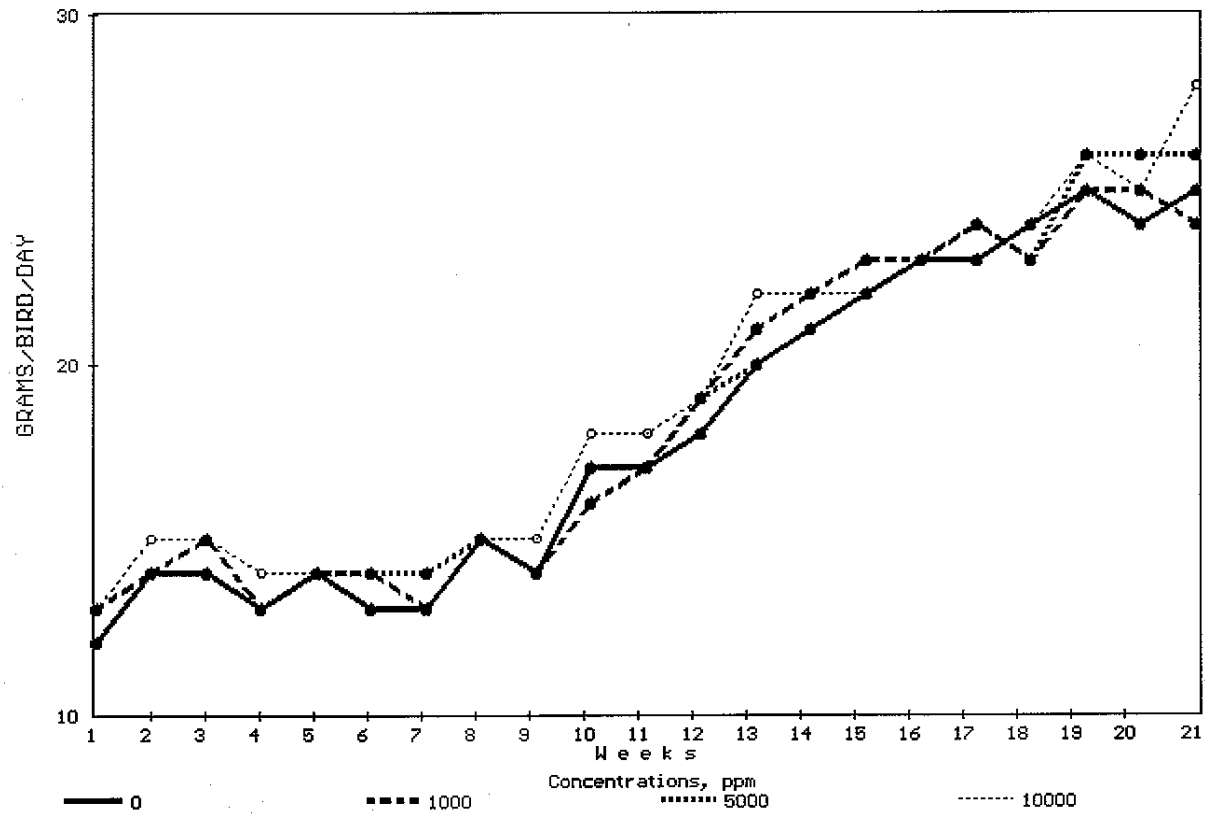
Mean Feed Consumption (g/bird/day) from a Northern Bobwhite Reproduction Study with C6 Acid

Experimental Group (ppm)	W E E K S																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Control	12	14	14	13	14	13	13	15	14	17	17	18	20	21	22	23	23	24	25	24	25
1000	13	14	14	13	14	14	13	15	14	16	17	19	21	22	23	23	24	23	25	25	24
5000	12	14	14	13	14	14	14	15	14	17	16	19	20	21	22	23	24	23	26	26	26
10000	13	15	15	14*	14	14	14*	15	15	17	18	19	22	22	22	23	23	24	26	25	28

* Significantly different from the control at $p < 0.05$

- 36 -

Figure 3
Mean Feed Consumption (g/bird/day) from a Northern Bobwhite
Reproduction Study with C6 Acid



- 37 -

Table 3

**Summary of Reproductive Performance from a Northern Bobwhite Reproduction Study with
C6 Acid**

Reproductive Parameter	Experimental Group (ppm)			
	Control	1000	5000	10000
Number of Replicates	14	16	16	15
Total Eggs Laid	684	854	758	664
Eggs Cracked	7	22	28	11
Eggs Set	612	745	646	583
Viable Embryos	579	707	598	554
Live 3-Week Embryos	577	706	598	553
Hatchlings	526	652	546	496
14-Day Old Survivors	486	595	483	425
Eggs Laid/Hen	49	53	47	44
Eggs Laid/Hen/Day ¹	0.50	0.55	0.49	0.46
14-Day Old Survivors/Hen	35	37	30	28

¹ Based on 97 days of eggs production.

- 38 -

Figure 4
 Mean Reproductive Performance from a Northern Bobwhite
 Reproduction Study with C6 Acid

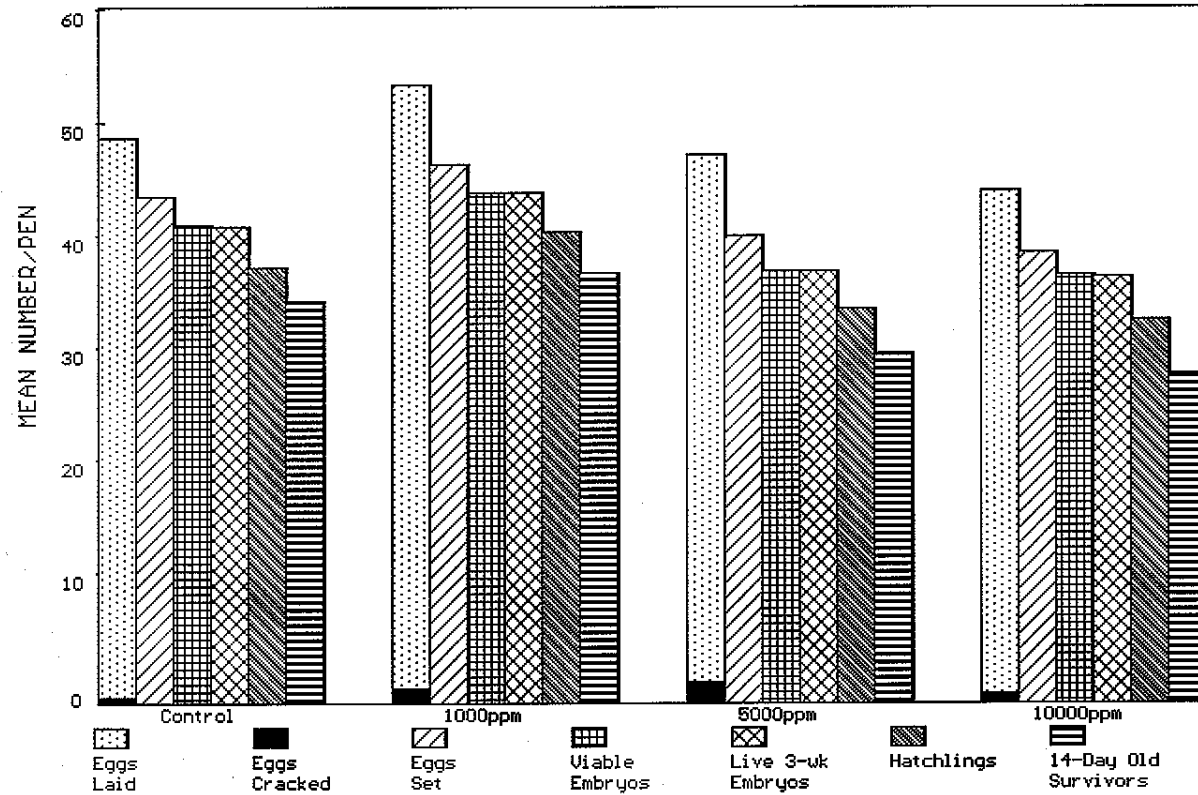


Table 4
Summary of Reproductive Performance, Normalized as Percentages (%)
from a Northern Bobwhite Reproduction Study with C6 Acid¹

Reproductive Parameter	Experimental Group (ppm)			
	Control	1000	5000	10000
Number of Replicates	14	16	16	15
Total Eggs Laid ²	684	854	758	664
Eggs Laid/Maximum Laid (%)	69	75	67	62
Eggs Cracked/Eggs Laid (%)	1	3	3	2
Viable Embryos/Eggs Set (%)	95	95	92	95
Live 3-Week Embryos/Viable Embryos (%)	100	100	100	100
Hatchlings/Live 3-Week Embryos (%)	93	92	92	90
14-Day Old Survivors/Hatchlings (%)	92	91	89	85
Hatchlings/Eggs Set (%)	88	87	84	85
14-Day Old Survivors/Eggs Set (%)	81	80	75	72
Hatchlings/Maximum Set (%)	60	65	54	53
14-Day Old Survivors/Maximum Set (%)	55	59	48	45

Differences between the control and each treatment groups were not significant ($p > 0.05$).

¹ Values represent pen means for experimental group. Values for each pen are presented in Appendices VII and VIII.

² Represents the total number of eggs laid in each group.

- 40 -

Figure 5
 Mean Reproductive Performance, Normalized as Percentages (%),
 from a Northern Bobwhite Reproduction Study with C6 Acid

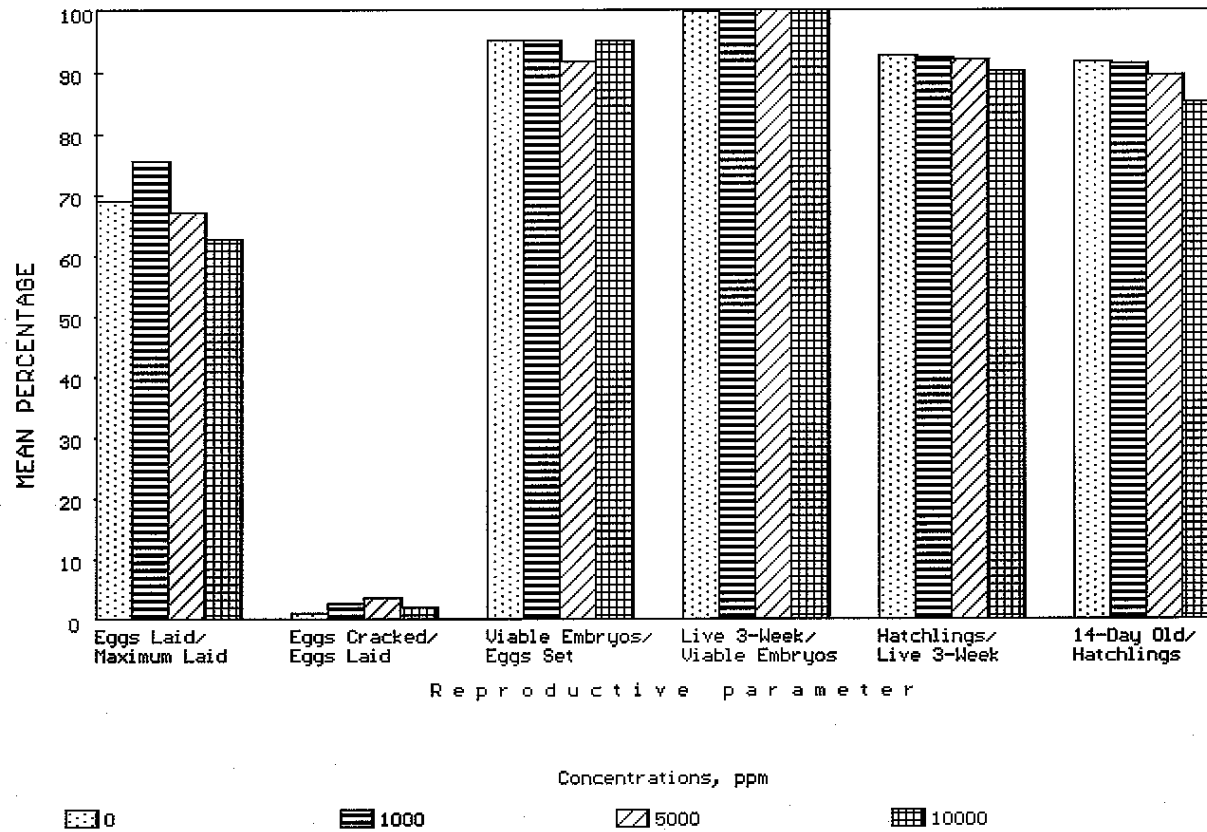


Table 5
Mean Eggshell Thickness Measurements (mm)
from a Northern Bobwhite Reproduction Study with C6 Acid

Experimental Group (ppm)	No. Eggs Measured	Shell Thickness Mean (\pm SD)
Control	60	0.229 \pm 0.014
1000	74	0.234 \pm 0.016
5000	73	0.224 \pm 0.017
10000	66	0.227 \pm 0.018

Differences between the control and each treatment groups were not significant ($p > 0.05$).

Table 6

**Mean Body Weight (g) of Hatchlings and 14-Day Old Survivors
from a Northern Bobwhite Reproduction Study with C6 Acid**

Experimental Group (PPM)	Hatchlings		14-Day Old Survivors	
	Number	Mean (± SD)	Number	Mean (± SD)
Control	524	6 ± 0	486	27 ± 3
1000	649	6 ± 0	595	27 ± 1
5000	545	6 ± 1	483	27 ± 2
10000	487	6 ± 0	425	25 ± 2

The number of hatchlings weighed may differ from the total number of hatchlings since those hatchlings found dead were not weighed.

Differences between the control and each treatment group were not significant ($p > 0.05$).

- 43 -

Table 7
Summary of Gross Pathological Observations
from a Northern Bobwhite Reproduction Study with C6 Acid

Adult Birds Euthanized at Termination of the Test
Regular Reproduction Test Groups

	Males - Treatment Group (ppm)				Females - Treatment Group (ppm)			
	Control	1000	5000	10,000	Control	1000	5000	10,000
Number of birds	15	16	16	15	15	16	16	15
External - feather loss	3	2	1	2	2	5	6	3
External - head lesion	0	0	0	0	0	1	1	1
External - vent lesions	0	0	0	0	1	0	0	0
External - pasty vent	0	0	0	0	1	0	0	0
External - foot lesions	0	1	0	0	2	1	1	1
Liver - mottled	0	0	0	1	0	0	0	0
Liver - pale	0	1	0	1	0	0	0	0
Liver - subcapsular hematoma	0	0	0	0	0	0	0	2
Spleen - mottled	0	0	0	1	0	0	0	0
Spleen - pale	0	1	0	0	1	1	0	0
Gastrointestinal tract - hematoma in small intestine	0	0	0	0	0	0	1	0
Urinary - kidney(s) mottled	0	0	0	0	0	1	0	1
Urinary - kidney(s) pale	0	0	0	0	0	2	0	0
Urinary - whitish plaques in ureter	0	0	0	1	0	0	0	0
Abdominal cavity - egg remnants	-	-	-	-	0	0	1	0
Abdominal cavity - intra-abdominal egg	-	-	-	-	0	0	1	0
Abdominal cavity - egg yolk peritonitis	-	-	-	-	1	1	0	1
Reproductive - cystic follicles	-	-	-	-	0	1	0	0
Reproductive - ovary regressing	-	-	-	-	0	0	0	1
Reproductive - ovary regressed	-	-	-	-	1	0	0	0
Reproductive - testes small (≤ 1.5 cm)	0	2	0	2	-	-	-	-
Reproductive - left testis small (≤ 1.5 cm)	0	1	2	3	-	-	-	-
Reproductive - right testis small (≤ 1.5 cm)	5	6	12	10	-	-	-	-
Not remarkable	8	4	4	1	10	6	8	9

- 44 -

Appendix I
Diet and Supplement Formulations

Table 1
Diet Formulation
WILDLIFE INTERNATIONAL, LTD. GAME BIRD RATION¹

INGREDIENTS	PERCENT (%)
Fine Corn Meal	42.86
Soy Bean Meal, 47.5% Protein	33.39
Wheat Midds	6.48
Agway Special, 60% Protein	9.96
Alfalfa Meal, 20% Protein	3.00
Dried Whey	2.50
Ground Limestone	0.62
Eastman CalPhos	0.11
GL Ferm (Fermatco) ²	0.25
Salt Iodized	0.10
CM T-Premix 561	0.05
CM TM Premix 434	0.08
CHO CHL 70%	0.09
Liquimeth 40%	0.25
Lysine 75%	0.06
DL Methionine 055	0.10
Vit K 16 g/lb 50#	0.05
Selenium	0.05
Total	100.00
VITAMIN AND MINERAL CONTENT	AMOUNT ADDED PER POUND
Vitamin D ₃	0.600 kiu/lb
Vitamin A	2.000 kiu/lb
Riboflavin	2.1992 mg/lb
Niacin	21.6932 mg/lb
Pantothenic Acid	5.2241 mg/lb
Vitamin B ₁₂	6.0000 ug/lb
Folic Acid	0.5169 mg/lb
Biotin	65.9360 ug/lb
Pyridoxine	1.4639 mg/lb
Thiamine	0.9200 mg/lb
Vitamin E	5.0000 iu/lb
Vitamin K (Menadione Dimethylpyrimidinol Bisulfite)	3.2400 mg/lb
Manganese	115.0203 mg/kg
Zinc	194.6601 mg/kg
Copper	24.3007 mg/kg
Iodine	2.4410 mg/kg
Iron	150.4117 mg/kg
Selenium	0.4749 mg/kg
Beta-Carotene	1.1413 mg/lb
Calcium	0.9750 %
Chloride	0.2164 %
Choline	1882.4116 mg/kg
Cobalt	0.1139 mg/kg
Magnesium	0.2503 %
Phos 30	0.3908 %
Phos 50	0.4719 %
Potassium	1.1148 %
Sodium	0.1335 %
Sulfur	0.3478 %
Phosphorus	0.6800 %
Ca:PHOS	1.4338 ratio

¹ The guaranteed analysis is a minimum of 27% protein, a minimum of 2.5% crude fat and a maximum of 3.8% crude fiber.

² Fermentation By-Products (Source of Unidentified Growth Factors)

- 45 -

Appendix I
Diet and Supplement Formulations

Table 2
Vitamins and Electrolytes Concentrate

Water Soluble Powder		
GUARANTEED ANALYSIS	<u>Per 4 oz.</u>	<u>Per lb.</u>
Vitamin A	2,500,000	10,000,000 IU
Vitamin D	1,000,000	4,000,000 ICU
Vitamin E	1,000	4,000 IU
Riboflavin	750	3,000 Mg
d-Pantothenic Acid	1,250	5,000 Mg
Niacin	2,500	10,000 Mg
Vitamin B-12	2.5	10.0 Mg
MSBC	1,000	4,000 Mg
Folic Acid	65	260 Mg
Thiamine HCl	250	1,000 Mg
Pyridoxine Hydrochloride	250	1,000 Mg
Ascorbic Acid	3,750	15,000 Mg

INGREDIENTS:

Vitamin A Supplement, D-Activated Animal Sterol (source of Vitamin D₃), Alpha Tocopheryl Acetate (source of Vitamin E). Riboflavin Supplement, d-Calcium Pantothenate, Niacin Supplement, Vitamin B-12 Supplement, Menadione Sodium Bisulfite (source of Vitamin K), Folic Acid, Thiamine HCl, Pyridoxine Hydrochloride, Ascorbic Acid, Sodium Chloride, Calcium Chloride, Magnesium Sulfate, Ferric Ammonium Citrate, Potassium Chloride and Dextrose.

MIXING PROCEDURE:

The vitamin and electrolyte mix was prepared as a ration of approximately 2 grams of Durvet vitamins and electrolytes to approximately 1 gallon of water.

- 46 -

Appendix II
Diet Preparation

Premixes for C₆ acid were prepared on October 6, 2009; October 30, 2009; December 1, 2009; December 24, 2009; January 21, 2010 and February 20, 2010. Nominal preparation was as follows:

1000 ppm:	48.6000 g C ₆ acid + 8051.4 g ration
5000 ppm:	243.000 g C ₆ acid + 7857.0 g ration
10,000 ppm:	486.0 g C ₆ acid + 7614.0 g ration

For each of the premixes, the appropriate amount of C₆ acid was weighed in a tared beaker on an analytical balance (1000 and 5000 ppm levels) or a top-loading balance (10,000 ppm level). Approximately half of the needed amount of basal ration was weighed into a tared mixing bowl on a top-loading balance. A portion of the weighed basal ration was set-aside for later use (retained ration). The C₆ acid was transferred into the mixing bowl. The beaker was rinsed three times with some of the retained ration, with the rinsate also added to the bowl. The contents were mixed for approximately five minutes on a Hobart mixer. The remaining amount of basal ration needed was weighed on a top-loading balance and added to the mixing bowl. Mixing then continued for an additional 15 minutes. After mixing, aliquots of the premix were weighed on a top-loading balance. Premixes were placed in appropriately labeled plastic bags, reweighed and stored frozen.

As needed, the appropriate premix was incorporated into the final diet as follows:

0 ppm:	11.4 kg ration + 600 g limestone
1000 ppm:	2000 g Premix + 9.4 kg ration + 600 g limestone
5000 ppm:	2000 g Premix + 9.4 kg ration + 600 g limestone
10,000 ppm:	2000 g Premix + 9.4 kg ration + 600 g limestone

The diet was mixed for approximately 20 minutes in a Patterson-Kelley® Twin Shell Blender.

- 47 -

Appendix III

The Analysis of C₆ Acid in Avian Diet

- 48 -

Appendix III

Table 1

Typical LC/MS Operational Parameters

INSTRUMENT:	Agilent Series 1100 High Performance Liquid Chromatograph with a Perkin-Elmer SCIEX API 100 Mass Spectrometer equipped with a Perkin-Elmer SCIEX TurboIonSpray ion source
ANALYTICAL COLUMN:	Thermo, Betasil C-8 column (50 mm × 2.1 mm I.D., 5- μ m particle size)
GUARD COLUMN:	Thermo, Betasil C-8 column (20 mm × 2.1 mm I.D.)
OVEN TEMPERATURE:	40°C
STOP TIME:	5.00 minutes
FLOW RATE:	250 μ L/minute
MOBILE PHASE:	Channel A: 0.1% Formic Acid :50% Channel B: Acetonitrile:50%
INJECTION VOLUME:	10.0 μ L
C ₆ ACID RETENTION TIME:	Approximately 2.5 minutes
C ₆ ACID MONITORED MASS:	312.8 amu

Appendix III

Table 2

Examples of Equations Used in Calculations

The concentration of C₆ acid found at the instrument was determined using the following equation:

$$\text{C}_6 \text{ acid concentration found at the instrument (}\mu\text{g/mL)} = \frac{\text{Peak area response} - (\text{y-intercept})}{\text{Slope}}$$

Determination of Sample Residues (C₆ acid)

The concentration expressed as ppm for each sample was determined using the following equation:

$$\text{C}_6 \text{ acid found in sample (ppm)} = \frac{\text{C}_6 \text{ acid found at the instrument (}\mu\text{g/mL)} \times \text{Initial volume (mL)} \times \text{Final dilution}}{\text{Blank diet weight (g)}}$$

$$\text{LOQ} = \frac{\text{Concentration of lowest standard (}\mu\text{g/mL)} \times \text{Initial volume (mL)} \times \text{Final dilution}}{\text{Blank diet weight (g)}}$$

Fortification Recoveries

The ppm found in each sample is divided by the nominal concentration of each sample (fortified level, ppm). This ratio times 100 is the percent recovery of the method at that level of fortification.

$$\% \text{ Recovery} = \frac{\text{ppm found for each sample}}{\text{ppm fortified for each sample}} \times 100$$

- 50 -

Appendix III

Table 3

Matrix Blanks and Fortifications Analyzed Concurrently with the Samples

Number (632-102-)	Sample		Concentration of C ₆ Acid (ppm)		Percent Recovery	Mean Percent Recovery
	Type	Interval	Fortified	Measured ¹		
MAB-1	Matrix Blank	Day 0, Week 1	0	< LOQ	-	
MAS-1	Matrix Fortification	Day 0, Week 1	100	101	101	107
MAS-2	Matrix Fortification	Day 0, Week 1	12000	13400	111	
MAB-2	Matrix Blank	Day 7, Week 1 Day 0, Week 2	0	< LOQ		
MAS-3	Matrix Fortification	Day 7, Week 1 Day 0, Week 2	100	104	104	106
MAS-4	Matrix Fortification	Day 7, Week 1 Day 0, Week 2	1200	1300	109	
MAB-3	Matrix Blank	Day 0, Week 3	0	< LOQ		
MAS-5	Matrix Fortification	Day 0, Week 3	100	112	112	111
MAS-6	Matrix Fortification	Day 0, Week 3	1200	13200	110	
MAB-5	Matrix Blank	Day 0, Week 4	0	< LOQ		
MAS-9	Matrix Fortification	Day 0, Week 4	100	107	107	108
MAS-10	Matrix Fortification	Day 0, Week 4	1200	13100	109	
MAB-6	Matrix Blank	Day 0, Week 8 & 12	0	< LOQ		
MAS-11	Matrix Fortification	Day 0, Week 8 & 12	100	97.3	97	99
MAS-12	Matrix Fortification	Day 0, Week 8 & 12	1200	11900	100	

¹The method limit of quantitation (LOQ) for these analyses was set at 20 ppm based upon product of the lowest analytical standard 0.01 µg/mL and the dilution factor (2000) of the matrix blank extract.

- 51 -

Appendix III

Table 3 (continued)

Matrix Blanks and Fortifications Analyzed Concurrently with the Samples

Number (632-102-)	Sample		Concentration of C ₆ Acid (ppm)		Percent Recovery	Mean Percent Recovery
	Type	Interval	Fortified	Measured ¹		
MAB-7	Matrix Blank	Day 0, Week 16 & 20	0	< LOQ	-	
MAS-13	Matrix Fortification	Day 0, Week 16 & 20	100	107	107	106
MAS-14	Matrix Fortification	Day 0, Week 16 & 20	12000	12400	104	

¹The method limit of quantitation (LOQ) for these analyses was set at 20 ppm based upon product of the lowest analytical standard 0.01 µg/mL and the dilution factor (2000) of the matrix blank extract.

- 52 -

Appendix III

Table 4

Homogeneity of C₆ Acid in Avian Diet

Nominal Concentration (ppm)	Sample I.D. Number (632-102-)	Location Sampled In Mixing Vessel	C ₆ Acid Concentration		Mean Measured Standard Deviation (SD) Coefficient of Variation (CV)	Mean Percent of Nominal
			Measured ¹	(ppm)		
1000	2	Top Left	950	$\bar{x} = 1080$ SD = 106 CV = 9.81%	108	
	3	Top Right	1010			
	4	Middle Left	1060			
	5	Middle Right	1040			
	6	Bottom Left	1230			
	7	Bottom Right	1180			
	5000	8	Top Left			5010
9		Top Right	4970			
10		Middle Left	5360			
11		Middle Right	4810			
12		Bottom Left	5100			
13		Bottom Right	5130			
10000	14	Top Left	10600	$\bar{x} = 10920$ SD = 458 CV = 4.19%	109	
	15	Top Right	11000			
	16	Middle Left	10600			
	17	Middle Right	11400			
	18	Bottom Left	10400			
	19	Bottom Right	11500			

¹Measured values were not corrected for mean procedural recoveries based on sample sets (see Table 3).

Appendix III

Table 5

Verification of C₆ Acid Concentrations in Avian Diet

Nominal Concentration (ppm)	Sample I.D. Number (632-102)	Interval (Day 0 of Week -)	C ₆ Acid Concentration		Percent of Nominal	Mean Percent of Nominal
			Measured ^{1,2} (ppm)	Mean Measured Standard Deviation (SD) Coefficient of Variation (CV)		
0	1	1	< LOQ			
	27	2	< LOQ			
	34	3	< LOQ			
	41	4	< LOQ			
	48	8	< LOQ			
	55	12	< LOQ			
	62	16	< LOQ			
	69	20	< LOQ			
	1000	28	2			
29		2	1110			
35		3	1120			
36		3	1050 ³			
42		4	1060			
43		4	1090			
49		8	1060			
50		8	1150			
56		12	1040			
57		12	1050			
63		16	986			
64		16	979			
70		20	909			
71	20	1000				

¹The method limit of quantitation (LOQ) for these analyses was set at 20 ppm based upon product of the lowest analytical standard 0.01 µg/mL and the dilution factor (2000) of the matrix blank extract.

²Measured values were not corrected for mean procedural recoveries based on sample sets (see Table 3).

³The mean of two extractions reported (1060,1030)

Appendix III

Table 5 (continued)

Verification of C6 Acid Concentrations in Avian Diet

Nominal Concentration (ppm)	Sample I.D. Number (632-102)	Interval (Day 0 of Week -)	C ₆ Acid Concentration		Percent of Nominal	Mean Percent of Nominal
			Measured ^{1,2} (ppm)	Mean Measured Standard Deviation (SD) Coefficient of Variation (CV)		
5000	30	2	5410	\bar{x} = 5450 SD = 410 CV = 7.52	108	109
	31	2	5330		107	
	37	3	5690		114	
	38	3	5700		114	
	44	4	5480		110	
	45	4	5810		106	
	51	8	5740		115	
	52	8	5230		105	
	58	12	5490		110	
	59	12	5250		105	
	65	16	4960		99	
	66	16	6380		128	
	72	20	5360		107	
	73	20	4560		91	

¹The method limit of quantitation (LOQ) for these analyses was set at 20 ppm based upon product of the lowest analytical standard 0.01 µg/mL and the dilution factor (2000) of the matrix blank extract.

²Measured values were not corrected for mean procedural recoveries based on sample sets (see Table 3).

Appendix III

Table 5 (continued)

Verification of C₆ Acid Concentrations in Avian Diet

Nominal Concentration (ppm)	Sample I.D. Number (632-102)	Interval (Day 0 of Week -)	C ₆ Acid Concentration		Percent of Nominal	Mean Percent of Nominal
			Measured ^{1,2} (ppm)	Mean Measured Standard Deviation (SD) Coefficient of Variation (CV)		
10000	32	2	11300	\bar{x} = 10700 SD = 611 CV = 5.71	113	107
	33	2	10200			
	39	3	11300			
	40	3	11400			
	46	4	10800			
	47	4	10100			
	53	8	10700			
	54	8	11100			
	60	12	9960			
	61	12	11500			
	67	16	10100			
	68	16	9580			
	74	20	10700			
	75	20	10400			

¹The method limit of quantitation (LOQ) for these analyses was set at 20 ppm based upon product of the lowest analytical standard 0.01 µg/mL and the dilution factor (2000) of the matrix blank extract.

²Measured values were not corrected for mean procedural recoveries based on sample sets (see Table 3).

Appendix III

Table 6

Ambient Stability of C₆ Acid in Avian Diet During the Northern Bobwhite Reproduction Study

Nominal Concentration (ppm)	Sample Number (632-102-)	C ₆ Acid Concentration					
		Week 1, Day 0 ¹		Week 1, Day 7			
		Mean Measured ^{2,3} (ppm)	Mean Percent of Nominal	Sample Number (632-102-)	Measured ^{2,3} (ppm)	Mean Measured	Mean Percent of Day 0
0	1	< LOQ		20	< LOQ		
1000	2-7	1080	108	21 22	1080 1070 ⁴	1080	100
5000	8-13	5060	101	23 24	5280 ⁴ 4970 ⁴	5130	101
10000	14-19	10920	109	25 26	10750 ⁴ 11000	10880	100

¹Day 0 values are from homogeneity samples presented in Table 4 and verification samples presented in Table 5.

²The method limit of quantitation (LOQ) for these analyses was set at 20 ppm based upon product of the lowest analytical standard 0.01 µg/mL and the dilution factor (2000) of the matrix blank extract.

³Measured values were not corrected for mean procedural recoveries based on sample sets (see Table 3).

⁴Mean of two extractions reported (1100,1040), (5130,5430), (5330,4610) and (10200,11300)

- 57 -

Appendix III

Matrix Fortification

A known amount of test substance was weighed into a beaker to prepare the high-level matrix fortification. Approximately 100 g of basal ration (minus the weight of the test substance) was weighed and half was added to a 600 mL beaker. The beaker containing the test substance was rinsed with the remaining basal ration transferring all rinsates to the 600 mL beaker. The sample was mixed well and transferred to a blender. The sample was then mixed in the blender for ~3 minutes. The blender was stopped at 1-minute intervals to scrape down the sides. The low-level matrix fortification was prepared in a similar manner using a known amount of the high-level matrix and basal ration.

Extraction

1. Weigh Z5.00 grams of avian feed into 8 oz. French square bottles (or equivalent).
2. Add 100 mL of methanol using a graduated cylinder (or equivalent) to each sample. Then place on a tabletop shaker and shake at ~250 rpm for ~60 minutes.
3. Transfer an aliquot to a scintillation vial (~20 mL), and then centrifuge at ~1500 rpm for ~10 minutes.
4. Dilute sample with methanol:0.1% formic acid (50:50) using class A volumetric flask and pipettes, or gas tight syringes.

Samples with concentrations of 0 to 100 ppm, dilute 0.100 mL to 10.0 mL.

Samples with concentrations of 1000 ppm, dilute 0.100 mL to 5.00 mL then 0.500 mL to 10.0 mL.

Samples with concentrations of 5000 ppm, dilute 0.100 mL to 5 mL then 0.100 mL to 10.0 mL

Samples with concentrations of 10000 to 12000 ppm, dilute 0.100 mL to 10.0 mL, then 0.100 mL to 10.0 mL.

5. Submit samples for analysis by HPLC with Mass Selective Detection.

Figure 1. Analytical method outline for the analysis of C₆ acid in avian diet.

Appendix III

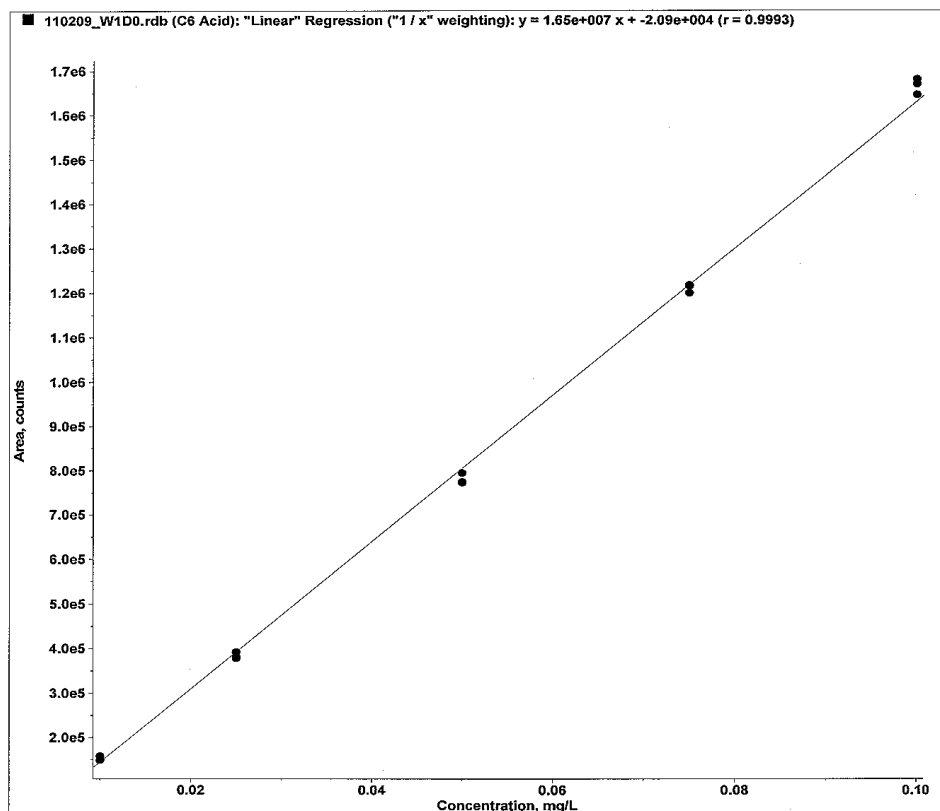


Figure 2. Typical calibration curve for C₆ acid.

Appendix III

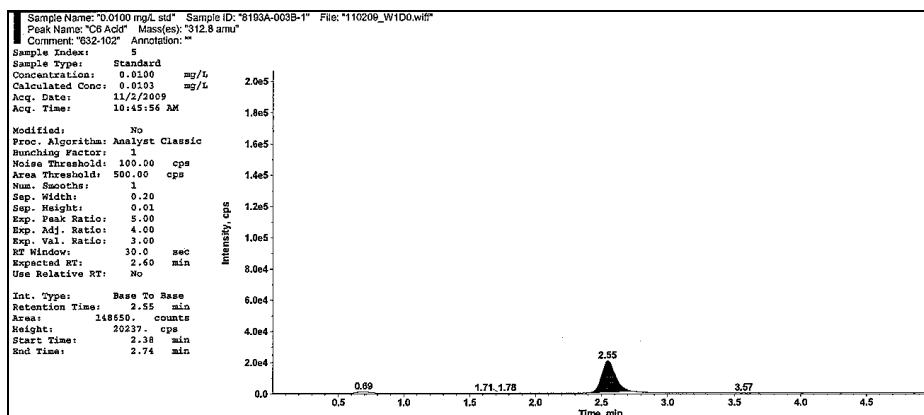


Figure 3. Typical chromatogram of a low-level C₆ acid calibration standard, 0.0100 µg /mL (0.100 ng on-column).

Appendix III

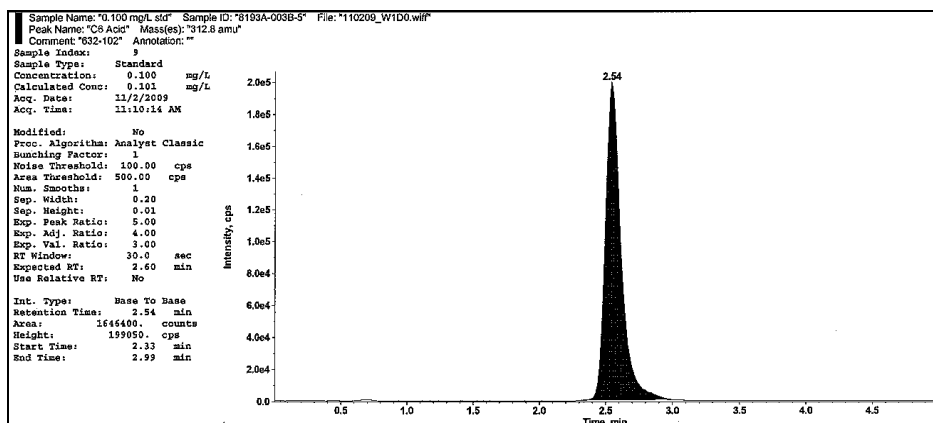


Figure 4. Typical chromatogram of a high-level C₆ acid calibration standard, 0.100 µg /mL (1.00 ng on-column).

Appendix III

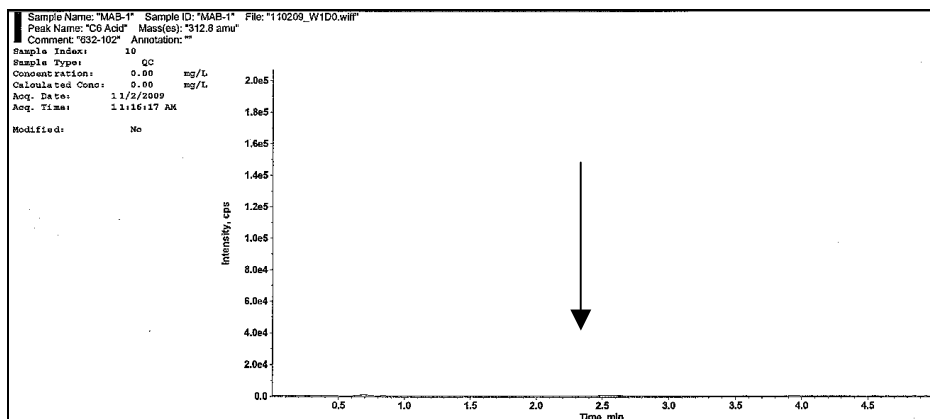


Figure 5. Typical chromatogram of a matrix blank, (632-102-MAB-1). The arrow indicates the approximate retention time of C₆ acid.

Appendix III

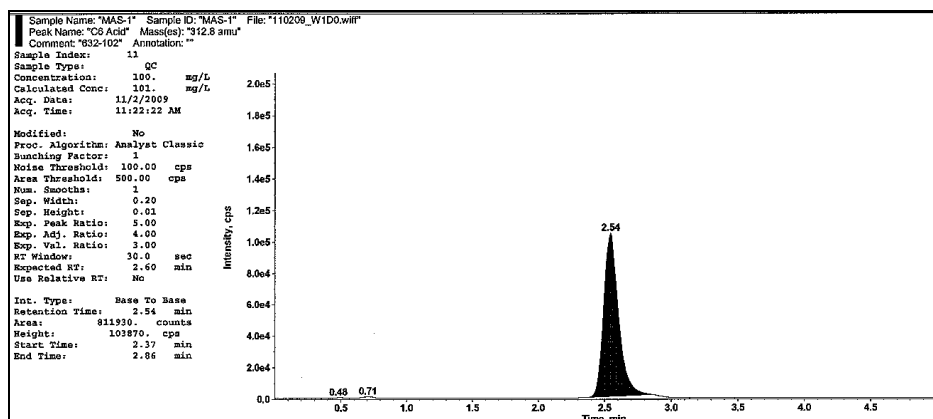


Figure 6. Typical chromatogram of a matrix fortification 632-102-MAS-1, 100 ppm

Appendix III

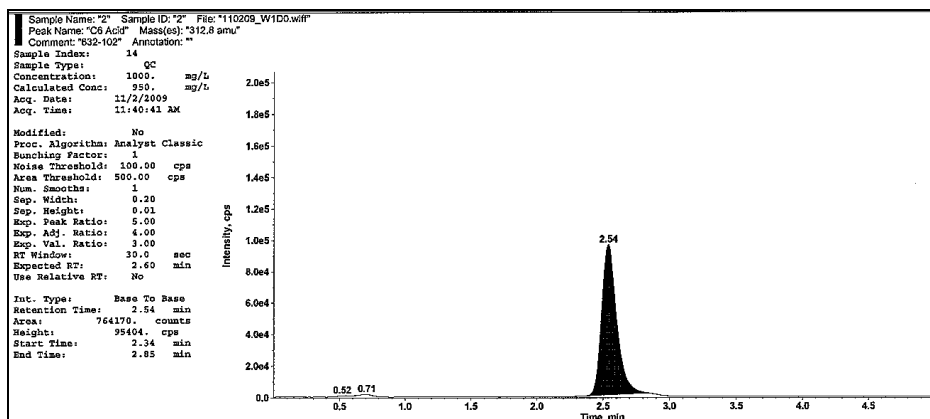


Figure 7. Typical chromatogram of an avian diet sample on Day 0, S-632-102-2 (1000 ppm).

- 64 -

Appendix IV

Daily Clinical Observations from a N. Bobwhite Reproduction Study with C₆ Acid

Appendix IV

Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid

Key to Codes and Abbreviations (Abb.)

Abb.	Definition	Abb.	Definition
AN	Normal in appearance and behavior.	bf	both feet
EUT	Euthanized	lf	left foot
FD	Found Dead	rf	right foot
S	Same - Remains as previous observation	ll	left leg
		rl	right leg
4	Ataxia (loss of coordination)	lw	left wing
11	ruffled appearance	rw	right wing
14	Lethargy		
BkL	Back lesion	bd	bandaged
FeL	Feather loss	bs	blood sampling event
FtL	Foot lesion	cv	conjugal visit
Fx	Fracture	he	healing
HdL	Head lesion	im	improving (modifier)
LbD	Limb deformity	sl	slight (modifier)
LgL	Leg lesion	sm	small
Lm	Lame or limping	su	sutured
VtL	Vent lesion		

Appendix IV - Table 1a
 Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
 Control - 0 ppm

Pen	Sex	Week 1							Week 2						
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
201	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
202	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
203	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
204	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
205	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
206	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
207	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
208	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
209	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
210	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
211	M	FeL	S	S	S	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
212	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
213	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
214	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
215	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
216	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN

AN - Appears normal; other observation codes - see Key.

Appendix IV - Table 1b
 Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
 Control - 0 ppm

Pen	Sex	Week 3							Week 4						
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
201	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
202	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
203	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
204	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
205	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
206	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
207	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
208	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
209	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
210	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
211	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
212	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
213	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
214	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
215	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
216	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN

AN - Appears normal; other observation codes - see Key.

Appendix IV - Table 1c
 Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
 Control - 0 ppm

Pen	Sex	Week 5							Week 6						
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
201	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
202	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
203	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
204	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
205	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
206	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
207	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
208	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
209	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
210	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
211	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
212	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
213	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
214	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
215	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
216	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN

AN - Appears normal; other observation codes - see Key.

Appendix IV - Table 1d
 Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
 Control - 0 ppm

Pen	Sex	Week 7							Week 8						
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
201	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
202	M	AN	AN	AN	AN	AN	AN	AN	AN	Fx(II-bd)	S	S	S	S	
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
203	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
204	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
205	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
206	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
207	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
208	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
209	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
210	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
211	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
212	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
213	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
214	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
215	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
216	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN

AN - Appears normal; other observation codes - see Key.

Appendix IV - Table 1e
 Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
 Control - 0 ppm

Pen	Sex	Week 9							Week 10						
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
201	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
202	M	Fx(1l-bd);Lm(sl)	S	S	S	S	S	S	Fx(1l-bd);Lm	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
203	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
204	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	HdL(sm)	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
205	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
206	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
207	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
208	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
209	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
210	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
211	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
212	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
213	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
214	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
215	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
216	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	HdL;14	S	FD	-	-	-

AN - Appears normal; other observation codes - see Key.

Appendix IV - Table 1f
 Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
 Control - 0 ppm

Pen	Sex	Week 11						Week 12							
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
201	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
202	M	Fx(11-bd;hc)	S	S	S	Fx(11-bd);Lm S+FtL(1f-bd)	S	Fx(11;hc);FtL(1f);(bd)	S	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
203	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	FeL	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	FeL;HdL
204	M	HdL(sm)	S	S	S	S	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
205	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
206	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
207	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
208	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
209	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
210	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
211	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
212	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
213	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
214	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
215	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
216	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	-	-	-	-	-	-	-	-	-	-	-	-	-	-

AN - Appears normal; other observation codes - see Key.

Appendix IV - Table 1g
 Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
 Control - 0 ppm

Pen	Sex	Week 13							Week 14						
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
201	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	HdL	S	S	S	S	S	S	FeL;HdL(he)	S	S	S	S	S	S
202	M	Fx(11-bd;he)	S	S	S	S	S	S	Fx(11-bd;he)	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
203	M	FeL	S	S	S	S	S	S	FeL	S	S	S	S	S	S
	F	FeL;HdL	S	S	S	S	S	S	HdL(sm)	S	S	S	S	S	S
204	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
205	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
206	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
207	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
208	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
209	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
210	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
211	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
212	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
213	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
214	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
215	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
216	M	EUT	-	-	-	-	-	-	-	-	-	-	-	-	-
	F	-	-	-	-	-	-	-	-	-	-	-	-	-	-

AN - Appears normal; other observation codes - see Key.

Appendix IV - Table 1h
Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
Control - 0 ppm

Pen	Sex	Week 15							Week 16							
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	
201	M	AN	AN	AN	AN	AN	AN	AN	AN ¹	AN	AN	AN	AN	AN	AN(cv)	AN
	F	FeL;HdL(he)	S	S	S	S	S	S	HdL(su) ¹	S	S	S	S	S	S(cv)	S
202	M	Fx(1l-bd;he)	S	S	S	S	S	S	FtL(1f-bd)	S	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
203	M	FeL	S	S	S	S	S	S	AN	AN	AN	AN	AN	AN	AN	AN
	F	HdL(sm)	S	S	S	S	S	S	AN	AN	AN	AN	AN	AN	AN	FeL
204	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
205	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
206	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
207	M	AN	AN	AN	FeL	S	S	S	FeL	S	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
208	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
209	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
210	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
211	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
212	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
213	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	FeL	AN	AN	AN	AN	AN	AN	AN	AN
214	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
215	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
216	M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	F	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

AN - Appears normal; other observation codes - see Key.

¹ Pair separated.

Appendix IV - Table 1i
 Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
 Control - 0 ppm

Pen	Sex	Week 17							Week 18						
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
201	M	AN	AN	AN(cv)	AN	AN	AN	S	AN	AN	AN(cv)	AN	AN	AN	AN
	F	HdL(su-he)	S	S(cv)	S	S	S	S	HdL(su-he)	S	S(cv)	S	S	S	S
202	M	FtL(lf-bd)	S	S	S	S	S	AN	FtL(lf-bd)	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	FtL(bf-bd);Lm	FtL(bf-bd)	S	S	S	S	S	S
203	M	AN	AN	AN	AN	AN	AN	FeL;HdL;BkL ¹	FeL;HdL;BkL	S	S(cv)	S	S	S(cv)	S
	F	FeL	S	S	S	S	S	S ¹	FeL	S	S(cv)	S	S	S(cv)	S
204	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
205	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
206	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
207	M	FeL	S	S	S	S	S	S	FeL	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
208	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
209	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
210	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
211	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
212	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
213	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
214	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	FeL	S	S	S	S	S	S
215	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
216	M	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	F	-	-	-	-	-	-	-	-	-	-	-	-	-	-

AN - Appears normal; other observation codes - see Key.

¹ Pair separated.

Appendix IV - Table 1j
 Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
 Control - 0 ppm

Pen	Sex	Week 19							Week 20						
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
201	M	AN	AN	AN	AN	AN	AN(cv)	AN	AN	AN	AN(cv)	AN	AN	AN(cv)	AN
	F	HdL(su-he)	S	S	S	S	S(cv)	S	HdL(su-he)	S	S(cv)	S	S	S(cv)	S
202	M	FtL(lf-bd)	S	S	S	S	S	S	AN	AN	AN	AN	AN	AN	AN
	F	FtL(bf-bd)	S	S	S	S	S	S	FtL(lf-bd)	S	S	S	FtL(lf-he)	S	S+Lm(sl)
203	M	FeL;HdL;BkL;(cv)	S	S	S	S	S(cv)	S	HdL(he)	S	S(cv)	S	S	S(cv)	S
	F	FeL(cv)	S	S	S	S	S(cv)	S	FeL	S	S(cv)	S	S	S(cv)	S
204	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	FeL	FeL	S	S	S	S	S	S
205	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
206	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
207	M	FeL	S	S	S	S	S	S	FeL	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
208	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	FtL(bf-he)	S	S+VtL
209	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
210	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
211	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
212	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
213	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
214	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
215	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
216	M	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	F	-	-	-	-	-	-	-	-	-	-	-	-	-	-

AN - Appears normal; other observation codes - see Key.

Appendix IV - Table 1k
 Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
 Control - 0 ppm

Pen	Sex	Week 21							
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
201	M	AN	AN	AN(cv)	AN	AN	AN(cv)	AN(bs)	-
	F	HdL(su-he)	S	S(cv)	S	S	S(cv)	S(bs)	-
202	M	AN	AN	AN	AN	AN	AN	AN(bs)	-
	F	FeL;FtL(lf-he);Lm(sl)	S	S	S	S	S	S(bs)	-
203	M	HdL(he)	S	S(cv)	S	S	S(cv)	S(bs)	-
	F	AN	AN	AN(cv)	AN	AN	AN(cv)	AN(bs)	-
204	M	AN	AN	AN	AN	AN	AN	AN(bs)	-
	F	FeL	S	S	S	S	S	S(bs)	-
205	M	AN	AN	AN	AN	AN	AN	AN(bs)	-
	F	AN	AN	AN	AN	AN	AN	AN(bs)	-
206	M	AN	AN	AN	AN	AN	AN	AN(bs)	-
	F	AN	AN	AN	AN	AN	AN	AN(bs)	-
207	M	FeL	S	S	S	S	S	S(bs)	-
	F	AN	AN	AN	AN	AN	AN	AN(bs)	-
208	M	AN	AN	AN	AN	AN	AN	AN(bs)	-
	F	FtL(bf-he)	S+VtL	S	S	S	S	S(bs)	-
209	M	AN	AN	AN	AN	AN	AN	AN(bs)	-
	F	AN	AN	AN	AN	AN	AN	AN(bs)	-
210	M	AN	AN	AN	AN	AN	AN	AN	AN(bs)
	F	AN	AN	AN	AN	AN	AN	AN	AN(bs)
211	M	AN	AN	AN	AN	AN	AN	AN	AN(bs)
	F	AN	AN	AN	AN	AN	AN	AN	AN(bs)
212	M	AN	AN	AN	AN	AN	AN	AN	AN(bs)
	F	AN	AN	AN	AN	AN	AN	AN	AN(bs)
213	M	AN	AN	AN	AN	AN	AN	AN	AN(bs)
	F	AN	AN	AN	AN	AN	AN	AN	AN(bs)
214	M	AN	AN	AN	AN	AN	AN	AN	AN(bs)
	F	AN	AN	AN	AN	AN	AN	AN	AN(bs)
215	M	AN	AN	AN	AN	AN	AN	AN	AN(bs)
	F	AN	AN	AN	AN	AN	AN	AN	AN(bs)
216	M	-	-	-	-	-	-	-	-
	F	-	-	-	-	-	-	-	-

AN - Appears normal; other observation codes - see Key.

Appendix IV - Table 2a
 Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
 1000 ppm

Pen	Sex	Week 1							Week 2						
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
217	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
218	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
219	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
220	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
221	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
222	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
223	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
224	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
225	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
226	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
227	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
228	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
229	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
230	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
231	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
232	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN

AN - Appears normal; other observation codes - see Key.

Appendix IV - Table 2b
Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
1000 ppm

Pen	Sex	Week 3							Week 4						
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
217	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
218	M	AN	AN	AN	AN	AN	AN	FeL	S	FeL	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
219	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
220	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
221	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
222	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
223	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
224	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	LbD(lw)	S	S	S	S
225	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
226	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
227	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
228	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
229	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
230	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
231	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
232	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN

AN - Appears normal; other observation codes - see Key.

Appendix IV - Table 2c
Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
1000 ppm

Pen	Sex	Week 5							Week 6						
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
217	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
218	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
219	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
220	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
221	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
222	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
223	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
224	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	LbD(Iw)	S	S	S	S	S	S	LbD(Iw)	S	S	S	S	S	S
225	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
226	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
227	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
228	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
229	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
230	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
231	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
232	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN

AN - Appears normal; other observation codes - see Key.

Appendix IV - Table 2d
 Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
 1000 ppm

Pen	Sex	Week 7							Week 8						
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
217	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
218	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
219	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
220	M	AN	AN	AN	AN	AN	AN	AN	AN	FeL	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
221	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
222	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
223	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
224	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	LbD(lw)	S	S	S	S	S	S	LbD(lw)	S	S	S	S	S	S
225	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
226	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
227	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
228	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
229	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
230	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
231	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	FeL
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
232	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN

AN - Appears normal; other observation codes - see Key.

Appendix IV - Table 2c
Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
1000 ppm

Pen	Sex	Week 9							Week 10						
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
217	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
218	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
219	M	AN	AN	AN	AN	AN	HdL(su)	S	HdL(su)	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
220	M	FeL	S	S	S	S	S	S	FeL	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
221	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	HdL(he)	S
222	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	HdL(sm)	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
223	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
224	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	LbD(tw)	S	S	S	S	S	S	LbD(tw)	S	S	S	S	S	S
225	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
226	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	FeL,HdL	S	FeL,HdL	S	S	S	S	S	S
227	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
228	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
229	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	FeL	S	S	S	S	S	S	AN	AN	AN	AN	AN	AN	AN
230	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
231	M	FeL	S	S	S	S	S	S	FeL	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
232	M	AN	AN	AN	AN	AN	FeL,HdL	S	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN

AN - Appears normal; other observation codes - see Key.

Appendix IV - Table 2f
 Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
 1000 ppm

Pen	Sex	Week 11							Week 12							
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	
217	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
218	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
219	M	HdL(su)	S	S	S	S	FeL(sl)	S	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
220	M	FeL	S	S	S	S	S	S	FeL	S	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	FeL	S	S	S	S	S	S	S
221	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	HdL(he)	S	S	S	S	S	S	HdL(he)	S	S	S	S	S	S	S
222	M	HdL(sm)	S	S	S	S	S	S	HdL(sm)	S	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
223	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
224	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	LbD(lw)	S	S	S	S	S	S	LbD(lw)	S	S	S	S	S	S	S
225	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	FeL	S	S	S	S
226	M	AN	AN	AN	AN	AN	AN	HdL	HdL	S	S	S	S	S	S	S
	F	FeL;HdL	S	S	S	S	S	S	FeL;HdL	S	S	S	S	S	S	S
227	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
228	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
229	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
230	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	FeL;HdL(he)
231	M	FeL	S	S	S	S	S	S	FeL	S	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
232	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN

AN - Appears normal; other observation codes - see Key.

Appendix IV - Table 2g
Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
1000 ppm

Pen	Sex	Week 13							Week 14						
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
217	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
218	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
219	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
220	M	FeL	S	S	S	S	S	S	AN	AN	AN	AN	AN	AN	AN
	F	FeL	S	S	S	S	S	S	FeL	S	S	S	S	S	S
221	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	HdL(he)	S	S	S	S	S	S	HdL(he)	S	S	S	S	S	S
222	M	HsL(sm-he)	S	S	S	S	S	S	HdL(he)	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
223	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
224	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	LbD(lw)	S	S	S	S	S	S	LbD(lw)	S	S	S	S	S	S
225	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	FeL	S	S	S	S	S	S	AN	AN	AN	AN	AN	AN	AN
226	M	HdL(he)	S	S	S	S	S	S	HdL(he)	S	S	S	S	S	S
	F	FeL;HdL	S	S	S	S	S	S	AN	AN	AN	AN	AN	AN	AN
227	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
228	M	AN	AN	AN	AN	AN	AN	AN	FtL(bf-bd);Lm	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
229	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
230	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	FeL;HdL(he)	S	S	S	S	S	S	FeL;HdL(he)	S	S	S	S	S	S
231	M	FeL	S	S	S	S	S	S	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
232	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN

AN - Appears normal; other observation codes - see Key.

Appendix IV - Table 2h
Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
1000 ppm

Pen	Sex	Week 15						Week 16							
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
217	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
218	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
219	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
220	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	FeL	S	S	S	S	S	S	S	FeL	S	S	S	S	S
221	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	HdL(he)	S	S	S	S	S	S	S	AN	AN	AN	AN	AN	AN
222	M	HdL(he)	S	S	S	S	S	S	S	AN	AN	AN	AN	AN	11(sl)
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
223	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
224	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	LbD(tw)	S	S	S	S	S	S	S	LbD(tw)	S	S	S	S	S
225	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
226	M	HdL(he)	S	S	S	S	S	S	S	HdL(he)	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
227	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
228	M	FtL(bf-bd)	S	S	S	S	FtL(lf-bd;rf-he);Lm(sl)	S	FtL(lf-bd);Lm(rf-sl)	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
229	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
230	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	FeL	S	S	S	S	S	S	S	FeL	S	S	S	S	S
231	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
232	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN

AN - Appears normal; other observation codes - see Key.

Appendix IV - Table 2i
 Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
 1000 ppm

Pen	Sex	Week 17							Week 18						
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
217	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
218	M	AN	AN	AN	AN	AN	AN	AN	FtL(rf-he)	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
219	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	HdL(sm)	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
220	M	AN	AN	AN	AN	AN	AN	AN	FeL	S	S	S	S	S	S
	F	FeL	S	S	S	S	S	S	AN	AN	AN	AN	AN	AN	AN
221	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	HdL(he)	S	S	S	S	S	HdL(he)	S	S	S	S	S	S
222	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
223	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
224	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	LbD(lw)	S	S	S	S	S	S	LbD(lw)	S	S	S	S	S	S
225	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	FeL	S	S	S	S	S	S
226	M	HdL(he)	S	S	S	S	S	S	HdL(he)	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
227	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
228	M	FtL(lf-bd);Lm(sl)	S	S	S	S	S	S	FtL(lf-bd)	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
229	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
230	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	FeL	S	S	S	S	S	S	AN	AN	AN	AN	AN	AN	AN
231	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	FeL;HdL	S	S	S	S	S	S
232	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN

AN - Appears normal; other observation codes - see Key.

Appendix IV - Table 2j
Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
1000 ppm

Pen	Sex	Week 19							Week 20						
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
217	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
218	M	FtL(rf-he)	S	S	S	S	S	S	FtL(rf-he)	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
219	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
220	M	FeL	S	S	S	S	S	S	FeL	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
221	M	AN	AN	FeL	S	S	S	S	AN	AN	AN	AN	AN	AN	AN
	F	HdL(hc)	S	S	S	S	S	S	HdL(hc)	S	S	S	S	S	S
222	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
223	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
224	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	LbD(lw)	S	S	S	S	S	S	LbD(lw)	S	S	S	S	S	S
225	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	FeL	S	S	S	S	S	S	FeL	S	S	S	S	S	S
226	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
227	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
228	M	FtL(lf-bd)	S	S	S	S	S	S	FtL(lf-bd)	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
229	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
230	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
231	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	FeL;HdL	S	S	S	S	S	S	FeL;HdL	S	S	S	S	S	S
232	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN

AN - Appears normal; other observation codes - see Key.

Appendix IV - Table 2k
 Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
 1000 ppm

Pen	Sex	Week 21								
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	
217	M	AN	AN	AN	AN	AN	AN	AN	AN(bs)	-
	F	AN	AN	AN	AN	AN	AN	AN	AN(bs)	-
218	M	AN	AN	AN	AN	AN	AN	AN	AN(bs)	-
	F	AN	AN	AN	AN	AN	AN	AN	AN(bs)	-
219	M	AN	AN	AN	AN	AN	AN	AN	AN(bs)	-
	F	AN	AN	AN	AN	AN	AN	AN	AN(bs)	-
220	M	FeL	S	S	S	S	S	S	S(bs)	-
	F	AN	AN	AN	AN	AN	AN	AN	AN(bs)	-
221	M	AN	AN	AN	AN	AN	AN	AN	AN(bs)	-
	F	HdL(he)	S	S	S	S	S	S	S(bs)	-
222	M	AN	AN	AN	AN	AN	AN	AN	AN(bs)	-
	F	AN	AN	AN	AN	AN	AN	AN	AN(bs)	-
223	M	AN	AN	AN	AN	AN	AN	AN	AN(bs)	-
	F	AN	AN	AN	AN	AN	AN	AN	AN(bs)	-
224	M	AN	AN	AN	AN	AN	AN	AN	AN(bs)	-
	F	LbD(lw)	S	S	S	S	S	S	S(bs)	-
225	M	AN	AN	AN	AN	AN	AN	AN	AN(bs)	-
	F	FeL	S	S	S	S	S	S	S(bs)	-
226	M	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)
227	M	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)
228	M	FtL(lf-bd)	S	S	S	S	S	S	S	S(bs)
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)
229	M	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)
230	M	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)
231	M	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)
	F	FeL	S	S	S	S	S	S	S	S(bs)
232	M	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)

AN - Appears normal; other observation codes - see Key.

Appendix IV - Table 3a
 Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
 5000 ppm

Pen	Sex	Week 1							Week 2						
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
233	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
234	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
235	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
236	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
237	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
238	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
239	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
240	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
241	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
242	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
243	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
244	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
245	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
246	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
247	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
248	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN

AN - Appears normal; other observation codes - see Key.

Appendix IV - Table 3b
 Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
 5000 ppm

Pen	Sex	Week 3							Week 4						
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
233	M	Fx(rl-bd)	S+Lm	S	S	S	S	S; FtL(rf-bd)	Fx(rl);FtL (rf);(bd);Lm	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
234	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
235	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
236	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
237	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
238	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
239	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
240	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
241	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
242	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
243	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
244	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
245	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
246	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
247	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
248	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN

AN - Appears normal; other observation codes - see Key.

Appendix IV - Table 3c
 Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
 5000 ppm

Pen	Sex	Week 5							Week 6						
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
233	M	Fx(rl-he); FtL(rf);(bd)	S+Lm(im)	S	S	S	S+Lm(im)	S	Fx(rl-he);FtL(rl); (bd);Lm(im)	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
234	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
235	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	4(sl)	S	AN	AN
236	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
237	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
238	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
239	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
240	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
241	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
242	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
243	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
244	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
245	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
246	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
247	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
248	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN

AN - Appears normal; other observation codes - see Key.

Appendix IV - Table 3d
 Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
 5000 ppm

Pen	Sex	Week 7						Week 8							
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
233	M	Fx(rl-he);FtL(rf); (bd);Lm(sl)	S	S	S	S	S	S	Fx(rl-he);FtL(rf); (bd);Lm(sl-im)	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
234	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
235	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
236	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
237	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
238	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
239	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
240	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
241	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
242	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
243	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
244	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
245	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
246	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
247	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
248	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN

AN - Appears normal; other observation codes - see Key.

Appendix IV - Table 3e
 Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
 5000 ppm

Pen	Sex	Week 9							Week 10						
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
233	M	Lm(sl)	S	S	S	S	S	S	Lm(sl)	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
234	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	HdL(he)	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
235	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
236	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	FtL(bf)	S+(bd)	S	FtL(bf-bd)	S	S	S	S	S	S
237	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
238	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
239	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
240	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
241	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
242	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
243	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
244	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
245	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
246	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
247	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
248	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN

AN - Appears normal; other observation codes - see Key.

Appendix IV - Table 3f
 Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
 5000 ppm

Pen	Sex	Week 11							Week 12						
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
233	M	Lm(sl)	S	S	S	S	S	S	Lm(rl-sl)	S	S+	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	FtL(rf)	AN	AN	AN	AN
234	M	HdL(he)	S	S	S	S	S	S	HdL(he)	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
235	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
236	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	FtL(bf-bd)	S	FtL(lf-bd)	S	FtL(lf-he)	S	S	FtL(bf-he)	S	S	S	S	S	S
237	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
238	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
239	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
240	M	AN	AN	FeL	S	S	S	S	FeL	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
241	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
242	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
243	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
244	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
245	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
246	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
247	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
248	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN

AN - Appears normal; other observation codes - see Key.

Appendix IV - Table 3g
 Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
 5000 ppm

Pen	Sex	Week 13							Week 14						
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
233	M	FtL(rf);Lm(rl-sl)	S	S	S	S	S	S	Lm(rf)	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
234	M	HdL(he)	S	S	S	S	S	S	HdL(he)	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
235	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	11(sl)	AN	AN	AN	AN	AN	AN	AN
236	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
237	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
238	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	FeL	S	S	S	S	S	S
239	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
240	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
241	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
242	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
243	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
244	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
245	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
246	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	LgL(1l;sm-bd)	LgL(1l-bd);11(sl)	S	S	S	S	S	S
247	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
248	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN

AN - Appears normal; other observation codes - see Key.

Appendix IV - Table 3h
 Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
 5000 ppm

Pen	Sex	Week 15							Week 16						
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
233	M	Lm(rf-sl)	S	S	S	S	S	S	Lm(rf-sl)	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
234	M	HdL(he)	S	S	S	S	S	S	HdL(he)	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
235	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
236	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
237	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
238	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	FeL	S	S	S	S	S	S	FeL	S	S	S	S	S	S
239	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
240	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
241	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
242	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
243	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
244	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
245	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
246	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	LgL(II-bd)	S	S	S	S	S	FtL(bf)	FtL(bf-bd)	S	S	S	S	S	S
247	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
248	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN

AN - Appears normal; other observation codes - see Key.

Appendix IV - Table 31
Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
5000 ppm

Pen	Sex	Week 17							Week 18						
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
233	M	Lm(rf-sl)	S	S	S	S	S	S	Lm(rf-sl)	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
234	M	HdL(he)	S	S	S	S	S	S	HdL(he)	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
235	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
236	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
237	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
238	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	FeL	S	S	S	S	S	S	FeL	S	S	S	S	S	S
239	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
240	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
241	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
242	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
243	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
244	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
245	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
246	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	FtL(bf-bd)	S	S	S	S	S	S	FtL(bf-he)	S	S	S	S	S	S
247	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	FeL	S	S	S	S	S	S
248	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN

AN - Appears normal; other observation codes - see Key.

Appendix IV - Table 3j
Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
5000 ppm

Pen	Sex	Week 19							Week 20						
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
233	M	Lm(rf-sl)	S	S	S	S	S	S	Lm(rf-sl)	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
234	M	HdL(he)	S	S	S	S	S	S	HdL(he)	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
235	M	FeL	S	S	S	S	S	S	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
236	M	FeL	S	S	S	S	S	S	FeL	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
237	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
238	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	FeL	S	S	S	S	S	S	FeL	S	S	S	S	S	S
239	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
240	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
241	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
242	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
243	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
244	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
245	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
246	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
247	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	FeL	S	S	S	S	S	S
248	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN

AN - Appears normal; other observation codes - see Key.

Appendix IV - Table 3k
 Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
 5000 ppm

Pen	Sex	Week 21							
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
233	M	Lm(rf-sl)	S	S	S	S	S	S	-
	F	AN	AN	AN	AN	AN	AN	AN(bs)	-
234	M	AN	AN	AN	AN	AN	AN	AN(bs)	-
	F	AN	AN	AN	AN	AN	AN	AN(bs)	-
235	M	AN	AN	AN	AN	AN	AN	AN(bs)	-
	F	AN	AN	AN	AN	AN	AN	AN(bs)	-
236	M	AN	AN	AN	AN	AN	AN	AN(bs)	-
	F	AN	AN	AN	AN	AN	AN	AN(bs)	-
237	M	AN	AN	AN	AN	AN	AN	AN(bs)	-
	F	AN	AN	AN	AN	AN	AN	AN(bs)	-
238	M	AN	AN	AN	AN	AN	AN	AN(bs)	-
	F	FeL	S	S	S	S	S	S(bs)	-
239	M	AN	AN	AN	AN	AN	AN	AN(bs)	-
	F	AN	AN	AN	AN	AN	AN	AN(bs)	-
240	M	AN	AN	AN	AN	AN	AN	AN(bs)	-
	F	AN	AN	AN	AN	AN	AN	AN(bs)	-
241	M	AN	AN	AN	AN	AN	AN	AN(bs)	-
	F	FeL	S	S	S	S	S	S	-
242	M	AN	AN	AN	AN	AN	AN	AN	AN(bs)
	F	AN	AN	AN	AN	AN	AN	AN	AN(bs)
243	M	AN	AN	AN	AN	AN	AN	AN	AN(bs)
	F	AN	AN	AN	AN	AN	AN	AN	AN(bs)
244	M	AN	AN	AN	AN	AN	AN	AN	AN(bs)
	F	FeL;HdL	S	S	S	S	S	S	S(bs)
245	M	AN	AN	AN	AN	AN	AN	AN	AN(bs)
	F	AN	AN	AN	AN	AN	AN	AN	AN(bs)
246	M	AN	AN	AN	AN	AN	AN	AN	AN(bs)
	F	AN	AN	AN	AN	AN	AN	AN	AN(bs)
247	M	AN	AN	AN	AN	AN	AN	AN	AN(bs)
	F	FeL	S	S	S	S	S	S	S(bs)
248	M	AN	AN	AN	AN	AN	AN	AN	AN(bs)
	F	AN	AN	AN	AN	AN	AN	AN	AN(bs)

AN - Appears normal; other observation codes - see Key.

Appendix IV - Table 4a
 Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
 10000 ppm

Pen	Sex	Week 1							Week 2						
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
249	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
250	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
251	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
252	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
253	M	FeL	S	S	S	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
254	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
255	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
256	M	FeL	S	S	S	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
257	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
258	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	FeL	S	S	S	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
259	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
260	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
261	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
262	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
263	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
264	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN

AN - Appears normal; other observation codes - see Key.

- 100 -

Appendix IV - Table 4b
 Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
 10000 ppm

Pen	Sex	Week 3							Week 4						
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
249	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
250	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
251	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
252	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
253	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
254	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
255	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
256	M	FeL	S	S	S	S	S	S	FeL	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
257	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
258	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
259	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
260	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
261	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
262	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
263	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
264	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN

AN - Appears normal; other observation codes - see Key.

Appendix IV - Table 4c
 Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
 10000 ppm

Pen	Sex	Week 5							Week 6						
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
249	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
250	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
251	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
252	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
253	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
254	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
255	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
256	M	FeL	S	S	S	S	S	S	FeL	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
257	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
258	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
259	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
260	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
261	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
262	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
263	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
264	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN

AN - Appears normal; other observation codes - see Key.

Appendix IV - Table 4d
 Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
 10000 ppm

Pen	Sex	Week 7							Week 8						
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
249	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
250	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
251	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
252	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
253	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
254	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
255	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
256	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
257	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
258	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
259	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
260	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
261	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
262	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
263	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
264	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN

AN - Appears normal; other observation codes - see Key.

Appendix IV - Table 4e
 Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
 10000 ppm

Pen	Sex	Week 9						Week 10							
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
249	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
250	M	FeL	S	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
251	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
252	M	AN	AN	AN	11(sl)	S	HdL(sm);11(sl)	S	FeL;11(sl)	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
253	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
254	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
255	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
256	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
257	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
258	M	AN	AN	AN	11(sl)	S	S	S	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
259	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
260	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
261	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
262	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
263	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
264	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN

AN - Appears normal; other observation codes - see Key.

Appendix IV - Table 4f
 Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
 10000 ppm

Pen	Sex	Week 11							Week 12						
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
249	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
250	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
251	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
252	M	FeL;11(sl)	S	S	FeL	S	S	S	AN	AN	AN	AN	AN	AN	AN
	F	11(sl)	S	S	S	S	S	S	11(sl)	S	S	S	S	S	S
253	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
254	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
255	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
256	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
257	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
258	M	11(sl)	S	S	S	S	S	S	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
259	M	AN	AN	AN	FeL	S	S	S	FeL	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
260	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
261	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
262	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
263	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
264	M	AN	AN	AN	AN	AN	AN	FL(rf-bd)	AN	FL(rf-he)	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN

AN - Appears normal; other observation codes - see Key.

- 105 -

Appendix IV - Table 4g
Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
10000 ppm

Pen	Sex	Week 13							Week 14						
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
249	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
250	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	FeL
251	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
252	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
253	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
254	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
255	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
256	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	HdL
257	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
258	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
259	M	FeL	S	S	S	S	S	S	FeL	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	FeL	S	S	S	S	S	S
260	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
261	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
262	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
263	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
264	M	FtL(rf),Lm	S	S	S	S	S	S	FtL(rf)	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN

AN - Appears normal; other observation codes - see Key.

Appendix IV - Table 4h
 Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
 10000 ppm

Pen	Sex	Week 15							Week 16						
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
249	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
250	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	FeL	S	S	S	S	S	S	FeL	S	S	S	S	S	S
251	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
252	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
253	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
254	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
255	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
256	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	HdL	S	S	S	S	S	S	AN	AN	AN	AN	AN	AN	AN
257	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
258	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	11(st)	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
259	M	FeL	S	S	S	S	S	S	FeL	S	S	S	S	S	S
	F	FeL	S	S	S	S	S	S	FeL	S	S	S	S	S	S
260	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
261	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
262	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
263	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
264	M	FlL(rf)	S	S	S	S	S	S	FlL(rf)	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN

AN - Appears normal; other observation codes - see Key.

Appendix IV - Table 4i
 Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
 10000 ppm

Pen	Sex	Week 17							Week 18						
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
249	M	AN	AN	AN	AN	AN	AN	AN	FD	-	-	-	-	-	-
	F	AN	AN	AN	AN	AN	AN	AN	EUT	-	-	-	-	-	-
250	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	FeL	S	S	S	S	S	S	FeL	S	S	S	S	S	S
251	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
252	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
253	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
254	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
255	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
256	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
257	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
258	M	11(sl)	S	S	S	S	S	S	11(sl)	S	S	S	S	S	S
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
259	M	FeL	S	S	FeL;Lm(rf)	S	S	S	FeL;FeL(rf);Lm	S	S	S	S	S	S
	F	FeL	S	S	S	S	S	S	FeL	S	S	S	S	S	S
260	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
261	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
262	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
263	M	FeL	S	S	S	S	S	S	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
264	M	FeL(rf)	S	S	S	S	S	S	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN

AN - Appears normal; other observation codes - see Key.

Appendix IV - Table 4j
 Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
 10000 ppm

Pen	Sex	Week 19							Week 20						
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
249	M	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	F	-	-	-	-	-	-	-	-	-	-	-	-	-	-
250	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	FeL	S	S	S	S	S	S	FeL	S	S	S	S	S	S
251	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
252	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
253	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
254	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
255	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	FeL	S	S	S	S	S	S	FeL	S	S	S	S	S	S
256	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
257	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
258	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
259	M	FeL; FtL(rf)	S	S	S	S	S	S	FeL	S	S	S	S	S	S
	F	FeL	S	S	S	S	S	S	FeL	S	S	S	S	S	S
260	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
261	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
262	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
263	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
264	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN

AN - Appears normal; other observation codes - see Key.

Appendix IV - Table 4k
Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
10000 ppm

Pen	Sex	Week 21								
		Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	
249	M	-	-	-	-	-	-	-	-	-
	F	-	-	-	-	-	-	-	-	-
250	M	AN	AN	AN	AN	AN	AN	AN	AN(bs)	-
	F	FeL	S	S	S	S	S	S	S(bs)	-
251	M	AN	AN	AN	AN	AN	AN	AN	AN(bs)	-
	F	AN	AN	AN	AN	AN	AN	AN	AN(bs)	-
252	M	AN	AN	AN	AN	AN	AN	AN	AN(bs)	-
	F	AN	AN	AN	AN	AN	AN	AN	AN(bs)	-
253	M	AN	AN	AN	AN	AN	AN	AN	AN(bs)	-
	F	AN	AN	AN	AN	AN	AN	AN	AN(bs)	-
254	M	AN	AN	AN	AN	AN	AN	AN	AN(bs)	-
	F	AN	AN	AN	AN	AN	AN	AN	AN(bs)	-
255	M	AN	AN	AN	AN	AN	AN	AN	AN(bs)	-
	F	FeL	S	S	S	S	S	S	S(bs)	-
256	M	AN	AN	AN	AN	AN	AN	AN	AN(bs)	-
	F	AN	AN	AN	AN	AN	AN	AN	AN(bs)	-
257	M	AN	AN	AN	AN	AN	AN	AN	AN(bs)	-
	F	AN	AN	AN	AN	AN	AN	AN	AN(bs)	-
258	M	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)
259	M	FeL	S	S	S	S	S	S	S	S(bs)
	F	FeL	S	S	S	S	S	S	S	S(bs)
260	M	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)
261	M	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)
262	M	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)
	F	FeL	S	S	S	S	S	S	S	S(bs)
263	M	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)
264	M	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)

AN - Appears normal; other observation codes - see Key.

Appendix V - Table 1

*Adult Body Weight (g) from a Northern Bobwhite Reproduction Study with C6 Acid
(Control, Males)*

Pen	Week 0	Change Week 0-2	Week 2	Change Week 2-4	Week 4	Change Week 4-6	Week 6	Change Week 6-8	Week 8	Change Week 8-Term	Test Term	Total Change
201	194	4	198	2	200	5	205	2	207	-	-	-
202	196	4	200	4	204	1	205	-20	185	26	211	15
203	188	0	188	1	189	1	190	2	192	-1	191	3
204	180	5	185	2	187	4	191	1	192	4	196	16
205	187	1	188	3	191	5	196	0	196	1	197	10
206	172	2	174	4	178	2	180	1	181	9	190	18
207	180	-1	179	1	180	4	184	5	189	4	193	13
208	189	1	190	6	196	6	202	3	205	2	207	18
209	209	0	209	-1	208	4	212	-2	210	-6	204	-5
210	196	2	198	4	202	1	203	8	211	5	216	20
211	216	0	216	7	223	8	231	2	233	-22	211	-5
212	199	2	201	3	204	2	206	4	210	-5	205	6
213	176	8	184	1	185	5	190	1	191	18	209	33
214	192	-1	191	5	196	3	199	7	206	-11	195	3
215	194	0	194	1	195	7	202	1	203	4	207	13
216	183	-2	181	3	184	2	186	8	194	-	-	-
Mean	191	2	192	3	195	4	199	1	200	2	202	11
SD	12	3	11	2	12	2	12	6	13	12	8	10

The means for body weights and body weight changes are calculated and rounded separately.
- Data are not available due to adult mortality.

Appendix V - Table 2

*Adult Body Weight (g) from a Northern Bobwhite Reproduction Study with C6 Acid
(Control, Females)*

Pen	Week 0	Change Week 0-2	Week 2	Change Week 2-4	Week 4	Change Week 4-6	Week 6	Change Week 6-8	Week 8	Change Week 8-Term	Test Term	Total Change
201	184	0	184	5	189	3	192	0	192	-	-	-
202	173	-2	171	-1	170	3	173	-1	172	36	208	35
203	206	-3	203	0	203	2	205	4	209	48	257	51
204	177	5	182	-2	180	1	181	0	181	39	220	43
205	180	-6	174	1	175	1	176	6	182	40	222	42
206	196	-3	193	2	195	0	195	7	202	52	254	58
207	187	4	191	3	194	0	194	-3	191	31	222	35
208	200	0	200	2	202	4	206	2	208	13	221	21
209	191	3	194	0	194	5	199	4	203	53	256	65
210	188	2	190	3	193	1	194	5	199	-20	179	-9
211	196	5	201	6	207	3	210	1	211	36	247	51
212	188	3	191	2	193	3	196	2	198	36	234	46
213	197	4	201	4	205	3	208	6	214	36	250	53
214	167	2	169	1	170	3	173	5	178	41	219	52
215	215	2	217	-5	212	7	219	-2	217	56	273	58
216	189	1	190	5	195	2	197	7	204	-	-	-
Mean	190	1	191	2	192	3	195	3	198	36	233	43
SD	12	3	13	3	13	2	14	3	14	19	25	19

The means for body weights and body weight changes are calculated and rounded separately.
- Data are not available due to adult mortality.

Appendix V - Table 3

*Adult Body Weight (g) from a Northern Bobwhite Reproduction Study with C6 Acid
(1000 PPM, Males)*

Pen	Week 0	Change Week 0-2	Week 2	Change Week 2-4	Week 4	Change Week 4-6	Week 6	Change Week 6-8	Week 8	Change Week 8-Term	Test Term	Total Change
217	191	7	198	6	204	5	209	4	213	-3	210	19
218	193	-1	192	3	195	1	196	9	205	-2	203	10
219	180	3	183	3	186	6	192	8	200	-12	188	8
220	188	-2	186	7	193	5	198	10	208	-12	196	8
221	206	-4	202	3	205	4	209	9	218	-3	215	9
222	184	1	185	3	188	4	192	0	192	19	211	27
223	204	2	206	4	210	5	215	2	217	-3	214	10
224	192	-2	190	2	192	2	194	6	200	11	211	19
225	210	-4	206	6	212	5	217	0	217	25	242	32
226	213	0	213	3	216	4	220	-1	219	-2	217	4
227	193	-4	189	6	195	-1	194	9	203	19	222	29
228	176	2	178	5	183	2	185	1	186	12	198	22
229	176	-3	173	6	179	4	183	2	185	16	201	25
230	196	6	202	3	205	3	208	7	215	-2	213	17
231	198	-2	196	0	196	3	199	5	204	5	209	11
232	194	1	195	4	199	4	203	4	207	-2	205	11
Mean	193	0	193	4	197	4	201	5	206	4	210	16
SD	11	3	11	2	11	2	11	4	11	11	12	9

The means for body weights and body weight changes are calculated and rounded separately.
Differences between control and this treatment group were not significant ($p > 0.05$).

Appendix V - Table 4

*Adult Body Weight (g) from a Northern Bobwhite Reproduction Study with C6 Acid
(1000 PPM, Females)*

Pen	Week 0	Change Week 0-2	Week 2	Change Week 2-4	Week 4	Change Week 4-6	Week 6	Change Week 6-8	Week 8	Change Week 8-Term	Test Term	Total Change
217	197	3	200	5	205	1	206	3	209	44	253	56
218	188	2	190	6	196	4	200	14	214	51	265	77
219	192	0	192	4	196	6	202	1	203	63	266	74
220	197	0	197	4	201	0	201	1	202	44	246	49
221	201	3	204	2	206	0	206	4	210	48	258	57
222	195	7	202	6	208	3	211	7	218	16	234	39
223	193	-1	192	2	194	4	198	6	204	44	248	55
224	170	4	174	-1	173	4	177	3	180	39	219	49
225	185	6	191	3	194	4	198	5	203	43	246	61
226	191	-2	189	5	194	0	194	2	196	36	232	41
227	179	2	181	4	185	2	187	0	187	35	222	43
228	202	2	204	1	205	4	209	1	210	38	248	46
229	195	-2	193	0	193	4	197	-2	195	38	233	38
230	194	-4	190	5	195	-1	194	1	195	30	225	31
231	185	3	188	2	190	1	191	4	195	42	237	52
232	188	-1	187	4	191	-1	190	3	193	37	230	42
Mean	191	1	192	3	195	2	198	3	201	41	241	51
SD	8	3	8	2	9	2	9	4	10	10	15	13

The means for body weights and body weight changes are calculated and rounded separately.
Differences between control and this treatment group were not significant ($p > 0.05$).

Appendix V - Table 5

**Adult Body Weight (g) from a Northern Bobwhite Reproduction Study with C6 Acid
(5000 PPM, Males)**

Pen	Week 0	Change Week 0-2	Week 2	Change Week 2-4	Week 4	Change Week 4-6	Week 6	Change Week 6-8	Week 8	Change Week 8-Term	Test Term	Total Change
233	203	-3	200	-9	191	2	193	14	207	-16	191	-12
234	190	4	194	4	198	2	200	-1	199	5	204	14
235	190	7	197	4	201	5	206	1	207	-8	199	9
236	189	4	193	3	196	3	199	6	205	-11	194	5
237	187	1	188	4	192	4	196	10	206	-11	195	8
238	193	3	196	3	199	0	199	5	204	19	223	30
239	195	-1	194	4	198	3	201	4	205	11	216	21
240	207	1	208	3	211	3	214	10	224	-8	216	9
241	188	3	191	4	195	1	196	-7	189	16	205	17
242	199	2	201	2	203	0	203	5	208	-4	204	5
243	191	-1	190	6	196	4	200	6	206	14	220	29
244	189	0	189	5	194	1	195	12	207	9	216	27
245	178	1	179	2	181	0	181	6	187	1	188	10
246	211	4	215	6	221	7	228	8	236	4	240	29
247	189	-2	187	5	192	2	194	8	202	13	215	26
248	183	3	186	1	187	4	191	4	195	-9	186	3
Mean	193	2	194	3	197	3	200	6	205	2	207	14
SD	9	3	9	3	9	2	10	5	12	11	15	12

The means for body weights and body weight changes are calculated and rounded separately. Differences between control and this treatment group were not significant ($p > 0.05$).

Appendix V - Table 6

Adult Body Weight (g) from a Northern Bobwhite Reproduction Study with C6 Acid

(5000 PPM, Females)

Pen	Week 0	Change Week 0-2	Week 2	Change Week 2-4	Week 4	Change Week 4-6	Week 6	Change Week 6-8	Week 8	Change Week 8-Term	Test Term	Total Change
233	182	-1	181	-3	178	1	179	11	190	54	244	62
234	212	6	218	5	223	1	224	1	225	31	256	44
235	179	3	182	2	184	2	186	-2	184	45	229	50
236	194	0	194	2	196	2	198	8	206	51	257	63
237	184	1	185	3	188	-1	187	5	192	52	244	60
238	176	2	178	2	180	1	181	5	186	33	219	43
239	217	2	219	7	226	4	230	6	236	29	265	48
240	206	4	210	2	212	0	212	5	217	39	256	50
241	200	-1	199	4	203	0	203	9	212	58	270	70
242	193	1	194	5	199	3	202	5	207	26	233	40
243	186	-5	181	6	187	-2	185	5	190	43	233	47
244	200	1	201	5	206	-1	205	9	214	34	248	48
245	193	12	205	2	207	4	211	6	217	32	249	56
246	177	-3	174	1	175	2	177	2	179	28	207	30
247	186	2	188	6	194	4	198	0	198	46	244	58
248	175	2	177	3	180	4	184	0	184	13	197	22
Mean	191	2	193	3	196	2	198	5	202	38	241	49
SD	13	4	15	2	16	2	16	4	17	12	20	12

The means for body weights and body weight changes are calculated and rounded separately.
Differences between control and this treatment group were not significant ($p > 0.05$).

Appendix V - Table 7

*Adult Body Weight (g) from a Northern Bobwhite Reproduction Study with C6 Acid
(10000 PPM, Males)*

Pen	Week 0	Change Week 0-2	Week 2	Change Week 2-4	Week 4	Change Week 4-6	Week 6	Change Week 6-8	Week 8	Change Week 8-Term	Test Term	Total Change
249	185	-4	181	2	183	0	183	8	191	-	-	-
250	194	4	198	4	202	2	204	6	210	12	222	28
251	181	-1	180	2	182	2	184	5	189	-3	186	5
252	216	0	216	2	218	4	222	2	224	12	236	20
253	187	2	189	2	191	5	196	6	202	7	209	22
254	181	1	182	4	186	6	192	2	194	-10	184	3
255	195	-6	189	7	196	2	198	5	203	4	207	12
256	178	1	179	1	180	1	181	4	185	5	190	12
257	195	2	197	5	202	5	207	8	215	15	230	35
258	172	4	176	3	179	4	183	4	187	-3	184	12
259	210	5	215	4	219	3	222	4	226	-15	211	1
260	185	-2	183	1	184	2	186	4	190	-1	189	4
261	172	8	180	1	181	2	183	-1	182	4	186	14
262	178	7	185	6	191	5	196	-1	195	-5	190	12
263	180	-2	178	2	180	7	187	2	189	16	205	25
264	200	-2	198	5	203	4	207	4	211	1	212	12
Mean	188	1	189	3	192	3	196	4	200	3	203	14
SD	13	4	13	2	13	2	13	3	14	9	17	10

The means for body weights and body weight changes are calculated and rounded separately.
 - Data are not available due to adult mortality.
 Differences between control and this treatment group were not significant ($p > 0.05$).

Appendix V - Table 8

*Adult Body Weight (g) from a Northern Bobwhite Reproduction Study with C6 Acid
(10000 PPM, Females)*

Pen	Week 0	Change Week 0-2	Week 2	Change Week 2-4	Week 4	Change Week 4-6	Week 6	Change Week 6-8	Week 8	Change Week 8-Term	Test Term	Total Change
249	174	0	174	5	179	4	183	3	186	-	-	-
250	173	0	173	3	176	4	180	5	185	51	236	63
251	187	-9	178	2	180	6	186	-1	185	35	220	33
252	204	5	209	1	210	1	211	3	214	30	244	40
253	175	2	177	0	177	1	178	-1	177	43	220	45
254	194	-2	192	1	193	1	194	0	194	33	227	33
255	191	1	192	5	197	4	201	4	205	36	241	50
256	186	0	186	0	186	2	188	3	191	31	222	36
257	189	5	194	0	194	0	194	8	202	57	259	70
258	182	-1	181	2	183	1	184	-2	182	28	210	28
259	176	0	176	1	177	2	179	4	183	32	215	39
260	216	-1	215	7	222	-2	220	6	226	26	252	36
261	201	9	210	2	212	1	213	-1	212	29	241	40
262	174	5	179	6	185	5	190	0	190	42	232	58
263	211	-5	206	5	211	2	213	1	214	18	232	21
264	187	5	192	2	194	3	197	-1	196	24	220	33
Mean	189	1	190	3	192	2	194	2	196	34	231	42
SD	14	4	14	2	15	2	14	3	14	10	14	13

The means for body weights and body weight changes are calculated and rounded separately.
 - Data are not available due to adult mortality.
 Differences between control and this treatment group were not significant ($p > 0.05$).

Appendix VI - Table 1
Feed Consumption (g/bird/day) from a Northern Bobwhite Reproduction Study with C6 Acid
(Control)

Pen	W E E K S																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
201	11	13	13	12	13	12	12	12	12	15	15	13	14	17	18	-	-	-	-	-	-
202	10	13	16	13	15	13	13	11	14	17	15	18	21	20	23	22	21	23	24	23	28
203	14	16	13	13	14	15	17	20	18	20	17	20	20	21	24	26	26	24	27	26	26
204	11	13	12	12	13	12	12	12	10	13	15	16	18	17	17	19	21	21	23	22	24
205	12	15	14	14	15	16	15	17	17	18	16	18	20	22	23	24	25	25	26	25	28
206	12	13	13	12	13	12	12	14	13	15	17	17	19	21	22	23	23	22	24	23	23
207	13	15	14	14	14	14	14	17	16	19	18	20	24	22	24	24	26	25	28	29	30
208	13	13	14	13	14	13	14	15	16	18	17	20	24	22	20	25	22	22	23	18	20
209	12	14	15	14	16	14	14	15	16	19	20	19	22	20	24	24	25	28	30	29	32
210	12	13	13	13	13	13	12	16	15	16	17	16	19	19	20	22	22	22	24	20	12
211	14	16	16	15	16	15	15	15	14	16	17	17	22	23	23	24	24	25	26	26	27
212	12	14	15	13	13	13	12	14	13	14	15	17	21	22	21	24	22	23	24	25	24
213	14	15	14	14	15	14	13	15	15	18	17	18	19	19	21	21	24	26	26	26	24
214	11	13	12	11	12	12	11	13	13	15	17	18	21	22	22	25	24	22	24	25	24
215	13	14	15	13	15	14	14	14	12	15	17	18	21	21	21	23	23	23	24	24	25
216	12	14	13	12	12	12	11	13	11	-	-	-	-	-	-	-	-	-	-	-	-
Mean	12	14	14	13	14	13	13	15	14	17	17	18	20	21	22	23	23	24	25	24	25
SD	1	1	1	1	1	1	2	2	2	2	1	2	2	2	2	2	2	2	2	3	5

- Data are not available due to adult mortality.

Appendix VI - Table 2
Feed Consumption (g/bird/day) from a Northern Bobwhite Reproduction Study with C6 Acid
(1000 PPM)

Pen	W E E K S																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
217	13	14	13	13	14	13	13	13	13	16	17	20	23	23	23	23	24	22	23	24	23
218	13	15	15	15	15	14	15	17	16	18	19	22	21	23	24	28	26	26	28	26	25
219	15	15	17	15	17	17	16	17	16	18	20	24	23	30	27	28	28	27	29	29	30
220	12	13	14	12	14	14	12	15	15	16	17	19	21	21	25	23	25	23	28	27	28
221	13	14	14	14	14	13	13	16	14	15	16	20	19	21	23	23	24	19	25	24	26
222	14	16	16	14	14	15	15	16	14	15	15	18	22	24	23	25	25	24	25	26	28
223	13	14	15	13	14	14	13	15	14	17	16	17	21	20	22	21	25	25	24	26	22
224	11	14	15	13	15	13	12	15	15	17	17	20	23	23	24	23	23	23	24	25	25
225	13	15	16	14	15	15	14	14	12	16	18	20	20	21	22	22	23	24	25	24	26
226	12	13	13	12	13	13	12	13	11	16	16	20	20	23	21	23	24	23	25	26	25
227	12	14	13	12	13	13	12	15	13	15	16	16	16	20	21	20	22	18	16	17	16
228	13	15	14	14	14	14	13	14	12	17	19	21	22	23	24	23	25	21	26	27	25
229	13	15	15	14	14	13	12	15	14	16	16	19	21	21	23	22	22	25	24	24	23
230	12	15	14	13	13	13	12	14	14	15	14	14	20	20	19	21	22	22	25	27	25
231	13	15	14	13	14	13	13	13	13	18	18	20	22	24	24	23	23	22	22	24	21
232	13	14	15	13	14	14	13	14	14	17	17	17	20	21	22	22	23	23	24	24	23
Mean	13	14	14	13	14	14	13	15	14	16	17	19	21	22	23	23	24	23	25	25	24
SD	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	3	3	3

Differences between control and this treatment group were not significant ($p > 0.05$).

- 120 -

Appendix VI - Table 3
 Feed Consumption (g/bird/day) from a Northern Bobwhite Reproduction Study with C6 Acid
 (5000 PPM)

Pen	W E E K S																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
233	15	16	11	16	15	15	15	18	15	17	17	19	20	24	25	25	25	24	26	26	26
234	14	17	15	15	17	14	14	14	12	14	14	18	20	23	23	24	24	25	26	26	27
235	12	16	16	14	17	14	14	14	15	17	18	20	22	23	25	26	24	25	29	29	28
236	14	16	16	15	16	15	15	17	14	18	18	23	23	23	27	28	28	27	28	28	29
237	11	12	10	11	11	12	12	14	12	14	15	16	18	19	20	19	21	20	21	21	20
238	12	14	14	13	14	14	14	16	15	17	16	17	19	19	21	22	23	22	24	23	24
239	12	14	14	13	14	14	13	15	14	14	14	15	16	19	21	22	25	26	26	26	26
240	13	15	14	13	13	14	13	15	15	16	16	17	21	24	24	28	28	26	35	36	35
241	12	14	16	13	14	14	16	16	19	19	21	25	23	25	25	29	25	25	26	27	30
242	11	14	13	12	13	12	12	14	10	14	14	17	18	19	20	21	24	22	24	23	23
243	12	14	14	13	14	14	14	15	13	17	16	19	21	22	24	25	26	25	26	27	29
244	11	14	15	12	13	12	14	16	15	18	18	23	22	21	20	19	18	20	21	20	20
245	12	14	14	14	17	13	12	16	13	16	16	17	20	19	17	20	25	21	29	32	20
246	13	14	14	14	14	14	13	15	15	19	19	20	22	21	20	22	23	24	27	28	28
247	13	15	17	14	15	15	14	15	13	20	18	23	24	25	23	24	29	23	29	31	27
248	11	12	13	12	13	12	12	12	12	15	15	14	18	17	16	18	19	18	19	19	18
Mean	12	14	14	13	14	14	14	15	14	17	16	19	20	21	22	23	24	23	26	26	26
SD	1	1	2	1	2	1	1	1	2	2	2	3	2	3	3	3	3	3	4	5	4

Differences between control and this treatment group were not significant ($p > 0.05$).

Appendix VI - Table 4
Feed Consumption (g/bird/day) from a Northern Bobwhite Reproduction Study with C6 Acid
(10000 PPM)

Pen	W E E K S																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
249	11	13	13	13	13	12	12	13	13	16	16	15	21	20	21	20	-	-	-	-	-
250	12	14	14	13	15	15	14	15	16	18	18	19	23	27	27	27	27	32	28	28	38
251	16	15	15	19	15	14	17	14	14	15	16	17	20	19	24	24	22	21	27	28	39
252	13	16	16	15	17	16	15	17	15	19	20	20	24	23	24	23	24	25	24	24	27
253	13	16	14	15	15	13	16	17	17	19	19	19	21	21	21	23	24	22	25	24	26
254	13	14	14	14	15	16	15	15	14	16	16	18	22	21	20	21	20	21	22	19	22
255	13	16	15	15	15	15	15	17	16	19	19	19	22	24	23	24	24	24	25	26	27
256	11	13	12	12	14	13	14	15	14	18	18	16	21	18	20	21	22	22	24	24	34
257	17	16	16	14	15	15	15	18	17	20	20	21	24	22	23	24	26	25	27	25	28
258	11	13	13	12	13	13	12	12	12	15	15	17	17	17	18	18	19	20	23	23	24
259	13	16	16	13	13	13	13	13	15	17	15	16	19	19	20	24	21	25	28	28	25
260	13	14	14	13	14	16	15	16	17	20	23	28	28	29	28	31	28	26	33	27	29
261	13	14	14	13	12	12	13	13	13	17	17	18	19	20	19	24	21	20	21	21	22
262	14	14	16	15	15	15	15	15	16	17	21	22	24	27	24	19	26	27	27	26	33
263	13	16	15	15	14	15	14	16	16	18	18	19	21	22	22	21	23	23	26	27	28
264	12	14	17	13	14	14	13	14	13	16	13	14	22	22	21	23	23	23	24	23	25
Mean	13	15	15	14*	14	14	14*	15	15	17	18	19	22	22	22	23	23	24	26	25	28
SD	2	1	1	2	1	1	1	2	1	2	3	3	3	3	3	3	2	3	3	3	5

- Data are not available due to adult mortality.

* Significantly different from the control at p < 0.05

- 122 -

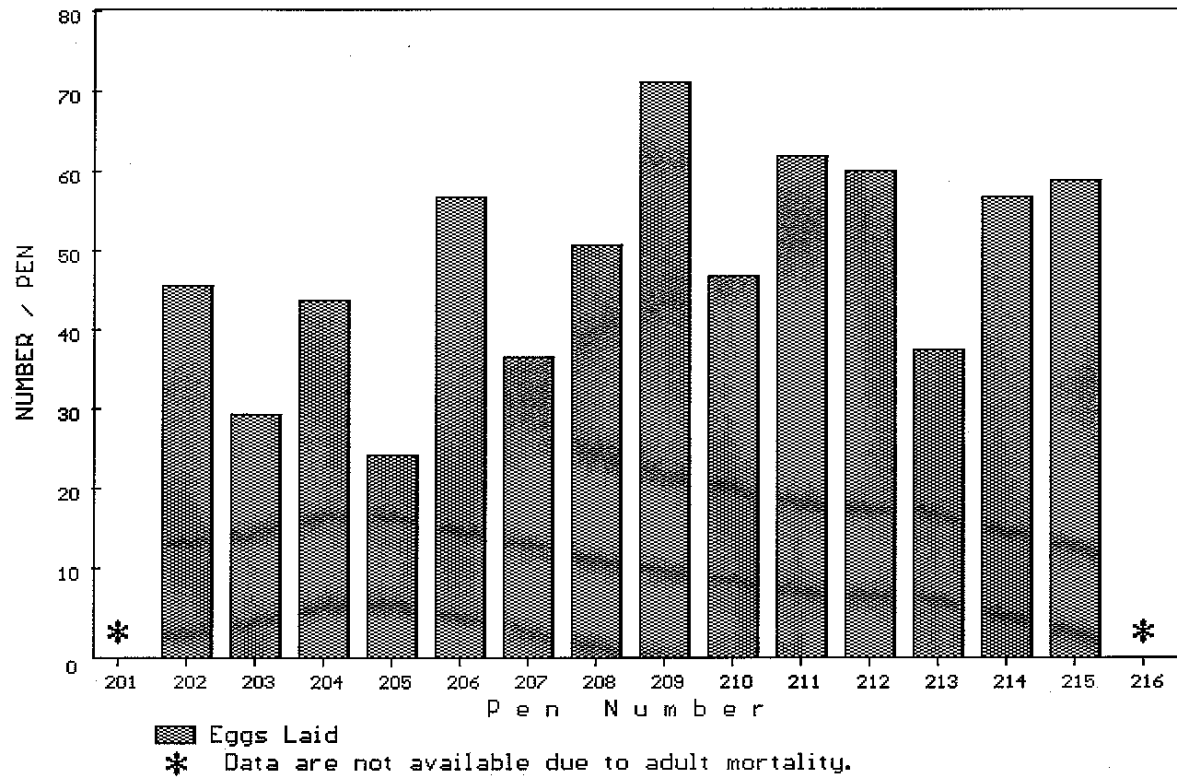
Reproductive Performance by Pen
Appendix VII - Table 1
Eggs Laid / Maximum Laid (%)
from a Northern Bobwhite Reproduction Study with C6 Acid

Replicate	0 PPM				1000 PPM				5000 PPM				10000 PPM			
	Eggs Laid	Max. Laid	%	Arcsin Trans.	Eggs Laid	Max. Laid	%	Arcsin Trans.	Eggs Laid	Max. Laid	%	Arcsin Trans.	Eggs Laid	Max. Laid	%	Arcsin Trans.
1	-	-	-	-	61	71	86	67.96	60	71	85	66.82	-	-	-	-
2	46	71	65	53.60	63	71	89	70.39	51	71	72	57.94	53	71	75	59.77
3	30	71	42	40.54	64	71	90	71.70	60	71	85	66.82	35	71	49	44.60
4	44	71	62	51.93	54	71	76	60.70	53	71	75	59.77	52	71	73	58.85
5	25	71	35	36.40	46	71	65	53.60	56	71	79	62.64	46	71	65	53.60
6	57	71	80	63.64	50	71	70	57.05	47	71	66	54.45	18	71	25	30.23
7	37	71	52	46.21	57	71	80	63.64	41	71	58	49.46	58	71	82	64.67
8	51	71	72	57.94	60	71	85	66.82	52	71	73	58.85	44	71	62	51.93
9	71	71	100	90.00	46	71	65	53.60	68	71	96	78.14	57	71	80	63.64
10	47	71	66	54.45	53	71	75	59.77	51	71	72	57.94	21	71	30	32.95
11	62	71	87	69.14	26	71	37	37.24	51	71	72	57.94	38	71	54	47.02
12	60	71	85	66.82	65	71	92	73.10	49	71	69	56.18	63	71	89	70.39
13	38	71	54	47.02	50	71	70	57.05	18	71	25	30.23	25	71	35	36.40
14	57	71	80	63.64	38	71	54	47.02	34	71	48	43.79	59	71	83	65.73
15	59	71	83	65.73	64	71	90	71.70	58	71	82	64.67	37	71	52	46.21
16	-	-	-	-	57	71	80	63.64	9	71	13	20.86	58	71	82	64.67
Total	684	994			854	1136			758	1136			664	1065		
Mean	49	71	69	57.65	53	71	75	60.94	47	71	67	55.41	44	71	62	52.71
SD	13	0	19	13.72	11	0	15	9.87	15	0	22	14.06	15	0	21	12.76

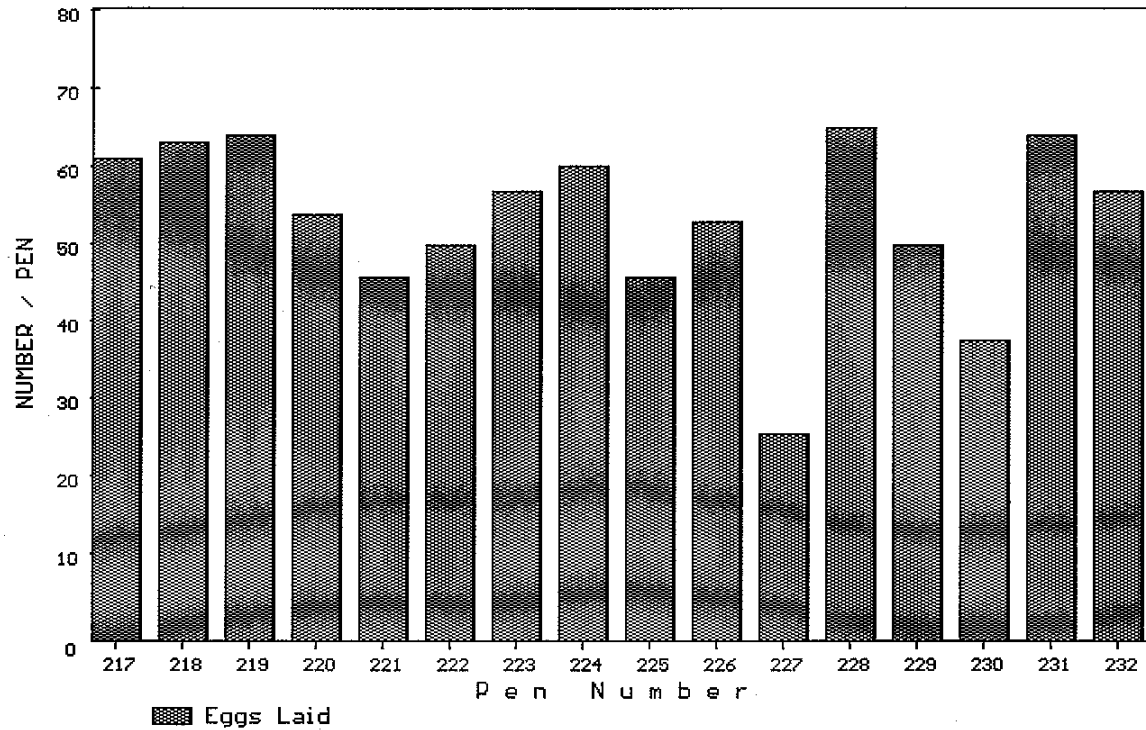
- Data are not available due to adult mortality.

Differences between the control and each treatment group were not significant ($p > 0.05$).

Appendix VII - Figure 1a
Eggs Laid from a Northern Bobwhite
Reproduction Study with C6 Acid - Control

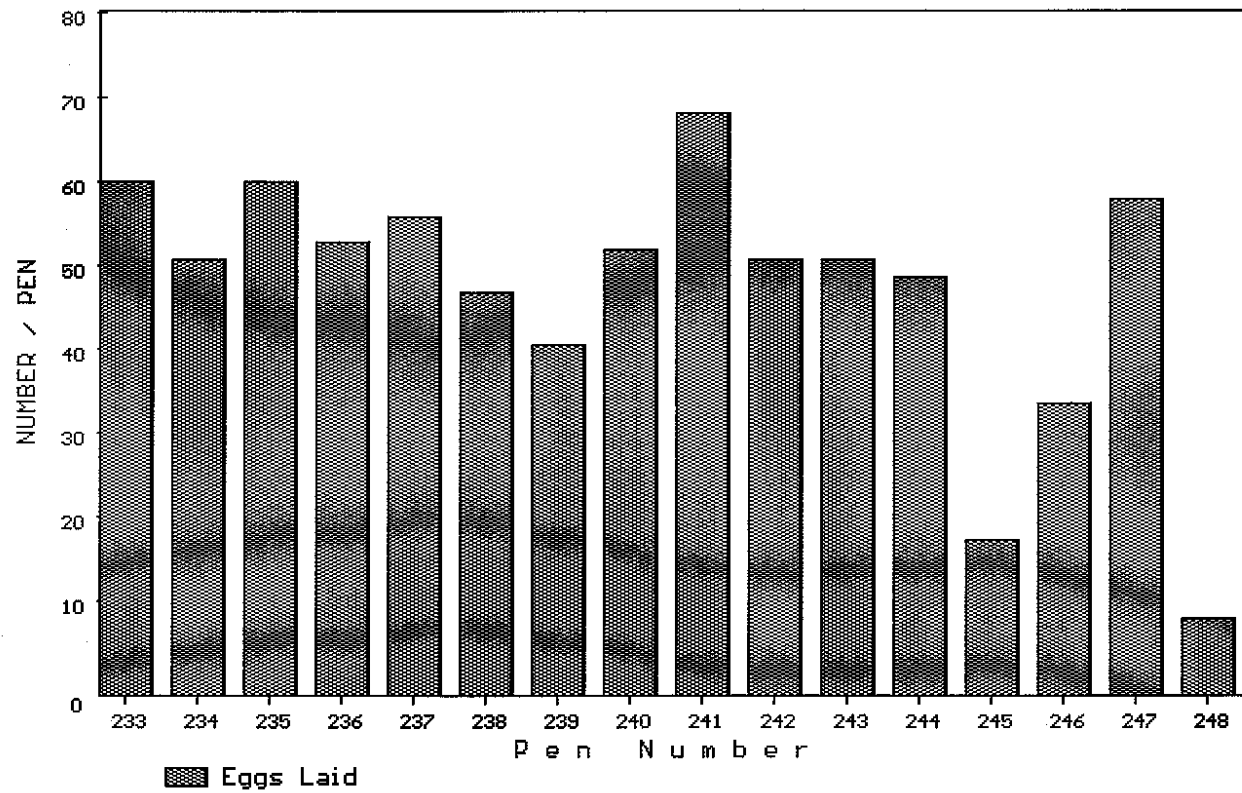


Appendix VII - Figure 1b
Eggs Laid from a Northern Bobwhite
Reproduction Study with C6 Acid - 1000 PPM

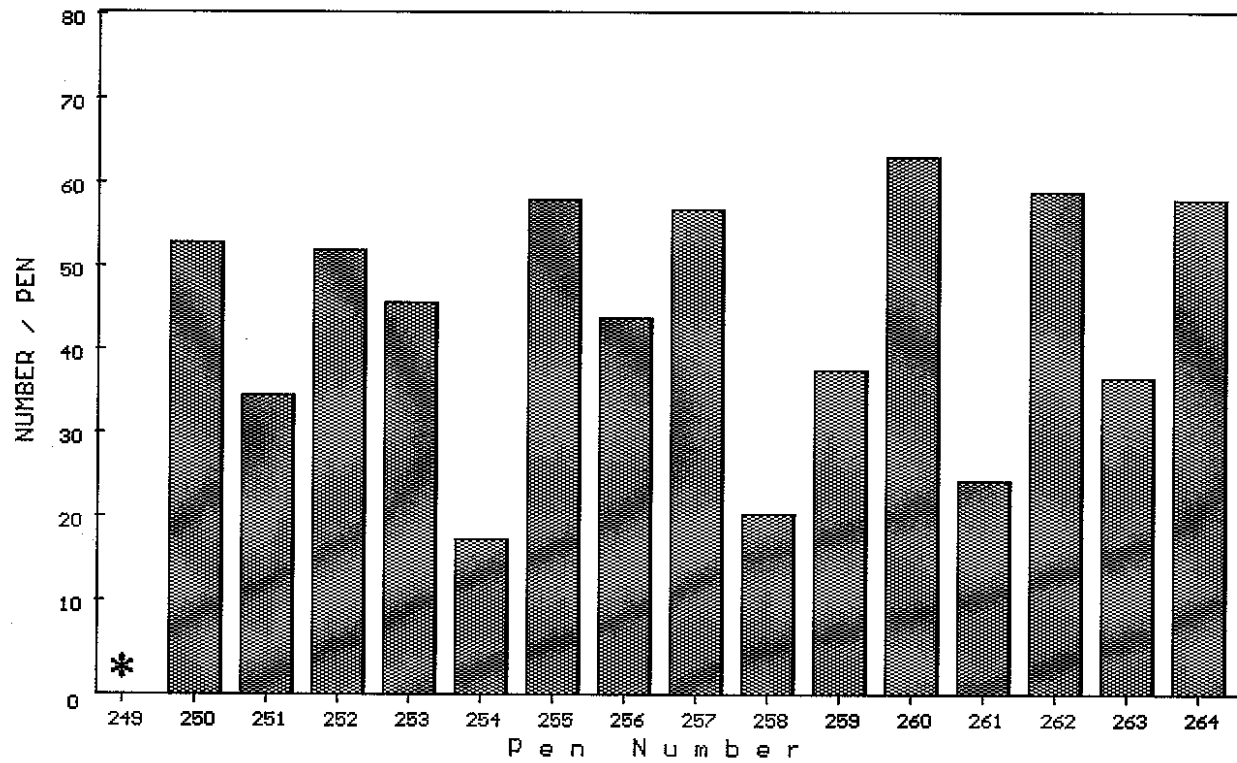


- 125 -

Appendix VII - Figure 1c
Eggs Laid from a Northern Bobwhite
Reproduction Study with C6 Acid - 5000 PPM



Appendix VII - Figure 1d
Eggs Laid from a Northern Bobwhite
Reproduction Study with C6 Acid - 10000 PPM



█ Eggs Laid

* Data are not available due to adult mortality.

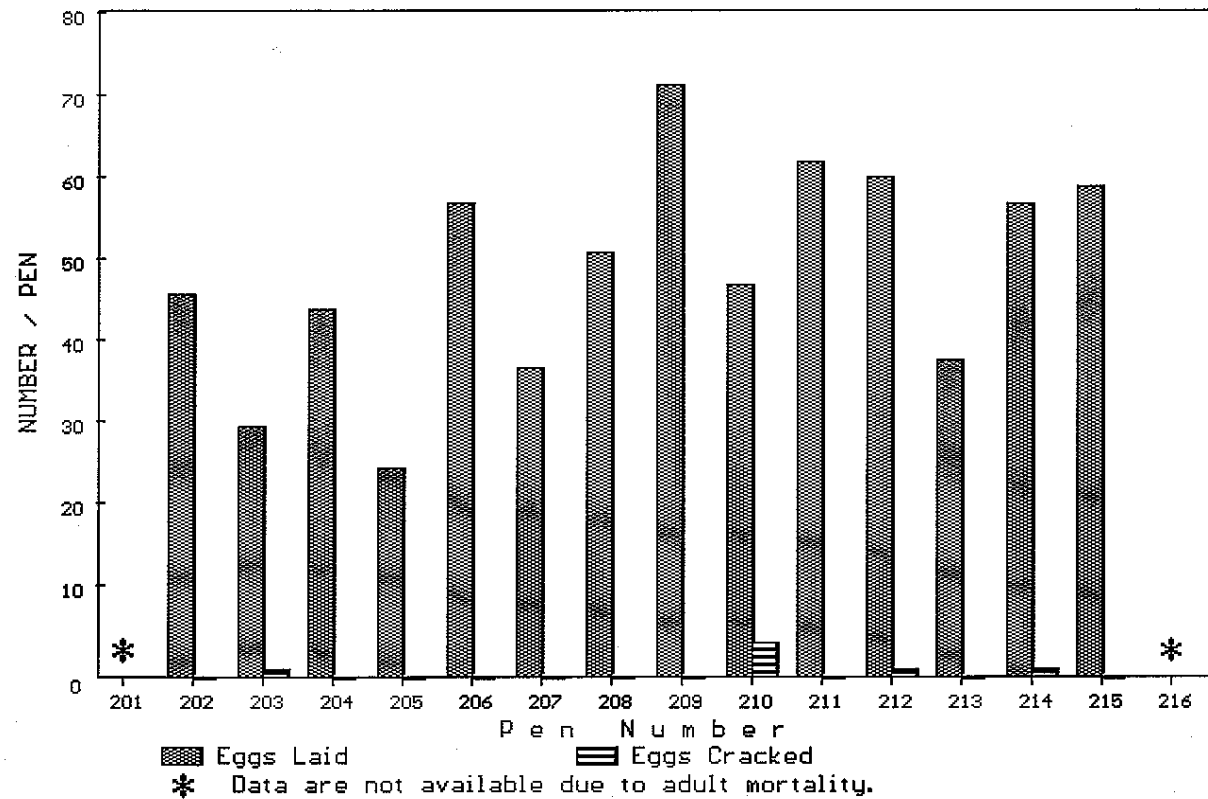
Reproductive Performance by Pen
Appendix VII - Table 2
Eggs Cracked / Eggs Laid (%)
from a Northern Bobwhite Reproduction Study with C6 Acid

Replicate	0 PPM				1000 PPM				5000 PPM				10000 PPM			
	Eggs Crack	Eggs Laid	%	Arcsin Trans.	Eggs Crack	Eggs Laid	%	Arcsin Trans.	Eggs Crack	Eggs Laid	%	Arcsin Trans.	Eggs Crack	Eggs Laid	%	Arcsin Trans.
1	-	-	-	-	8	61	13	21.23	11	60	18	25.35	-	-	-	-
2	0	46	0	0.00	2	63	3	10.26	2	51	4	11.42	0	53	0	0.00
3	1	30	3	10.52	0	64	0	0.00	0	60	0	0.00	6	35	17	24.46
4	0	44	0	0.00	1	54	2	7.82	2	53	4	11.20	0	52	0	0.00
5	0	25	0	0.00	1	46	2	8.48	7	56	13	20.70	0	46	0	0.00
6	0	57	0	0.00	6	50	12	20.27	1	47	2	8.39	0	18	0	0.00
7	0	37	0	0.00	1	57	2	7.61	0	41	0	0.00	0	58	0	0.00
8	0	51	0	0.00	0	60	0	0.00	0	52	0	0.00	0	44	0	0.00
9	0	71	0	0.00	0	46	0	0.00	0	68	0	0.00	0	57	0	0.00
10	4	47	9	16.96	0	53	0	0.00	0	51	0	0.00	0	21	0	0.00
11	0	62	0	0.00	0	26	0	0.00	0	51	0	0.00	1	38	3	9.34
12	1	60	2	7.42	1	65	2	7.13	4	49	8	16.60	1	63	2	7.24
13	0	38	0	0.00	0	50	0	0.00	1	18	6	13.63	0	25	0	0.00
14	1	57	2	7.61	2	38	5	13.26	0	34	0	0.00	0	59	0	0.00
15	0	59	0	0.00	0	64	0	0.00	0	58	0	0.00	1	37	3	9.46
16	-	-	-	-	0	57	0	0.00	0	9	0	0.00	2	58	3	10.70
Total	7	684			22	854			28	758			11	664		
Mean	1	49	1	3.04	1	53	3	6.00	2	47	3	6.71	1	44	2	4.08
SD	1	13	2	5.42	2	11	4	7.34	3	15	5	8.72	2	15	4	7.03

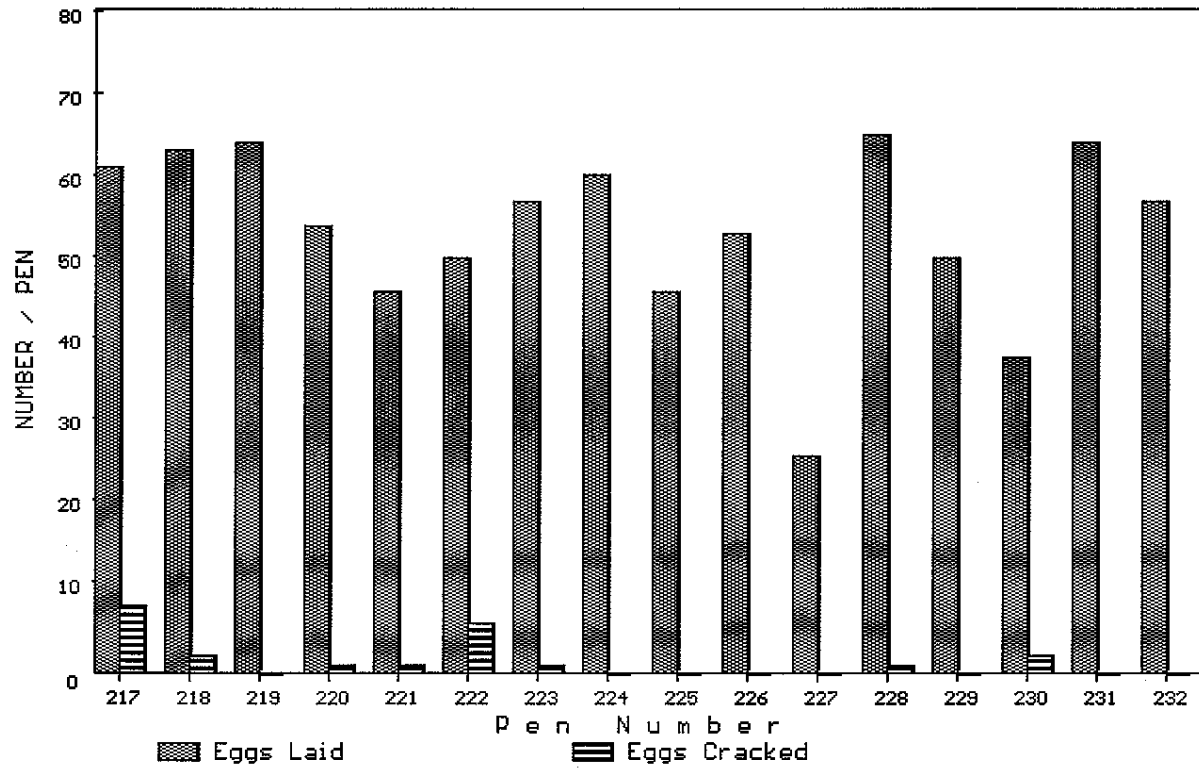
- Data are not available due to adult mortality.

Differences between the control and each treatment group were not significant (p > 0.05).

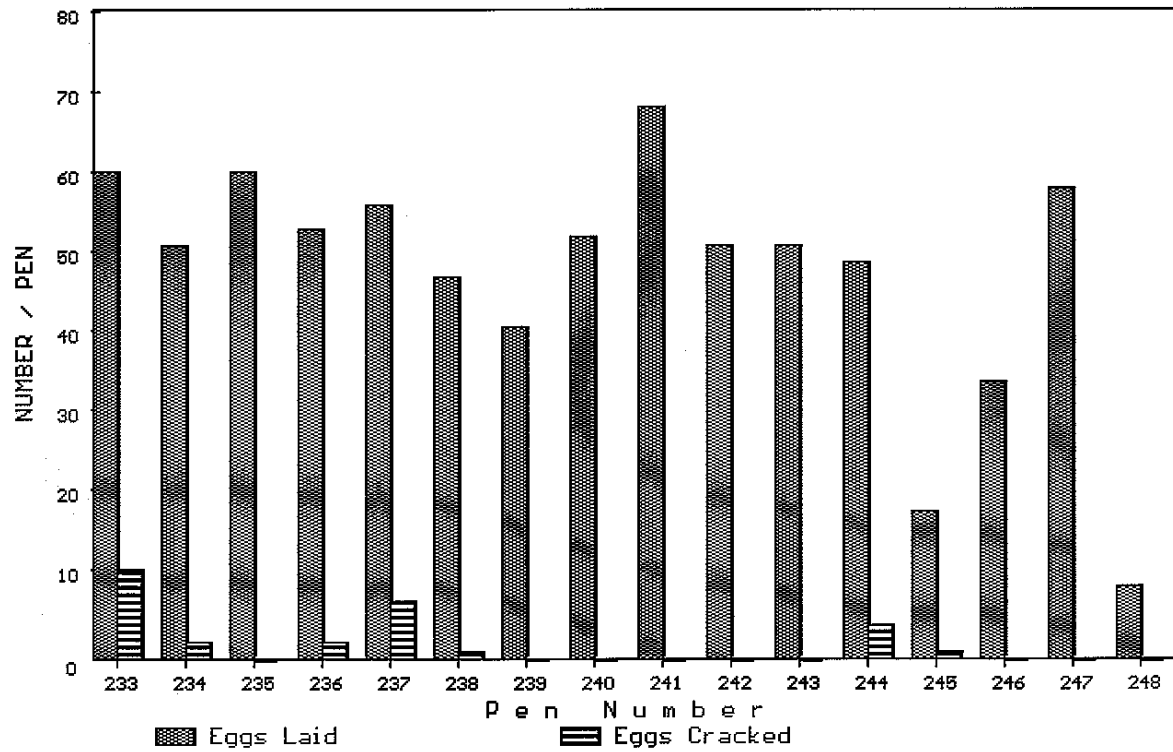
Appendix III - Figure 2a
Eggs Cracked / Eggs Laid from a Northern Bobwhite
Reproduction Study with C6 Acid - Control



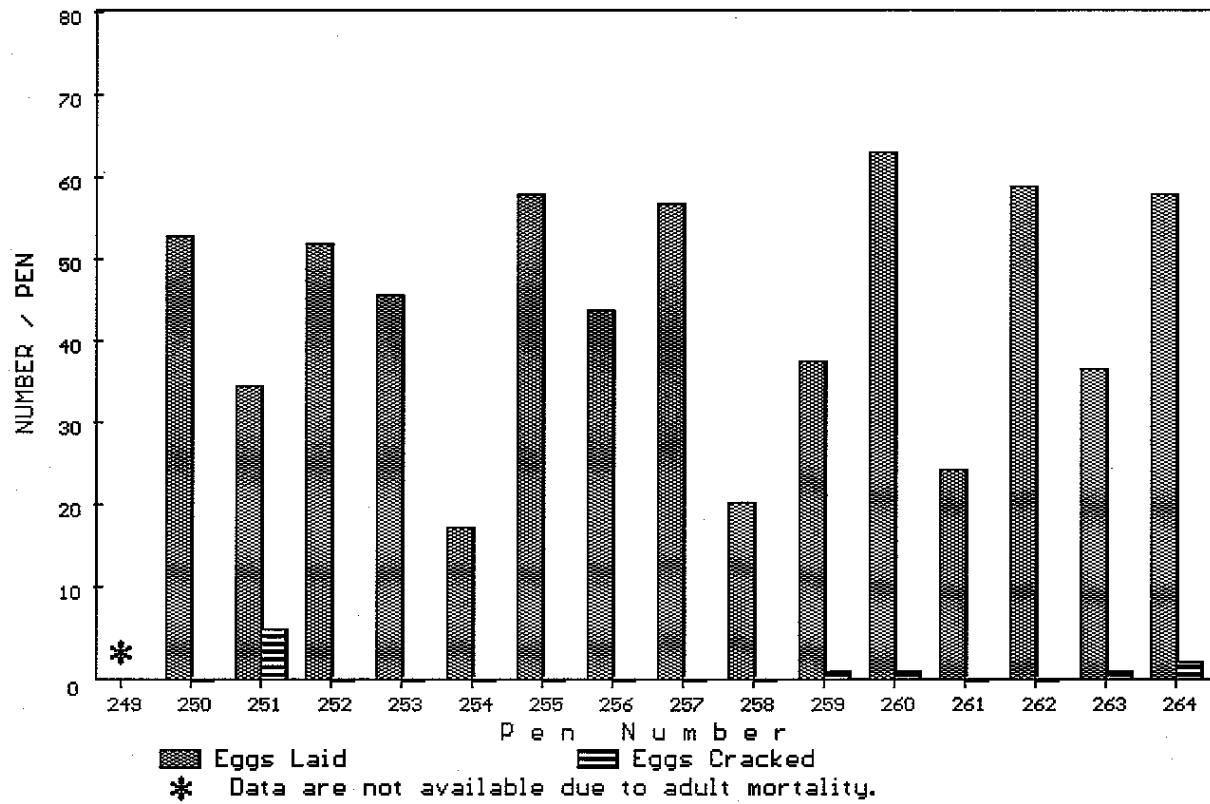
Appendix VII - Figure 2b
Eggs Cracked / Eggs Laid from a Northern Bobwhite
Reproduction Study with C6 Acid - 1000 PPM



Appendix VII - Figure 2c
Eggs Cracked / Eggs Laid from a Northern Bobwhite
Reproduction Study with C6 Acid - 5000 PPM



Appendix VII - Figure 2d
 Eggs Cracked / Eggs Laid from a Northern Bobwhite
 Reproduction Study with C6 Acid - 10000 PPM



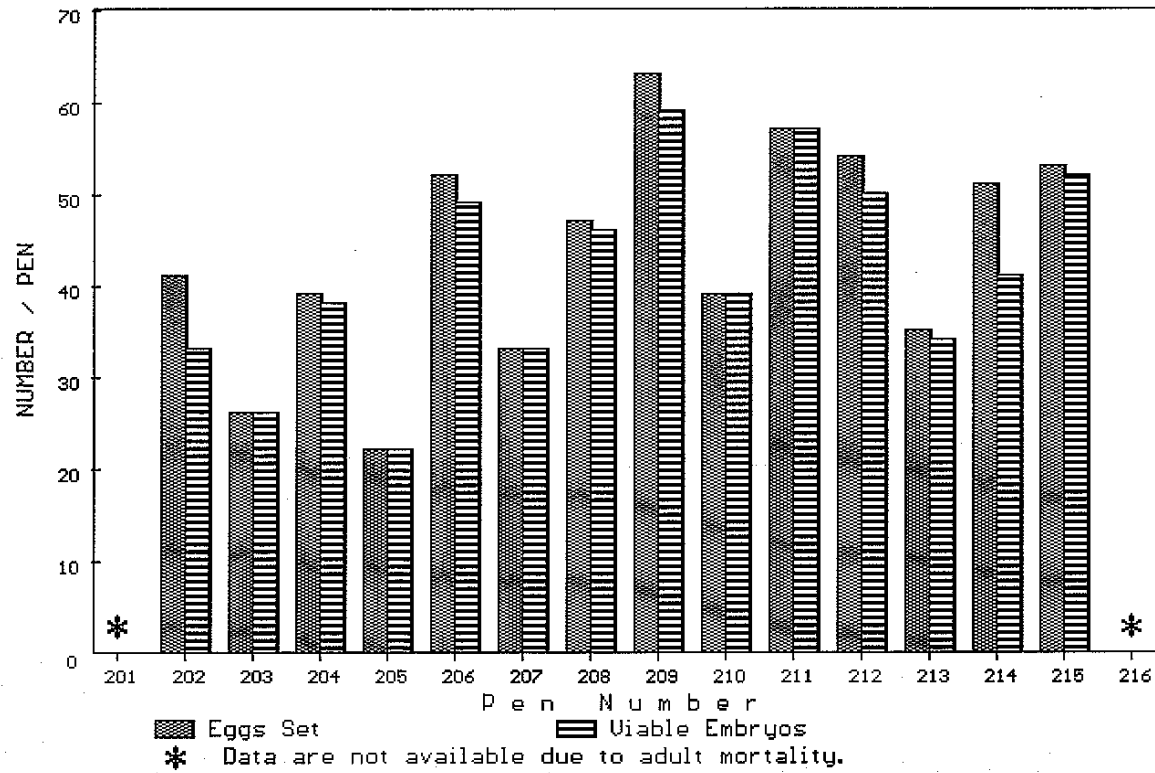
*Reproductive Performance by Pen
Appendix VII - Table 3
Viable Embryos / Eggs Set (%)
from a Northern Bobwhite Reproduction Study with C6 Acid*

Replicate	0 PPM				1000 PPM				5000 PPM				10000 PPM			
	Viable Eggs		Arcsin		Viable Eggs		Arcsin		Viable Eggs		Arcsin		Viable Eggs		Arcsin	
	Embr.	Set	%	Trans.	Embr.	Set	%	Trans.	Embr.	Set	%	Trans.	Embr.	Set	%	Trans.
1	-	-	-	-	48	48	100	90.00	30	43	70	56.64	-	-	-	-
2	33	41	80	63.79	52	55	95	76.49	44	44	100	90.00	42	48	88	69.30
3	26	26	100	90.00	58	59	98	82.52	54	54	100	90.00	18	25	72	58.05
4	38	39	97	80.79	36	48	75	60.00	43	45	96	77.83	46	47	98	81.61
5	22	22	100	90.00	39	41	95	77.24	43	43	100	90.00	42	42	100	90.00
6	49	52	94	76.10	31	33	94	75.75	41	41	100	90.00	14	14	100	90.00
7	33	33	100	90.00	51	51	100	90.00	33	37	89	70.80	50	52	96	78.69
8	46	47	98	81.61	53	53	100	90.00	46	47	98	81.61	39	39	100	90.00
9	59	63	94	75.41	42	42	100	90.00	61	63	97	79.74	45	52	87	68.48
10	39	39	100	90.00	48	48	100	90.00	29	46	63	52.56	17	18	94	76.37
11	57	57	100	90.00	20	22	91	72.45	47	47	100	90.00	34	34	100	90.00
12	50	54	93	74.21	46	58	79	62.94	35	38	92	73.68	55	57	96	79.20
13	34	35	97	80.27	45	45	100	90.00	11	12	92	73.22	20	20	100	90.00
14	41	51	80	63.72	30	31	97	79.65	24	28	86	67.79	54	54	100	90.00
15	52	53	98	82.10	57	59	97	79.39	52	52	100	90.00	31	31	100	90.00
16	-	-	-	-	51	52	98	82.03	5	6	83	65.91	47	50	94	75.82
Total	579	612			707	745			598	646			554	583		
Mean	41	44	95	80.57	44	47	95	80.53	37	40	92	77.49	37	39	95	81.17
SD	11	12	7	9.20	11	11	8	9.63	15	15	11	12.44	14	14	8	10.16

- Data are not available due to adult mortality.

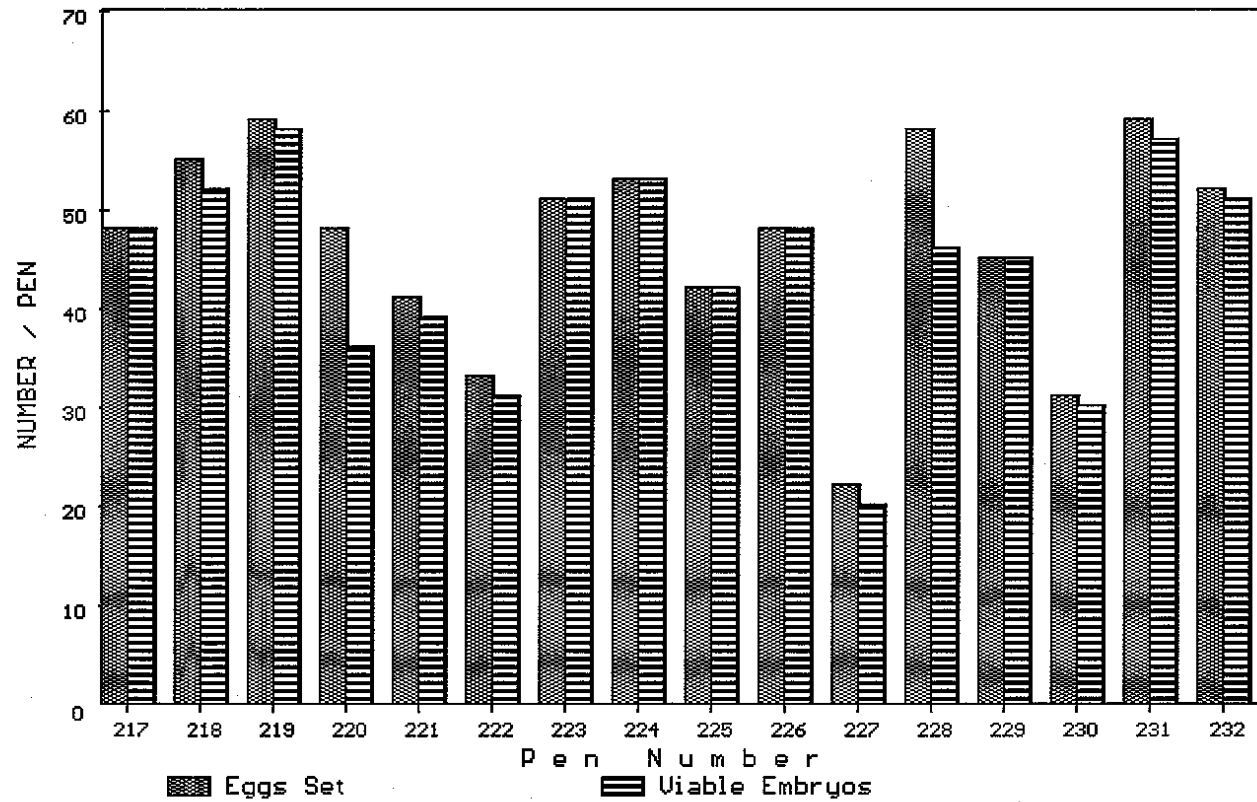
Differences between the control and each treatment group were not significant (p > 0.05).

Appendix VII - Figure 3a
 Viable Embryos / Eggs Set from a Northern Bobwhite
 Reproduction Study with C6 Acid - Control

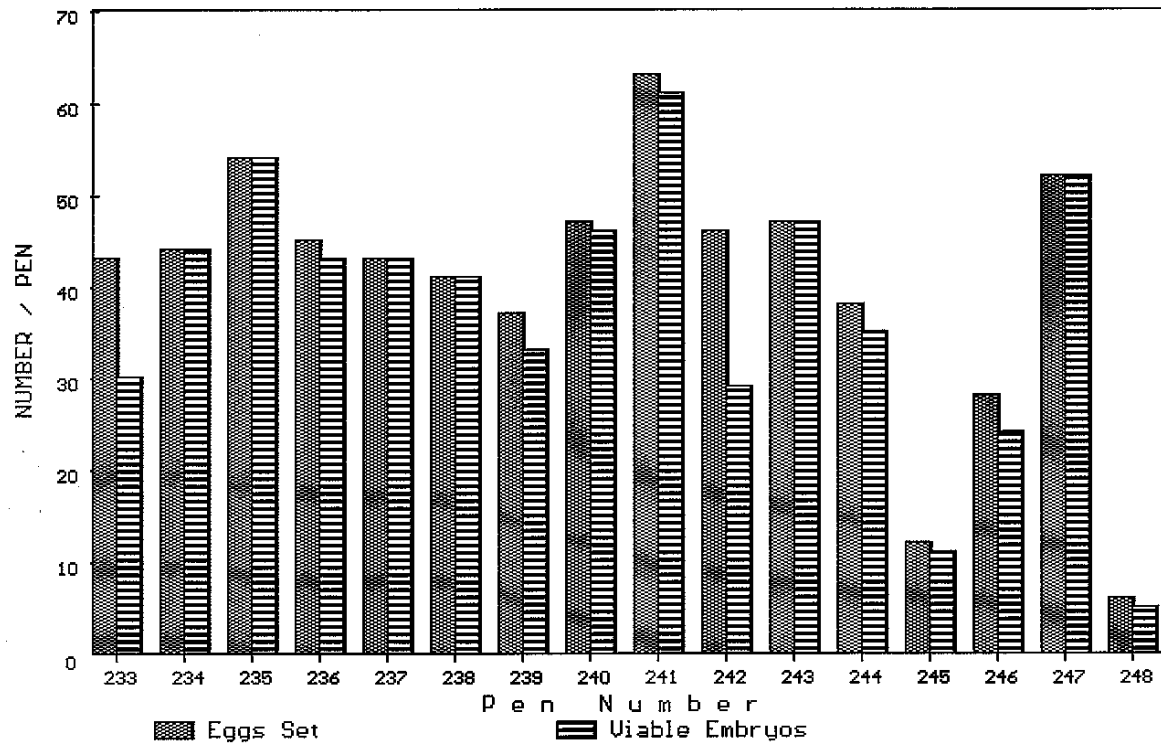


- 134 -

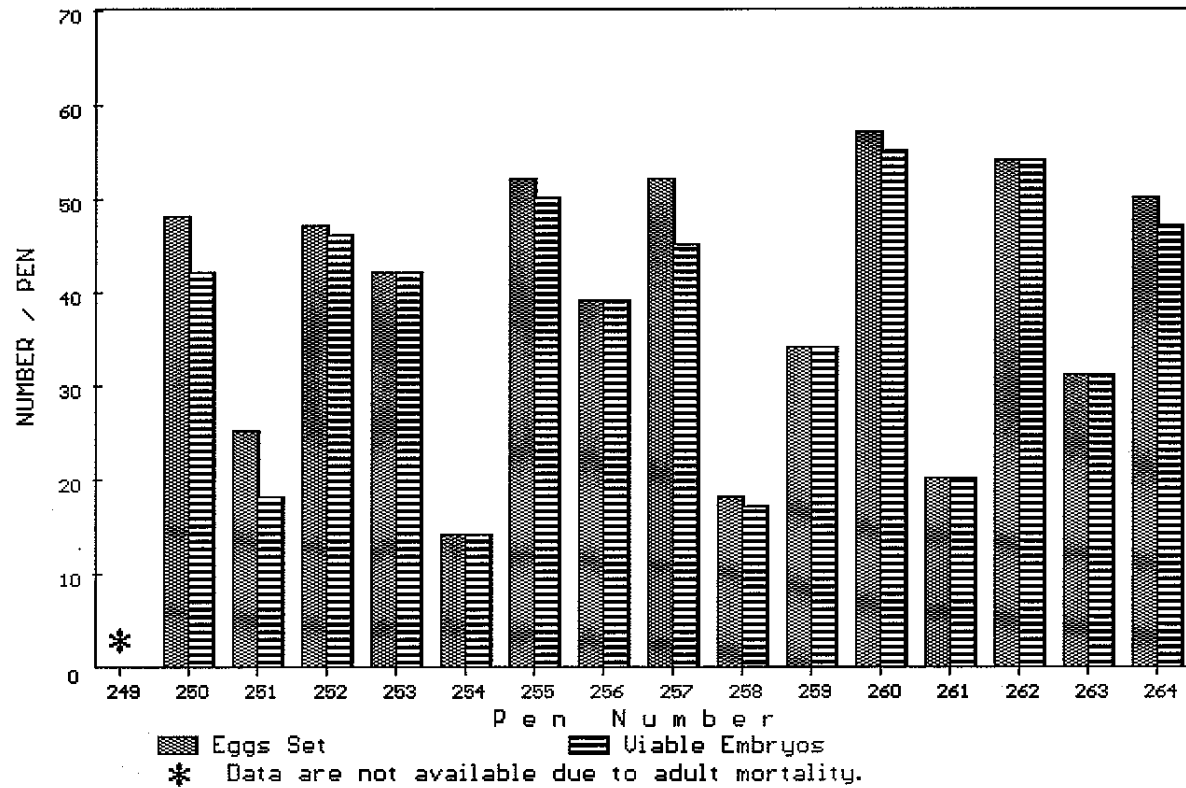
Appendix VII - Figure 3b
Viable Embryos / Eggs Set from a Northern Bobwhite
Reproduction Study with C6 Acid - 1000 PPM



Appendix VII - Figure 3c
Viable Embryos / Eggs Set from a Northern Bobwhite
Reproduction Study with C6 Acid - 5000 PPM



Appendix VII - Figure 3d
 Viable Embryos / Eggs Set from a Northern Bobwhite
 Reproduction Study with C6 Acid - 10000 PPM

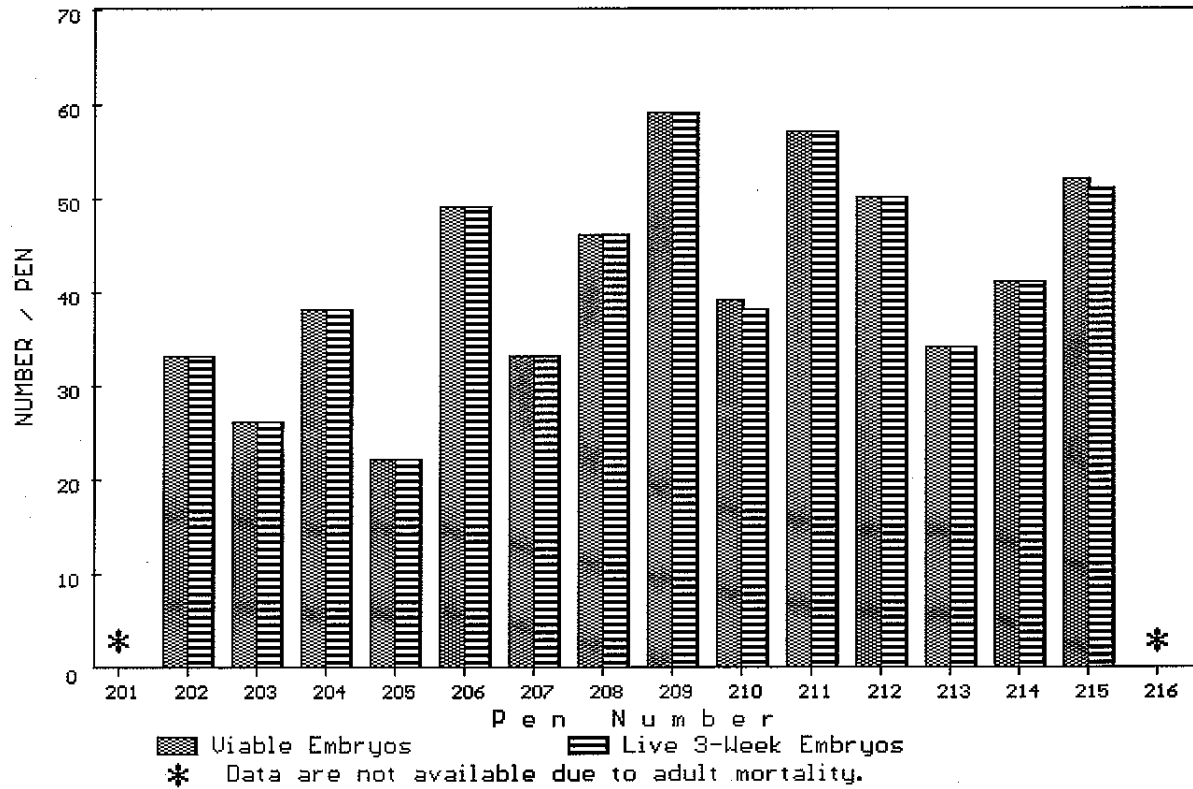


Reproductive Performance by Pen
Appendix VII - Table 4
Live 3-Week Embryos / Viable Embryos (%)
from a Northern Bobwhite Reproduction Study with C6 Acid

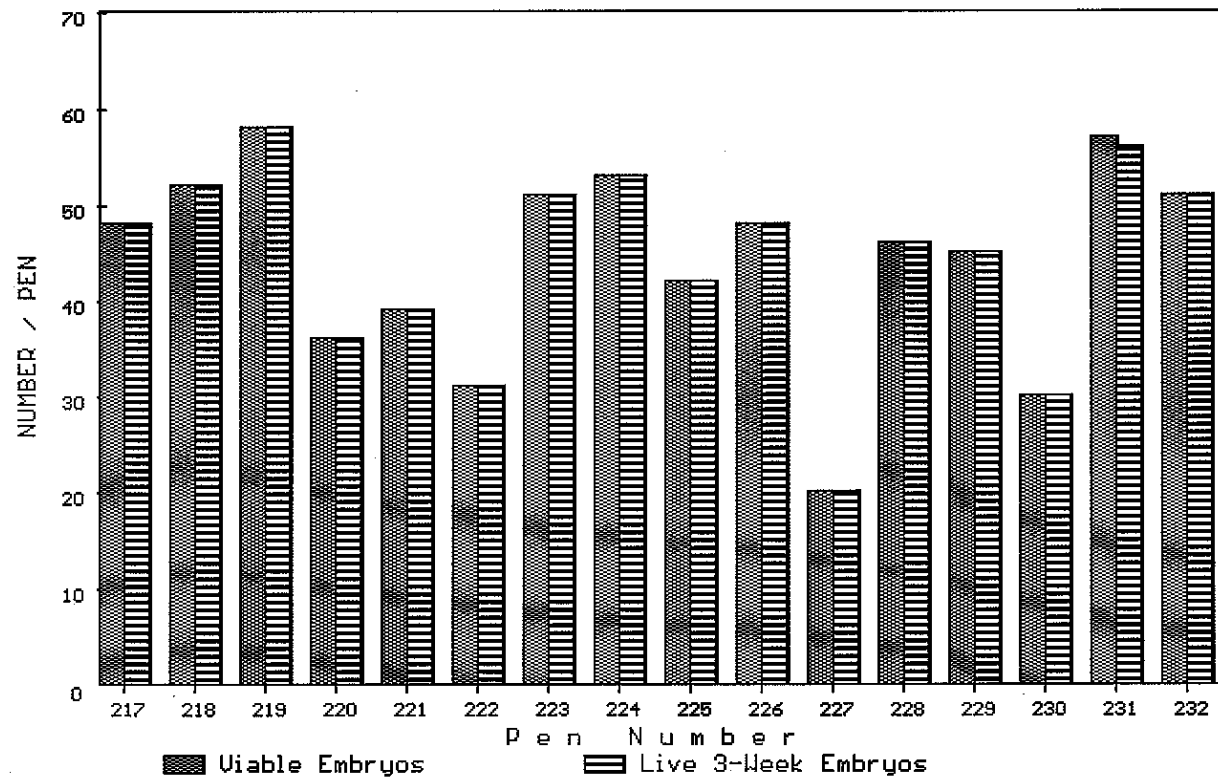
Replicate	0 PPM				1000 PPM				5000 PPM				10000 PPM			
	Live 3-Week	Viable Embr.	%	Arcsin Trans.	Live 3-Week	Viable Embr.	%	Arcsin Trans.	Live 3-Week	Viable Embr.	%	Arcsin Trans.	Live 3-Week	Viable Embr.	%	Arcsin Trans.
1	-	-	-	-	48	48	100	90.00	30	30	100	90.00	-	-	-	-
2	33	33	100	90.00	52	52	100	90.00	44	44	100	90.00	42	42	100	90.00
3	26	26	100	90.00	58	58	100	90.00	54	54	100	90.00	18	18	100	90.00
4	38	38	100	90.00	36	36	100	90.00	43	43	100	90.00	46	46	100	90.00
5	22	22	100	90.00	39	39	100	90.00	43	43	100	90.00	42	42	100	90.00
6	49	49	100	90.00	31	31	100	90.00	41	41	100	90.00	14	14	100	90.00
7	33	33	100	90.00	51	51	100	90.00	33	33	100	90.00	50	50	100	90.00
8	46	46	100	90.00	53	53	100	90.00	46	46	100	90.00	39	39	100	90.00
9	59	59	100	90.00	42	42	100	90.00	61	61	100	90.00	45	45	100	90.00
10	38	39	97	80.79	48	48	100	90.00	29	29	100	90.00	17	17	100	90.00
11	57	57	100	90.00	20	20	100	90.00	47	47	100	90.00	34	34	100	90.00
12	50	50	100	90.00	46	46	100	90.00	35	35	100	90.00	54	55	98	82.25
13	34	34	100	90.00	45	45	100	90.00	11	11	100	90.00	20	20	100	90.00
14	41	41	100	90.00	30	30	100	90.00	24	24	100	90.00	54	54	100	90.00
15	51	52	98	82.03	56	57	98	82.39	52	52	100	90.00	31	31	100	90.00
16	-	-	-	-	51	51	100	90.00	5	5	100	90.00	47	47	100	90.00
Total	577	579			706	707			598	598			553	554		
Mean	41	41	100	88.77	44	44	100	89.52	37	37	100	90.00	37	37	100	89.48
SD	11	11	1	3.13	11	11	1	1.90	15	15	0	0.00	14	14	1	2.00

- Data are not available due to adult mortality.
Differences between the control and each treatment group were not significant (p > 0.05).

Appendix VII - Figure 4a
Live 3-Week Embryos / Viable Embryos from a Northern Bobwhite
Reproduction Study with C6 Acid - Control

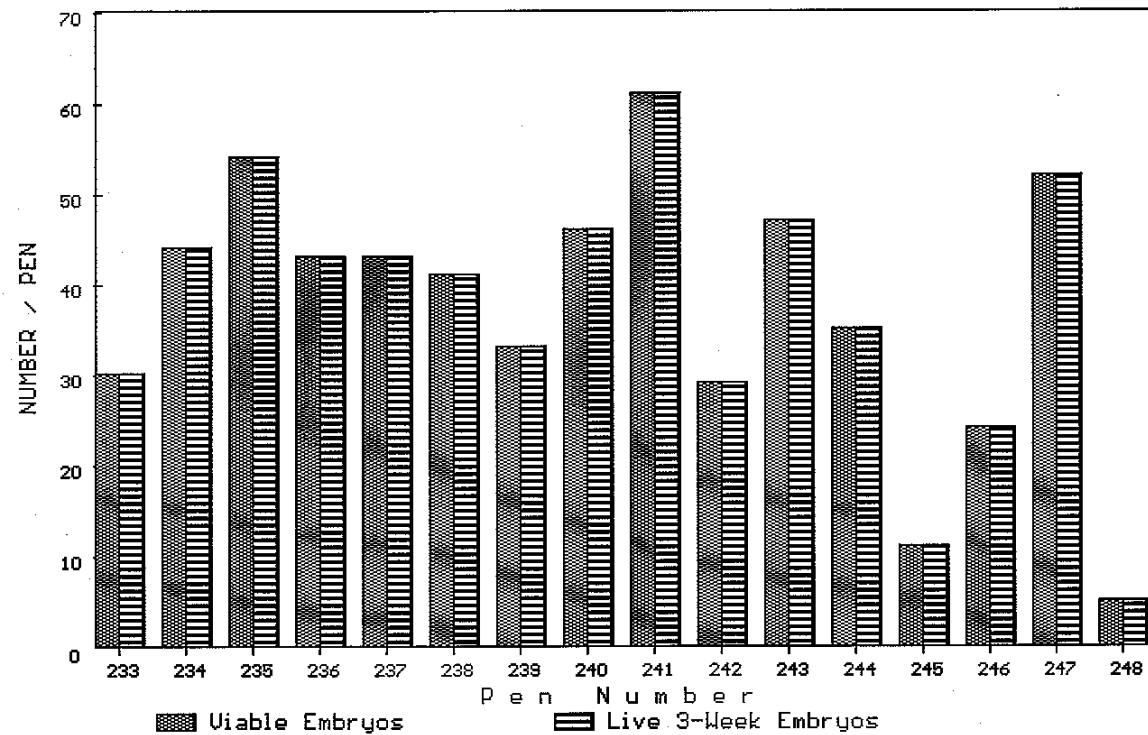


Appendix VII - Figure 4b
Live 3-Week Embryos / Viable Embryos from a Northern Bobwhite
Reproduction Study with C6 Acid - 1000 PPM

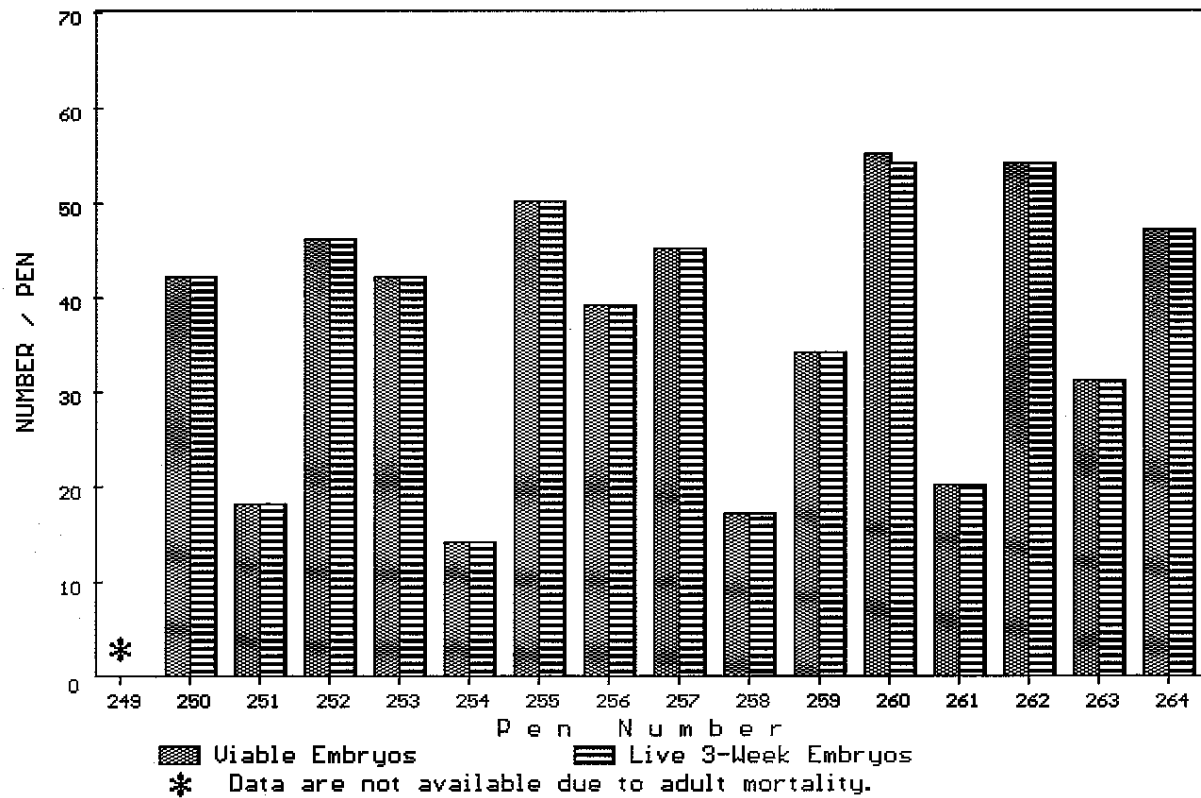


- 140 -

Appendix UII - Figure 4c
Live 3-Week Embryos / Uiable Embryos from a Northern Bobwhite
Reproduction Study with C6 Acid - 5000 PPM



Appendix VII - Figure 4d
 Live 3-Week Embryos / Viable Embryos from a Northern Bobwhite
 Reproduction Study with C6 Acid - 10000 PPM

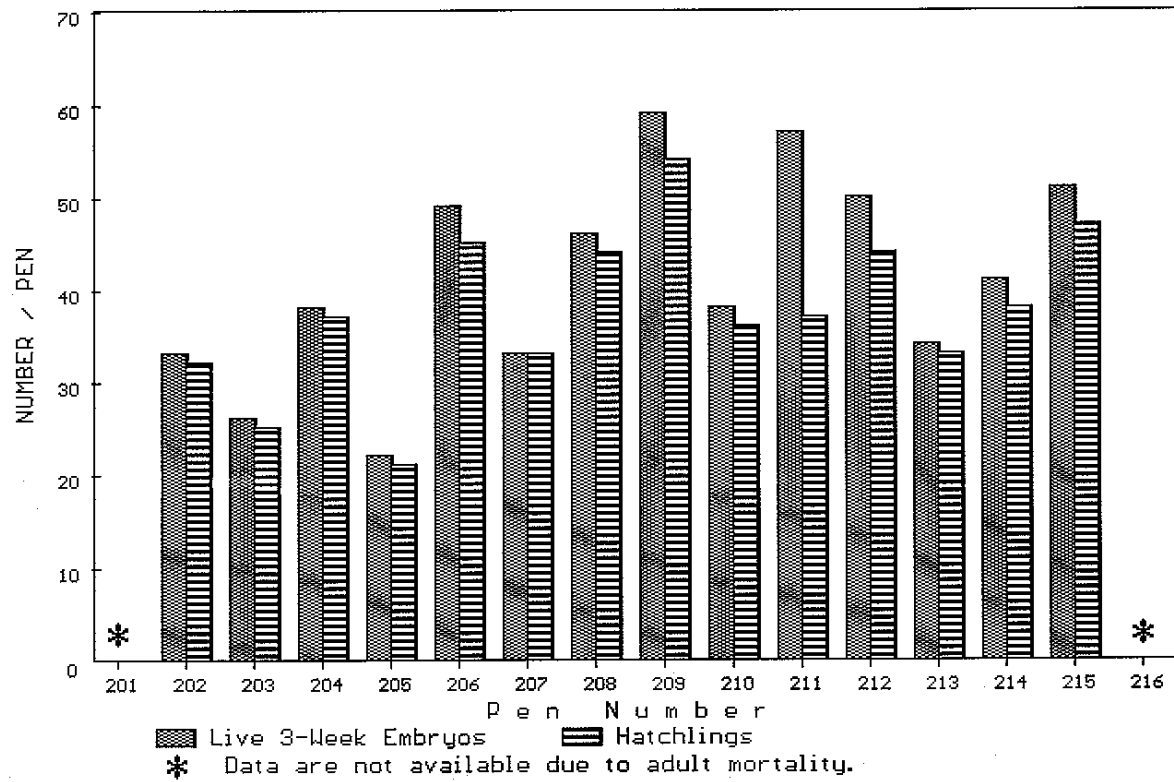


Reproductive Performance by Pen
Appendix VII - Table 5
Hatchlings / Live 3-Week Embryos (%)
from a Northern Bobwhite Reproduction Study with C6 Acid

Replicate	0 PPM				1000 PPM				5000 PPM				10000 PPM			
	Number Hatch.	Live 3-Week	%	Arcsin Trans.	Number Hatch.	Live 3-Week	%	Arcsin Trans.	Number Hatch.	Live 3-Week	%	Arcsin Trans.	Number Hatch.	Live 3-Week	%	Arcsin Trans.
1	-	-	-	-	47	48	98	81.70	24	30	80	63.43	-	-	-	-
2	32	33	97	79.98	47	52	90	71.94	41	44	93	74.86	38	42	90	72.02
3	25	26	96	78.69	53	58	91	72.93	38	54	70	57.02	18	18	100	90.00
4	37	38	97	80.66	32	36	89	70.53	39	43	91	72.24	44	46	96	77.96
5	21	22	95	77.69	36	39	92	73.90	41	43	95	77.55	40	42	95	77.40
6	45	49	92	73.40	24	31	77	61.63	41	41	100	90.00	13	14	93	74.50
7	33	33	100	90.00	50	51	98	81.95	33	33	100	90.00	42	50	84	66.42
8	44	46	96	77.96	52	53	98	82.10	41	46	89	70.75	36	39	92	73.90
9	54	59	92	73.08	41	42	98	81.12	58	61	95	77.19	37	45	82	65.06
10	36	38	95	76.74	42	48	88	69.30	28	29	97	79.30	15	17	88	69.94
11	37	57	65	53.68	19	20	95	77.08	40	47	85	67.30	32	34	94	75.96
12	44	50	88	69.73	45	46	98	81.52	32	35	91	72.98	46	54	85	67.36
13	33	34	97	80.13	35	45	78	61.87	9	11	82	64.76	20	20	100	90.00
14	38	41	93	74.31	29	30	97	79.48	24	24	100	90.00	50	54	93	74.21
15	47	51	92	73.74	52	56	93	74.50	52	52	100	90.00	18	31	58	49.64
16	-	-	-	-	48	51	94	75.96	5	5	100	90.00	47	47	100	90.00
Total	526	577			652	706			546	598			496	553		
Mean	38	41	93	75.70	41	44	92	74.84	34	37	92	76.71	33	37	90	74.29
SD	9	11	8	7.97	11	11	7	6.67	14	15	9	10.83	13	14	11	10.67

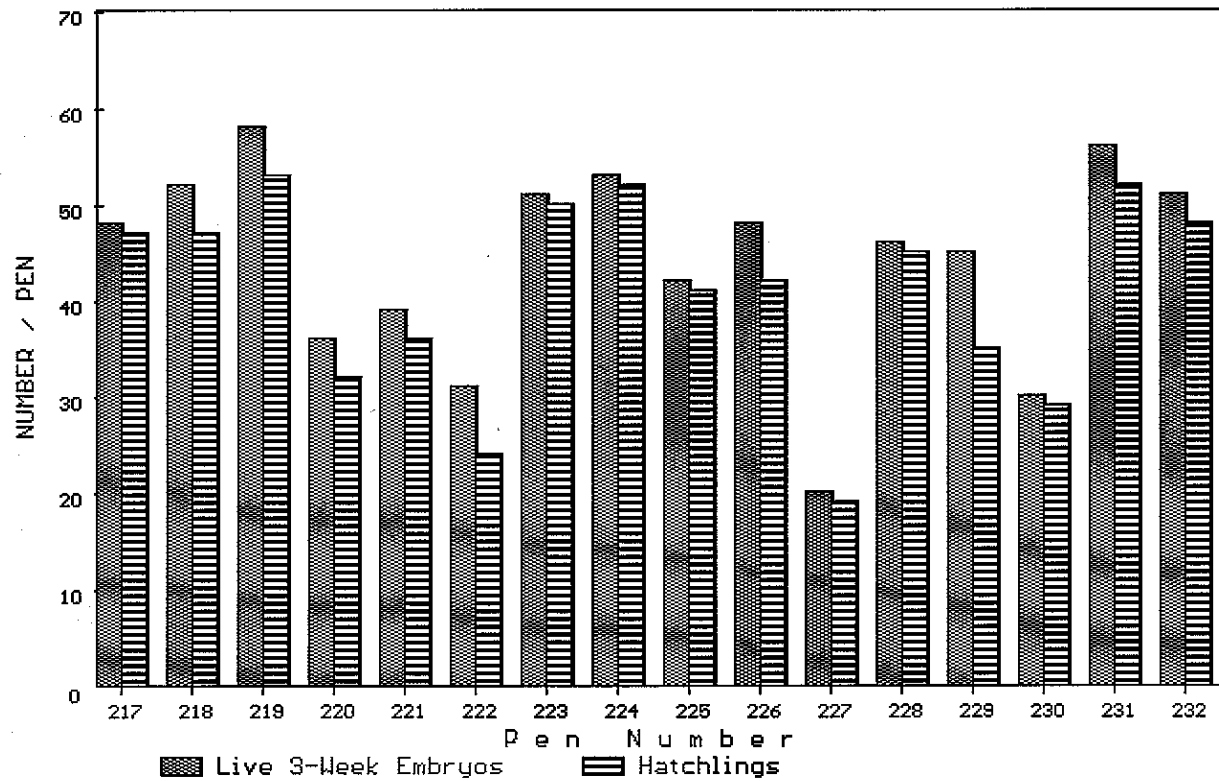
- Data are not available due to adult mortality.
Differences between the control and each treatment group were not significant ($p > 0.05$).

Appendix VII - Figure 5a
Hatchlings / Live 3-Week Embryos from a Northern Bobwhite
Reproduction Study with C6 Acid - Control



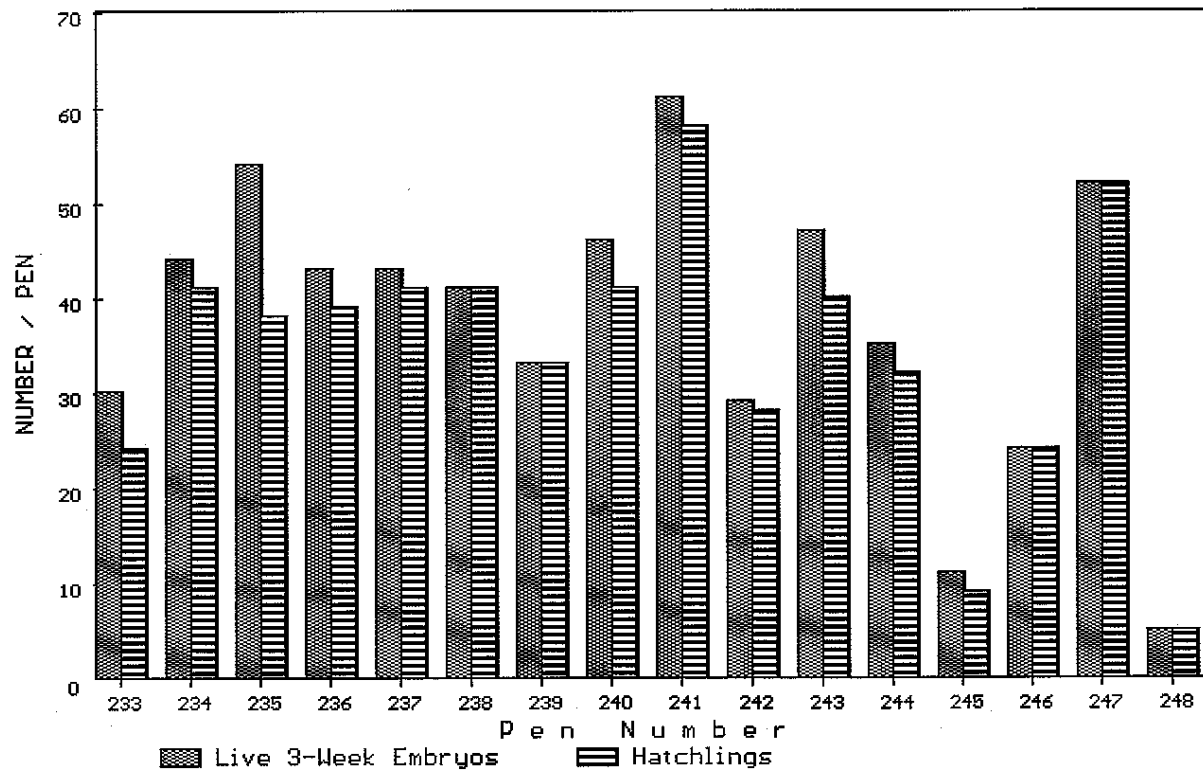
- 144 -

Appendix VII - Figure 5b
Hatchlings / Live 3-Week Embryos from a Northern Bobwhite
Reproduction Study with C6 Acid - 1000 PPM

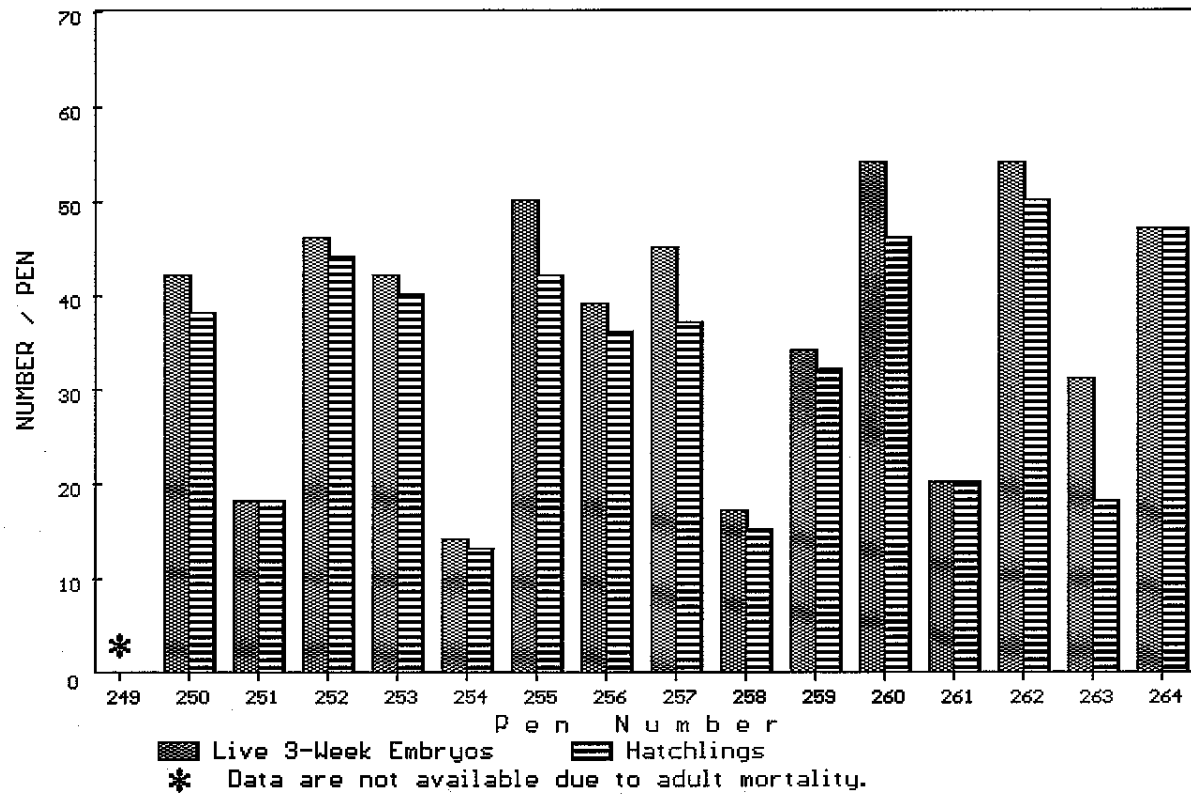


- 145 -

Appendix VII - Figure 5c
Hatchlings / Live 3-Week Embryos from a Northern Bobwhite
Reproduction Study with C6 Acid - 5000 PPM



Appendix VII - Figure 5d
Hatchlings / Live 3-Week Embryos from a Northern Bobwhite
Reproduction Study with C6 Acid - 10000 PPM

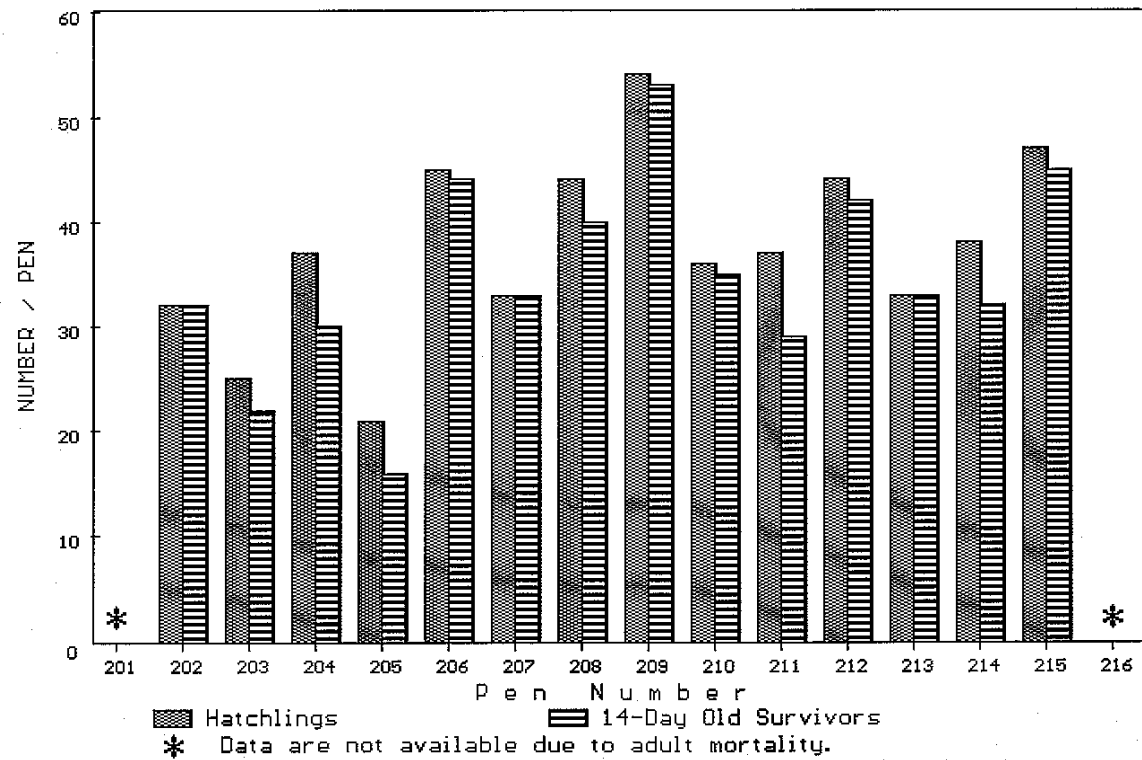


Reproductive Performance by Pen
Appendix VII - Table 6
14-Day Old Survivors / Hatchlings (%)
from a Northern Bobwhite Reproduction Study with C6 Acid

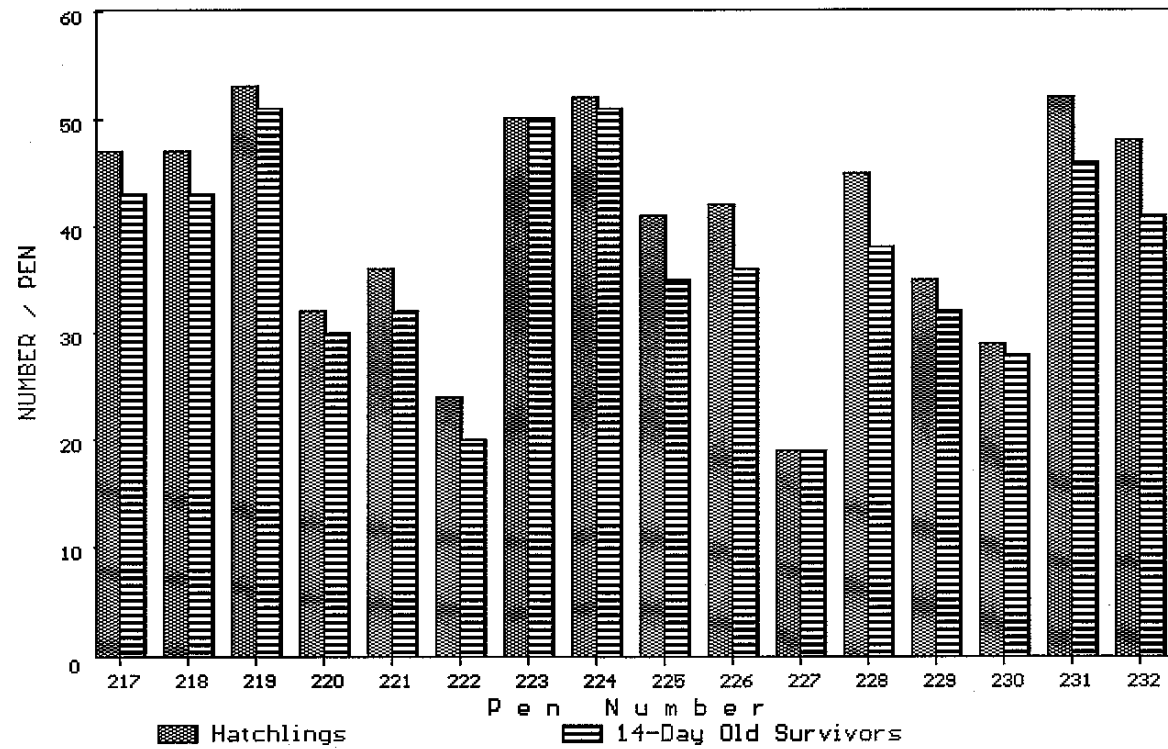
Replicate	0 PPM				1000 PPM				5000 PPM				10000 PPM			
	14-Day Old	Number Hatch.	%	Arcsin Trans.	14-Day Old	Number Hatch.	%	Arcsin Trans.	14-Day Old	Number Hatch.	%	Arcsin Trans.	14-Day Old	Number Hatch.	%	Arcsin Trans.
1	-	-	-	-	43	47	91	73.04	24	24	100	90.00	-	-	-	-
2	32	32	100	90.00	43	47	91	73.04	33	41	80	63.79	35	38	92	73.68
3	22	25	88	69.73	51	53	96	78.80	24	38	63	52.63	17	18	94	76.37
4	30	37	81	64.22	30	32	94	75.52	38	39	97	80.79	41	44	93	74.86
5	16	21	76	60.79	32	36	89	70.53	35	41	85	67.51	16	40	40	39.23
6	44	45	98	81.43	20	24	83	65.91	33	41	80	63.79	13	13	100	90.00
7	33	33	100	90.00	50	50	100	90.00	31	33	94	75.75	38	42	90	72.02
8	40	44	91	72.45	51	52	98	82.03	40	41	98	81.02	34	36	94	76.37
9	53	54	98	82.18	35	41	85	67.51	56	58	97	79.30	33	37	89	70.80
10	35	36	97	80.41	36	42	86	67.79	24	28	86	67.79	5	15	33	35.26
11	29	37	78	62.29	19	19	100	90.00	33	40	82	65.27	30	32	94	75.52
12	42	44	95	77.69	38	45	84	66.77	23	32	72	57.97	45	46	98	81.52
13	33	33	100	90.00	32	35	91	72.98	9	9	100	90.00	19	20	95	77.08
14	32	38	84	66.59	28	29	97	79.30	23	24	96	78.22	43	50	86	68.03
15	45	47	96	78.10	46	52	88	70.14	52	52	100	90.00	17	18	94	76.37
16	-	-	-	-	41	48	85	67.55	5	5	100	90.00	39	47	83	65.63
Total	486	526			595	652			483	546			425	496		
Mean	35	38	92	76.13	37	41	91	74.43	30	34	89	74.61	28	33	85	70.18
SD	10	9	9	10.31	10	11	6	7.73	13	14	11	12.22	13	13	20	14.52

- Data are not available due to adult mortality.
Differences between the control and each treatment group were not significant (p > 0.05).

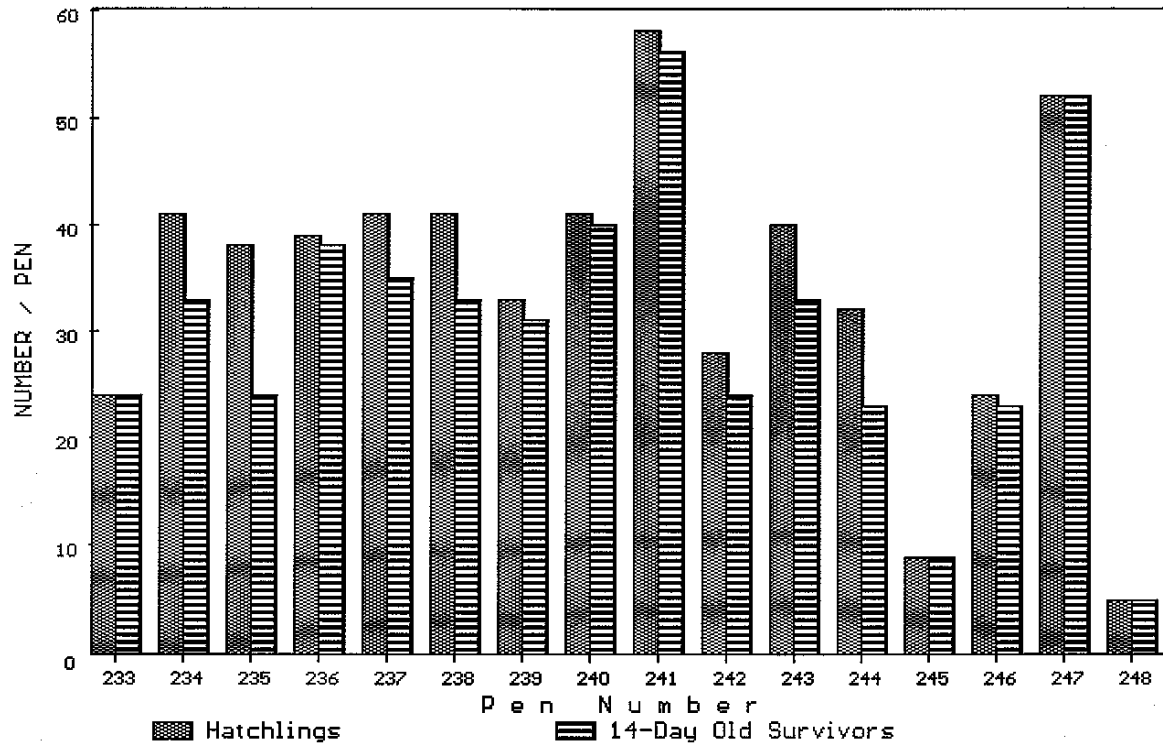
Appendix VII - Figure 6a
 14-Day Old Survivors / Hatchlings from a Northern Bobwhite
 Reproduction Study with C6 Acid - Control



Appendix VII - Figure 6b
14-Day Old Survivors / Hatchlings from a Northern Bobwhite
Reproduction Study with C6 Acid - 1000 PPM

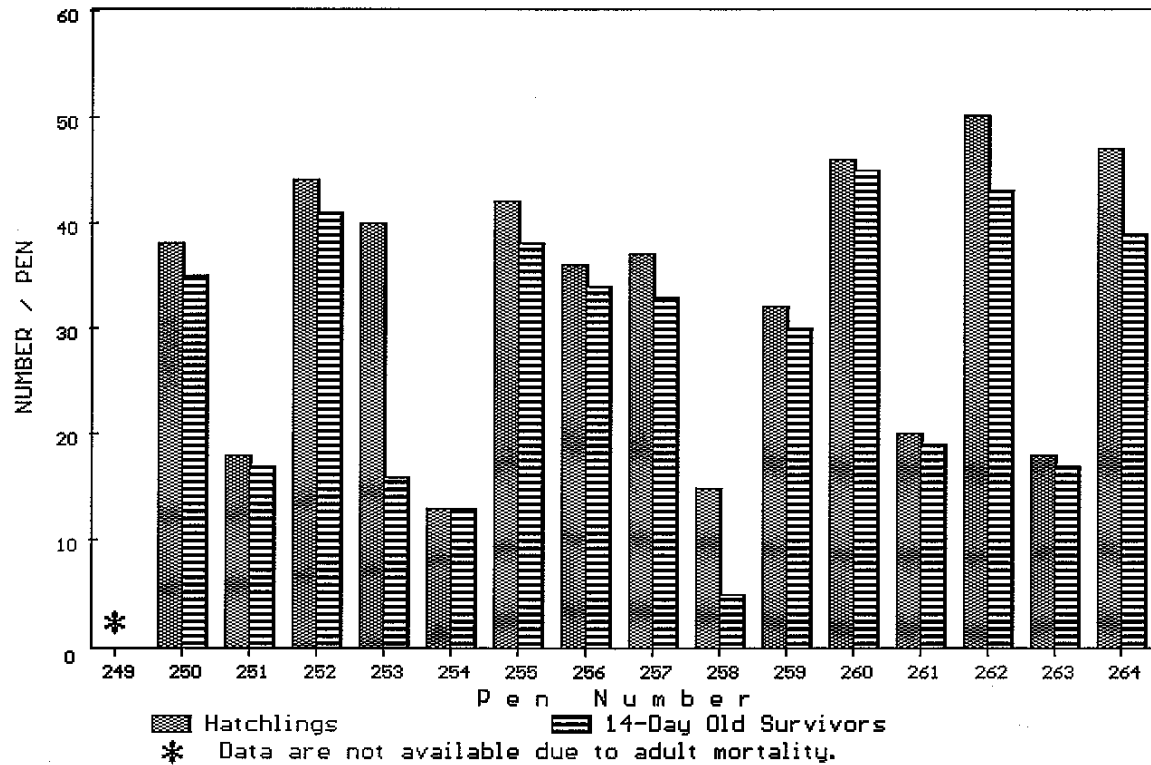


Appendix VII - Figure 6c
14-Day Old Survivors / Hatchlings from a Northern Bobwhite
Reproduction Study with C6 Acid - 5000 PPM



- 151 -

Appendix VII - Figure 6d
 14-Day Old Survivors / Hatchlings from a Northern Bobwhite
 Reproduction Study with C6 Acid - 10000 PPM



Reproductive Performance by Pen
Appendix VII - Table 7
Hatchlings / Eggs Set (%)
from a Northern Bobwhite Reproduction Study with C6 Acid

Replicate	0 PPM				1000 PPM				5000 PPM				10000 PPM			
	Number Hatch.	Eggs Set	%	Arcsin Trans.	Number Hatch.	Eggs Set	%	Arcsin Trans.	Number Hatch.	Eggs Set	%	Arcsin Trans.	Number Hatch.	Eggs Set	%	Arcsin Trans.
1	-	-	-	-	47	48	98	81.70	24	43	56	48.34	-	-	-	-
2	32	41	78	62.06	47	55	85	67.58	41	44	93	74.86	38	48	79	62.84
3	25	26	96	78.69	53	59	90	71.40	38	54	70	57.02	18	25	72	58.05
4	37	39	95	76.91	32	48	67	54.74	39	45	87	68.58	44	47	94	75.37
5	21	22	95	77.69	36	41	88	69.56	41	43	95	77.55	40	42	95	77.40
6	45	52	87	68.48	24	33	73	58.52	41	41	100	90.00	13	14	93	74.50
7	33	33	100	90.00	50	51	98	81.95	33	37	89	70.80	42	52	81	63.99
8	44	47	94	75.37	52	53	98	82.10	41	47	87	69.07	36	39	92	73.90
9	54	63	86	67.79	41	42	98	81.12	58	63	92	73.64	37	52	71	57.51
10	36	39	92	73.90	42	48	88	69.30	28	46	61	51.28	15	18	83	65.91
11	37	57	65	53.68	19	22	86	68.33	40	47	85	67.30	32	34	94	75.96
12	44	54	81	64.51	45	58	78	61.74	32	38	84	66.59	46	57	81	63.94
13	33	35	94	76.17	35	45	78	61.87	9	12	75	60.00	20	20	100	90.00
14	38	51	75	59.68	29	31	94	75.29	24	28	86	67.79	50	54	93	74.21
15	47	53	89	70.34	52	59	88	69.85	52	52	100	90.00	18	31	58	49.64
16	-	-	-	-	48	52	92	73.90	5	6	83	65.91	47	50	94	75.82
Total	526	612			652	745			546	646			496	583		
Mean	38	44	88	71.09	41	47	87	70.56	34	40	84	68.67	33	39	85	69.27
SD	9	12	10	9.29	11	11	9	8.56	14	15	13	11.54	13	14	12	10.18

- Data are not available due to adult mortality.
Differences between the control and each treatment group were not significant (p > 0.05).

Reproductive Performance by Pen
Appendix VII - Table 8
14-Day Old Survivors / Eggs Set (%)
from a Northern Bobwhite Reproduction Study with C6 Acid

Replicate	0 PPM				1000 PPM				5000 PPM				10000 PPM			
	14-Day Old	Eggs Set	%	Arcsin Trans.	14-Day Old	Eggs Set	%	Arcsin Trans.	14-Day Old	Eggs Set	%	Arcsin Trans.	14-Day Old	Eggs Set	%	Arcsin Trans.
1	-	-	-	-	43	48	90	71.17	24	43	56	48.34	-	-	-	-
2	32	41	78	62.06	43	55	78	62.15	33	44	75	60.00	35	48	73	58.64
3	22	26	85	66.91	51	59	86	68.39	24	54	44	41.81	17	25	68	55.55
4	30	39	77	61.29	30	48	63	52.24	38	45	84	66.77	41	47	87	69.07
5	16	22	73	58.52	32	41	78	62.06	35	43	81	64.45	16	42	38	38.11
6	44	52	85	66.91	20	33	61	51.12	33	41	80	63.79	13	14	93	74.50
7	33	33	100	90.00	50	51	98	81.95	31	37	84	66.25	38	52	73	58.74
8	40	47	85	67.30	51	53	96	78.80	40	47	85	67.30	34	39	87	69.02
9	53	63	84	66.52	35	42	83	65.91	56	63	89	70.53	33	52	63	52.81
10	35	39	90	71.32	36	48	75	60.00	24	46	52	46.25	5	18	28	31.81
11	29	57	51	45.50	19	22	86	68.33	33	47	70	56.92	30	34	88	69.94
12	42	54	78	61.87	38	58	66	54.04	23	38	61	51.08	45	57	79	62.69
13	33	35	94	76.17	32	45	71	57.49	9	12	75	60.00	19	20	95	77.08
14	32	51	63	52.38	28	31	90	71.88	23	28	82	65.00	43	54	80	63.17
15	45	53	85	67.14	46	59	78	62.00	52	52	100	90.00	17	31	55	47.78
16	-	-	-	-	41	52	79	62.62	5	6	83	65.91	39	50	78	62.03
Total	486	612			595	745			483	646			425	583		
Mean	35	44	81	65.28	37	47	80	64.38	30	40	75	61.52	28	39	72	59.40
SD	10	12	12	10.46	10	11	11	8.83	13	15	15	11.41	13	14	19	12.76

- Data are not available due to adult mortality.
Differences between the control and each treatment group were not significant (p > 0.05).

*Reproductive Performance by Pen
Appendix VII - Table 9
Hatchlings / Maximum Set (%)
from a Northern Bobwhite Reproduction Study with C6 Acid*

Replicate	0 PPM				1000 PPM				5000 PPM				10000 PPM			
	Number Hatch.	Max. Set	%	Arcsin Trans.	Number Hatch.	Max. Set	%	Arcsin Trans.	Number Hatch.	Max. Set	%	Arcsin Trans.	Number Hatch.	Max. Set	%	Arcsin Trans.
1	-	-	-	-	47	63	75	59.74	24	63	38	38.11	-	-	-	-
2	32	63	51	45.45	47	63	75	59.74	41	63	65	53.78	38	63	60	50.95
3	25	63	40	39.05	53	63	84	66.52	38	63	60	50.95	18	63	29	32.31
4	37	63	59	50.03	32	63	51	45.45	39	63	62	51.89	44	63	70	56.69
5	21	63	33	35.26	36	63	57	49.11	41	63	65	53.78	40	63	63	52.83
6	45	63	71	57.69	24	63	38	38.11	41	63	65	53.78	13	63	21	27.02
7	33	63	52	46.36	50	63	79	62.98	33	63	52	46.36	42	63	67	54.74
8	44	63	70	56.69	52	63	83	65.30	41	63	65	53.78	36	63	57	49.11
9	54	63	86	67.79	41	63	65	53.78	58	63	92	73.64	37	63	59	50.03
10	36	63	57	49.11	42	63	67	54.74	28	63	44	41.81	15	63	24	29.21
11	37	63	59	50.03	19	63	30	33.31	40	63	63	52.83	32	63	51	45.45
12	44	63	70	56.69	45	63	71	57.69	32	63	51	45.45	46	63	73	58.70
13	33	63	52	46.36	35	63	56	48.19	9	63	14	22.21	20	63	32	34.29
14	38	63	60	50.95	29	63	46	42.72	24	63	38	38.11	50	63	79	62.98
15	47	63	75	59.74	52	63	83	65.30	52	63	83	65.30	18	63	29	32.31
16	-	-	-	-	48	63	76	60.79	5	63	8	16.36	47	63	75	59.74
Total	526	882			652	1008			546	1008			496	945		
Mean	38	63	60	50.80	41	63	65	53.97	34	63	54	47.38	33	63	53	46.42
SD	9	0	14	8.49	11	0	17	10.19	14	0	22	14.24	13	0	20	12.18

- Data are not available due to adult mortality.
Differences between the control and each treatment group were not significant (p > 0.05).

Reproductive Performance by Pen
Appendix VII - Table 10
14-Day Old Survivors / Maximum Set (%)
from a Northern Bobwhite Reproduction Study with C6 Acid

Replicate	0 PPM				1000 PPM				5000 PPM				10000 PPM			
	14-Day Old	Max. Set	%	Arcsin Trans.	14-Day Old	Max. Set	%	Arcsin Trans.	14-Day Old	Max. Set	%	Arcsin Trans.	14-Day Old	Max. Set	%	Arcsin Trans.
1	-	-	-	-	43	63	68	55.71	24	63	38	38.11	-	-	-	-
2	32	63	51	45.45	43	63	68	55.71	33	63	52	46.36	35	63	56	48.19
3	22	63	35	36.22	51	63	81	64.12	24	63	38	38.11	17	63	27	31.30
4	30	63	48	43.64	30	63	48	43.64	38	63	60	50.95	41	63	65	53.78
5	16	63	25	30.26	32	63	51	45.45	35	63	56	48.19	16	63	25	30.26
6	44	63	70	56.69	20	63	32	34.29	33	63	52	46.36	13	63	21	27.02
7	33	63	52	46.36	50	63	79	62.98	31	63	49	44.55	38	63	60	50.95
8	40	63	63	52.83	51	63	81	64.12	40	63	63	52.83	34	63	54	47.28
9	53	63	84	66.52	35	63	56	48.19	56	63	89	70.53	33	63	52	46.36
10	35	63	56	48.19	36	63	57	49.11	24	63	38	38.11	5	63	8	16.36
11	29	63	46	42.72	19	63	30	33.31	33	63	52	46.36	30	63	48	43.64
12	42	63	67	54.74	38	63	60	50.95	23	63	37	37.17	45	63	71	57.69
13	33	63	52	46.36	32	63	51	45.45	9	63	14	22.21	19	63	30	33.31
14	32	63	51	45.45	28	63	44	41.81	23	63	37	37.17	43	63	68	55.71
15	45	63	71	57.69	46	63	73	58.70	52	63	83	65.30	17	63	27	31.30
16	-	-	-	-	41	63	65	53.78	5	63	8	16.36	39	63	62	51.89
Total	486	882			595	1008			483	1008			425	945		
Mean	35	63	55	48.08	37	63	59	50.46	30	63	48	43.67	28	63	45	41.67
SD	10	0	15	9.20	10	0	16	9.66	13	0	21	13.55	13	0	20	12.42

- Data are not available due to adult mortality.

Differences between the control and each treatment group were not significant (p > 0.05).

- 156 -

*Reproductive Performance by Week and Pen
Appendix VIII - Table 1a
Eggs Laid by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid*

Experimental Group (ppm)	P E N S																Totals
	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	
LOT ¹																	
A	-	1	0	0	0	2	0	4	10	2	4	4	0	3	3	-	33
B	-	3	0	2	0	4	0	5	7	2	5	5	0	3	4	-	40
C	-	3	0	2	0	5	0	6	7	4	6	6	0	5	6	-	50
D	-	5	0	3	2	6	1	4	6	5	6	6	4	5	6	-	59
Control																	
E	-	6	2	5	2	7	6	6	7	6	7	6	6	7	6	-	79
F	-	7	5	6	3	7	3	8	7	7	7	7	5	7	7	-	86
G	-	3	6	6	4	6	8	7	7	7	7	7	5	7	7	-	87
H	-	6	6	7	4	7	6	8	7	7	7	6	7	7	7	-	92
I	-	7	6	7	5	8	7	3	7	7	7	7	6	7	7	-	91
J	-	5	5	6	5	5	6	0	6	0	6	6	5	6	6	-	67
Totals	-	46	30	44	25	57	37	51	71	47	62	60	38	57	59	-	684

- Data are not available due to adult mortality

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

*Reproductive Performance by Week and Pen
Appendix VIII - Table 1b
Eggs Laid by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid*

Experimental Group (ppm)	P E N S																Totals
	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	
LOT ¹																	
A	2	3	5	2	0	3	1	3	0	0	0	4	0	0	5	3	31
B	6	6	5	5	0	3	4	4	2	2	1	6	0	0	5	3	52
C	6	7	6	2	4	4	6	6	2	4	5	8	3	1	6	5	75
D	7	6	7	5	5	6	6	6	5	7	4	6	6	3	7	6	92
1000																	
E	7	7	7	7	7	5	7	7	5	6	7	7	7	5	7	7	105
F	7	7	7	7	8	5	6	7	7	7	5	7	7	4	7	7	105
G	7	7	7	7	4	5	7	7	6	7	4	7	7	6	7	6	101
H	7	7	7	7	6	7	7	7	6	7	0	7	7	6	7	7	102
I	6	8	7	7	7	7	7	8	7	7	0	8	7	7	7	7	107
J	6	5	6	5	5	5	6	5	6	6	0	5	6	6	6	6	84
Totals	61	63	64	54	46	50	57	60	46	53	26	65	50	38	64	57	854

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

*Reproductive Performance by Week and Pen
Appendix VIII - Table 1c
Eggs Laid by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid*

Experimental Group (ppm)	P E N S																Totals
	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	
LOT ¹																	
A	3	0	1	0	3	0	0	0	5	0	0	5	0	1	2	0	20
B	4	1	6	3	4	1	0	2	6	3	1	5	0	3	4	0	43
C	6	4	7	5	5	4	1	4	8	5	5	5	0	1	6	0	66
D	6	5	6	5	5	5	3	6	7	5	4	6	0	2	6	0	71
5000																	
E	7	7	7	6	5	5	4	7	8	6	7	5	0	0	7	0	81
F	7	7	6	7	7	6	6	7	6	6	7	3	0	4	7	1	87
G	7	7	7	7	7	6	6	7	8	6	7	4	4	4	6	3	96
H	7	7	8	7	7	7	8	6	8	7	7	7	6	5	7	2	106
I	7	7	7	7	7	7	7	7	7	7	7	5	5	8	7	2	104
J	6	6	5	6	6	6	6	6	5	6	6	4	3	6	6	1	84
Totals	60	51	60	53	56	47	41	52	68	51	51	49	18	34	58	9	758

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

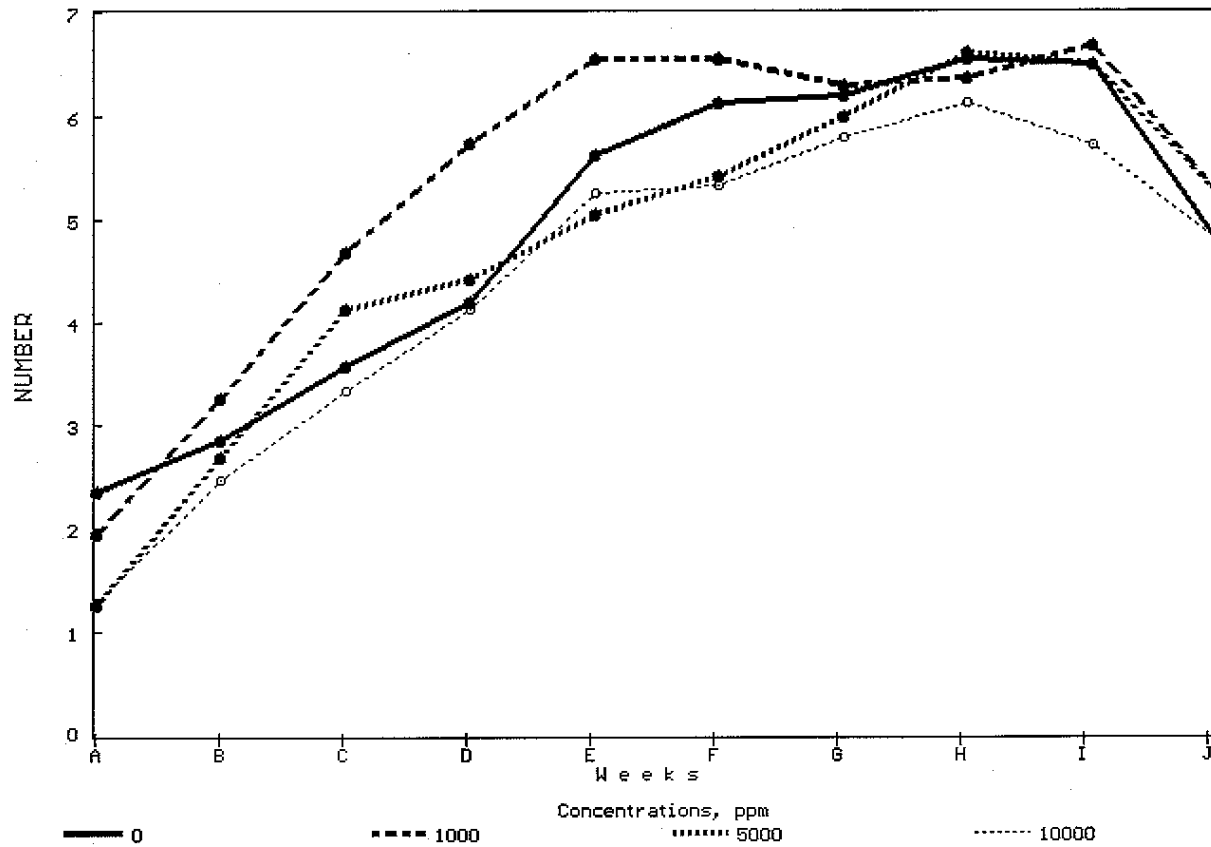
*Reproductive Performance by Week and Pen
Appendix VIII - Table 1d
Eggs Laid by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid*

Experimental Group (ppm)	P E N S																Totals
	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	
LOT ¹																	
A	-	0	0	1	0	0	5	0	4	0	0	5	0	2	0	2	19
B	-	3	2	4	0	0	5	2	4	0	0	6	2	5	0	4	37
C	-	4	3	5	3	2	5	3	5	0	0	6	1	6	1	6	50
D	-	6	4	6	4	3	6	4	6	0	1	6	3	5	3	5	62
10000 E	-	6	4	6	6	4	6	5	6	1	5	7	3	7	6	7	79
F	-	7	4	6	6	3	6	5	7	2	6	6	3	7	5	7	80
G	-	7	4	6	7	3	7	6	7	4	6	7	3	7	6	7	87
H	-	7	5	7	8	2	6	7	7	5	8	7	3	7	6	7	92
I	-	7	5	6	7	0	6	6	6	5	7	7	4	7	6	7	86
J	-	6	4	5	5	1	6	6	5	4	5	6	3	6	4	6	72
Totals	-	53	35	52	46	18	58	44	57	21	38	63	25	59	37	58	664

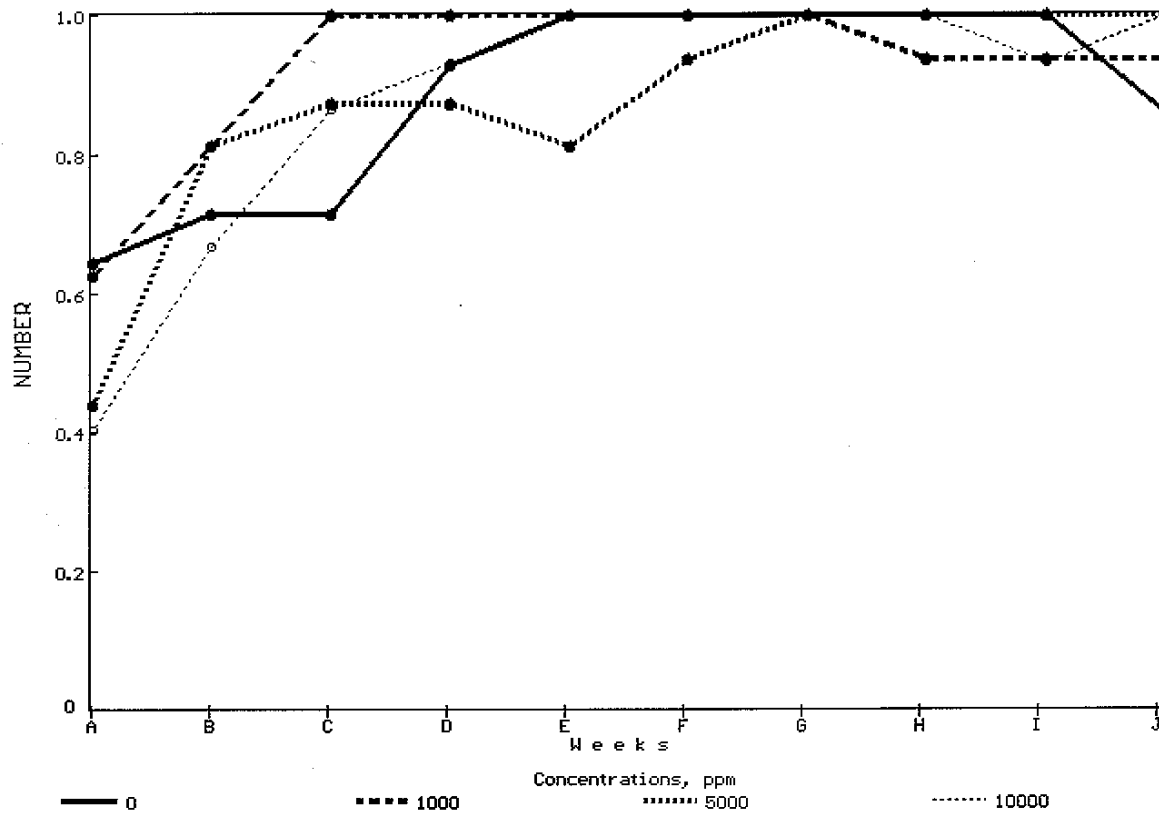
- Data are not available due to adult mortality

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

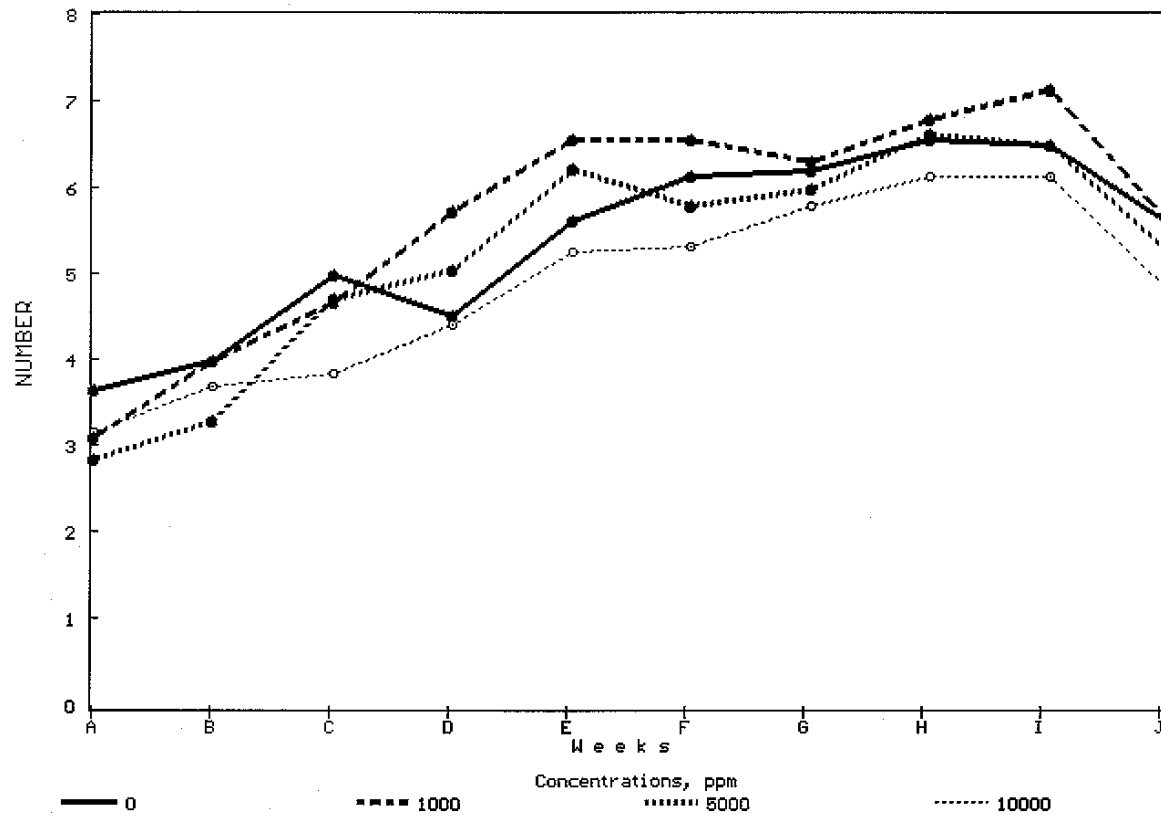
Appendix VIII - Figure 1
Eggs Laid per Hen from a Northern Bobwhite Reproduction Study with C6 Acid



Appendix VIII - Figure 2
Hens Laying per Pen from a Northern Bobwhite Reproduction Study with C6 Acid



Appendix VIII - Figure 3
Eggs per Laying Hen from a Northern Bobwhite Reproduction Study with C6 Acid



*Reproductive Performance by Week and Pen
Appendix VIII - Table 2a
Eggs Cracked by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid*

Experimental Group (ppm)	P E N S																Totals
	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	
LOT ¹																	
A	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0
B	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0
C	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0
D	-	0	0	0	0	0	0	0	0	1	0	0	0	0	0	-	1
Control																	
E	-	0	1	0	0	0	0	0	0	0	0	0	0	1	0	-	2
F	-	0	0	0	0	0	0	0	0	1	0	0	0	0	0	-	1
G	-	0	0	0	0	0	0	0	0	1	0	0	0	0	0	-	1
H	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0
I	-	0	0	0	0	0	0	0	0	1	0	1	0	0	0	-	2
J	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0
Totals	-	0	1	0	0	0	0	0	0	4	0	1	0	1	0	-	7

- Data are not available due to adult mortality

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

*Reproductive Performance by Week and Pen
Appendix VIII - Table 2b
Eggs Cracked by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid*

Experimental Group (ppm)	P E N S																
	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	Totals
LOT ¹																	
A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1000 E	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
F	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
G	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2
H	5	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	8
I	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	3
J	1	1	0	0	1	1	0	0	0	0	0	0	0	1	0	0	5
Totals	8	2	0	1	1	6	1	0	0	0	0	1	0	2	0	0	22

¹LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

Reproductive Performance by Week and Pen
Appendix VIII - Table 2c
Eggs Cracked by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid

Experimental Group (ppm)	P E N S																Totals
	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	
LOT ¹																	
A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
B	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
5000 E	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
F	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
G	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	3
H	2	0	0	1	1	0	0	0	0	0	0	3	0	0	0	0	7
I	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	3
J	3	0	0	1	1	1	0	0	0	0	0	0	1	0	0	0	7
Totals	11	2	0	2	7	1	0	0	0	0	0	4	1	0	0	0	28

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

*Reproductive Performance by Week and Pen
Appendix VIII - Table 2d
Eggs Cracked by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid*

Experimental Group (ppm)	P E N S																Totals
	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	
LOT ¹																	
A	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
B	-	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
C	-	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
D	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10000 E	-	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	2
F	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G	-	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
H	-	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
I	-	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
J	-	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	3
Totals	-	0	6	0	0	0	0	0	0	0	1	1	0	0	1	2	11

- Data are not available due to adult mortality

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

*Reproductive Performance by Week and Pen
Appendix VIII - Table 3a
Eggs Set by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid*

Experimental Group (ppm)	P E N S																Totals
	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	
LOT ¹																	
A	-	1	0	0	0	2	0	4	6	2	3	4	0	3	2	-	27
B	-	2	0	1	0	3	0	4	7	1	5	4	0	2	4	-	33
C	-	3	0	2	0	5	0	6	6	4	5	6	0	5	5	-	47
D	-	4	0	2	2	5	1	3	6	3	6	5	4	4	6	-	51
Control																	
E	-	6	0	5	1	7	4	6	6	6	6	6	5	6	4	-	68
F	-	6	5	5	3	6	3	7	7	5	7	6	5	6	7	-	78
G	-	3	5	6	3	6	7	7	6	6	6	7	4	7	6	-	79
H	-	5	6	6	4	6	6	7	7	6	7	5	7	6	7	-	85
I	-	7	5	7	4	8	6	3	6	6	6	6	5	7	6	-	82
J	-	4	5	5	5	4	6	0	6	0	6	5	5	5	6	-	62
Totals	-	41	26	39	22	52	33	47	63	39	57	54	35	51	53	-	612

- Data are not available due to adult mortality

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

*Reproductive Performance by Week and Pen
Appendix VIII - Table 3b
Eggs Set by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid*

Experimental Group (ppm)	P E N S																
	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	Totals
LOT ¹																	
A	1	3	4	2	0	3	0	3	0	0	0	4	0	0	4	3	27
B	6	5	5	4	0	2	4	3	2	1	1	5	0	0	5	2	45
C	5	7	5	2	3	4	5	6	1	4	3	8	2	1	5	5	66
D	7	5	7	4	5	3	6	5	5	6	4	5	6	2	7	5	82
1000 E	4	6	6	7	6	5	6	7	4	6	6	7	6	4	6	7	93
F	7	5	7	6	8	2	6	5	7	6	5	6	7	3	7	6	93
G	6	7	6	7	3	5	6	6	5	7	3	6	6	5	6	6	90
H	2	6	7	6	6	2	7	6	6	6	0	6	7	5	7	6	85
I	5	8	6	6	6	4	5	8	6	7	0	8	6	7	6	7	95
J	5	3	6	4	4	3	6	4	6	5	0	3	5	4	6	5	69
Totals	48	55	59	48	41	33	51	53	42	48	22	58	45	31	59	52	745

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

*Reproductive Performance by Week and Pen
Appendix VIII - Table 3c
Eggs Set by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid*

Experimental Group (ppm)	P E N S																
	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	Totals
LOT ¹																	
A	2	0	0	0	0	0	0	0	4	0	0	5	0	1	0	0	12
B	4	0	6	2	3	0	0	1	6	2	1	4	0	2	4	0	35
C	5	4	6	5	4	4	0	4	7	5	4	5	0	1	5	0	59
D	5	4	6	4	4	4	3	5	7	4	4	5	0	1	6	0	62
5000																	
E	4	6	6	6	4	5	3	7	7	6	6	4	0	0	6	0	70
F	6	6	5	6	7	5	6	6	6	5	7	1	0	3	7	0	76
G	4	7	6	7	4	6	5	7	7	6	6	4	0	4	5	3	81
H	5	6	8	5	6	6	8	5	8	6	7	3	6	4	7	1	91
I	5	6	6	6	6	7	6	7	6	7	6	4	4	7	6	2	91
J	3	5	5	4	5	4	6	5	5	5	6	3	2	5	6	0	69
Totals	43	44	54	45	43	41	37	47	63	46	47	38	12	28	52	6	646

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

- 170 -

*Reproductive Performance by Week and Pen
Appendix VIII - Table 3d
Eggs Set by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid*

Experimental Group (ppm)	P E N S															Totals	
	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263		264
LOT ¹																	
A	-	0	0	1	0	0	4	0	3	0	0	5	0	2	0	1	16
B	-	2	1	3	0	0	5	1	4	0	0	5	2	4	0	3	30
C	-	4	1	5	2	2	4	3	4	0	0	6	0	6	0	6	43
D	-	5	4	5	4	2	6	3	6	0	1	5	3	4	3	4	55
10000 E	-	6	2	6	5	4	5	5	5	1	4	7	1	7	5	5	68
F	-	6	4	5	6	2	6	4	7	1	6	5	3	6	5	6	72
G	-	7	2	6	6	3	6	6	6	4	5	7	2	7	4	7	78
H	-	6	4	6	8	1	5	6	7	4	8	6	3	6	6	6	82
I	-	7	4	6	6	0	5	6	5	5	6	6	3	7	5	7	78
J	-	5	3	4	5	0	6	5	5	3	4	5	3	5	3	5	61
Totals	-	48	25	47	42	14	52	39	52	18	34	57	20	54	31	50	583

- Data are not available due to adult mortality

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

- 171 -

*Reproductive Performance by Week and Pen
Appendix VIII - Table 4a
Viable Embryos by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid*

Experimental Group (ppm)	P E N S																Totals
	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	
LOT ¹																	
A	-	0	0	0	0	0	0	3	3	2	3	0	0	0	2	-	13
B	-	0	0	0	0	3	0	4	7	1	5	4	0	0	3	-	27
C	-	0	0	2	0	5	0	6	5	4	5	6	0	0	5	-	38
D	-	3	0	2	2	5	1	3	6	3	6	5	3	4	6	-	49
Control E	-	6	0	5	1	7	4	6	6	6	6	6	5	6	4	-	68
F	-	6	5	5	3	6	3	7	7	5	7	6	5	6	7	-	78
G	-	3	5	6	3	6	7	7	6	6	6	7	4	7	6	-	79
H	-	5	6	6	4	5	6	7	7	6	7	5	7	6	7	-	84
I	-	6	5	7	4	8	6	3	6	6	6	6	5	7	6	-	81
J	-	4	5	5	5	4	6	0	6	0	6	5	5	5	6	-	62
Totals	-	33	26	38	22	49	33	46	59	39	57	50	34	41	52	-	579

- Data are not available due to adult mortality

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

*Reproductive Performance by Week and Pen
Appendix VIII - Table 4b
Viable Embryos by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid*

Experimental Group (ppm)	P E N S																
	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	Totals
LOT ¹																	
A	1	2	4	0	0	3	0	3	0	0	0	0	0	0	3	3	19
B	6	5	5	0	0	2	4	3	2	1	0	2	0	0	5	2	37
C	5	7	5	2	3	3	5	6	1	4	3	7	2	1	5	4	63
D	7	5	7	4	5	3	6	5	5	6	4	2	6	2	7	5	79
1000 E	4	5	6	5	6	5	6	7	4	6	5	7	6	4	6	7	89
F	7	5	7	4	7	2	6	5	7	6	5	5	7	2	7	6	88
G	6	7	6	7	3	5	6	6	5	7	3	6	6	5	5	6	89
H	2	5	6	6	6	2	7	6	6	6	0	6	7	5	7	6	83
I	5	8	6	4	5	3	5	8	6	7	0	8	6	7	6	7	91
J	5	3	6	4	4	3	6	4	6	5	0	3	5	4	6	5	69
Totals	48	52	58	36	39	31	51	53	42	48	20	46	45	30	57	51	707

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

*Reproductive Performance by Week and Pen
Appendix VIII - Table 4c
Viable Embryos by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid*

Experimental Group (ppm)	P E N S																Totals
	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	
LOT ¹																	
A	0	0	0	0	0	0	0	0	2	0	0	4	0	0	0	0	6
B	3	0	6	2	3	0	0	1	6	0	1	4	0	0	4	0	30
C	5	4	6	5	4	4	0	3	7	0	4	5	0	0	5	0	52
D	4	4	6	3	4	4	0	5	7	0	4	5	0	1	6	0	53
5000 E	3	6	6	6	4	5	2	7	7	0	6	3	0	0	6	0	61
F	4	6	5	6	7	5	6	6	6	5	7	1	0	3	7	0	74
G	4	7	6	6	4	6	5	7	7	6	6	4	0	4	5	2	79
H	3	6	8	5	6	6	8	5	8	6	7	3	5	4	7	1	88
I	3	6	6	6	6	7	6	7	6	7	6	3	4	7	6	2	88
J	1	5	5	4	5	4	6	5	5	5	6	3	2	5	6	0	67
Totals	30	44	54	43	43	41	33	46	61	29	47	35	11	24	52	5	598

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

*Reproductive Performance by Week and Pen
Appendix VIII - Table 4d
Viable Embryos by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid*

Experimental Group (ppm)	P E N S																
	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	Totals
LOT ¹																	
A	-	0	0	1	0	0	4	0	1	0	0	4	0	2	0	0	12
B	-	0	1	3	0	0	4	1	4	0	0	5	2	4	0	2	26
C	-	2	0	5	2	2	4	3	4	0	0	6	0	6	0	6	40
D	-	5	3	5	4	2	6	3	5	0	1	5	3	4	3	3	52
10000 E	-	5	0	6	5	4	5	5	5	1	4	7	1	7	5	5	65
F	-	5	3	5	6	2	6	4	6	1	6	5	3	6	5	6	69
G	-	7	2	5	6	3	6	6	6	4	5	6	2	7	4	7	76
H	-	6	4	6	8	1	5	6	6	4	8	6	3	6	6	6	81
I	-	7	2	6	6	0	5	6	4	4	6	6	3	7	5	7	74
J	-	5	3	4	5	0	5	5	4	3	4	5	3	5	3	5	59
Totals	-	42	18	46	42	14	50	39	45	17	34	55	20	54	31	47	554

- Data are not available due to adult mortality

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

Reproductive Performance by Week and Pen
Appendix VIII - Table 5a
Live Three-Week Embryos by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid

Experimental Group (ppm)	P E N S																Totals
	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	
LOT ¹																	
A	-	0	0	0	0	0	0	3	3	2	3	0	0	0	2	-	13
B	-	0	0	0	0	3	0	4	7	0	5	4	0	0	3	-	26
C	-	0	0	2	0	5	0	6	5	4	5	6	0	0	5	-	38
D	-	3	0	2	2	5	1	3	6	3	6	5	3	4	6	-	49
Control																	
E	-	6	0	5	1	7	4	6	6	6	6	6	5	6	4	-	68
F	-	6	5	5	3	6	3	7	7	5	7	6	5	6	7	-	78
G	-	3	5	6	3	6	7	7	6	6	6	7	4	7	6	-	79
H	-	5	6	6	4	5	6	7	7	6	7	5	7	6	7	-	84
I	-	6	5	7	4	8	6	3	6	6	6	6	5	7	5	-	80
J	-	4	5	5	5	4	6	0	6	0	6	5	5	5	6	-	62
Totals	-	33	26	38	22	49	33	46	59	38	57	50	34	41	51	-	577

- Data are not available due to adult mortality

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

*Reproductive Performance by Week and Pen
Appendix VIII - Table 5b
Live Three-Week Embryos by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid*

Experimental Group (ppm)	P E N S																
	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	Totals
LOT ¹																	
A	1	2	4	0	0	3	0	3	0	0	0	0	0	0	3	3	19
B	6	5	5	0	0	2	4	3	2	1	0	2	0	0	5	2	37
C	5	7	5	2	3	3	5	6	1	4	3	7	2	1	5	4	63
D	7	5	7	4	5	3	6	5	5	6	4	2	6	2	7	5	79
1000 E	4	5	6	5	6	5	6	7	4	6	5	7	6	4	6	7	89
F	7	5	7	4	7	2	6	5	7	6	5	5	7	2	7	6	88
G	6	7	6	7	3	5	6	6	5	7	3	6	6	5	5	6	89
H	2	5	6	6	6	2	7	6	6	6	0	6	7	5	7	6	83
I	5	8	6	4	5	3	5	8	6	7	0	8	6	7	6	7	91
J	5	3	6	4	4	3	6	4	6	5	0	3	5	4	5	5	68
Totals	48	52	58	36	39	31	51	53	42	48	20	46	45	30	56	51	706

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

*Reproductive Performance by Week and Pen
Appendix VIII - Table 5c
Live Three-Week Embryos by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid*

Experimental Group (ppm)	P E N S																Totals
	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	
LOT ¹																	
A	0	0	0	0	0	0	0	0	2	0	0	4	0	0	0	0	6
B	3	0	6	2	3	0	0	1	6	0	1	4	0	0	4	0	30
C	5	4	6	5	4	4	0	3	7	0	4	5	0	0	5	0	52
D	4	4	6	3	4	4	0	5	7	0	4	5	0	1	6	0	53
5000 E	3	6	6	6	4	5	2	7	7	0	6	3	0	0	6	0	61
F	4	6	5	6	7	5	6	6	6	5	7	1	0	3	7	0	74
G	4	7	6	6	4	6	5	7	7	6	6	4	0	4	5	2	79
H	3	6	8	5	6	6	8	5	8	6	7	3	5	4	7	1	88
I	3	6	6	6	6	7	6	7	6	7	6	3	4	7	6	2	88
J	1	5	5	4	5	4	6	5	5	5	6	3	2	5	6	0	67
Totals	30	44	54	43	43	41	33	46	61	29	47	35	11	24	52	5	598

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

- 178 -

*Reproductive Performance by Week and Pen
Appendix VIII - Table 5d
Live Three-Week Embryos by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid*

Experimental Group (ppm)	P E N S																
	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	Totals
LOT ¹																	
A	-	0	0	1	0	0	4	0	1	0	0	4	0	2	0	0	12
B	-	0	1	3	0	0	4	1	4	0	0	5	2	4	0	2	26
C	-	2	0	5	2	2	4	3	4	0	0	6	0	6	0	6	40
D	-	5	3	5	4	2	6	3	5	0	1	5	3	4	3	3	52
10000 E	-	5	0	6	5	4	5	5	5	1	4	6	1	7	5	5	64
F	-	5	3	5	6	2	6	4	6	1	6	5	3	6	5	6	69
G	-	7	2	5	6	3	6	6	6	4	5	6	2	7	4	7	76
H	-	6	4	6	8	1	5	6	6	4	8	6	3	6	6	6	81
I	-	7	2	6	6	0	5	6	4	4	6	6	3	7	5	7	74
J	-	5	3	4	5	0	5	5	4	3	4	5	3	5	3	5	59
Totals	-	42	18	46	42	14	50	39	45	17	34	54	20	54	31	47	553

- Data are not available due to adult mortality

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

*Reproductive Performance by Week and Pen
Appendix VIII - Table 6a
Hatchlings by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid*

Experimental Group (ppm)	P E N S																Totals
	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	
LOT ¹																	
A	-	0	0	0	0	0	0	3	3	2	3	0	0	0	2	-	13
B	-	0	0	0	0	3	0	4	7	0	5	4	0	0	3	-	26
C	-	0	0	2	0	5	0	5	5	3	5	5	0	0	5	-	35
D	-	3	0	2	2	4	1	3	6	3	5	5	3	4	6	-	47
Control																	
E	-	6	0	5	1	7	4	6	6	6	6	6	5	6	4	-	68
F	-	5	5	5	3	6	3	7	7	5	5	6	5	6	7	-	75
G	-	3	5	6	3	4	7	6	5	6	1	7	4	5	5	-	67
H	-	5	5	6	4	5	6	7	5	5	2	3	7	5	6	-	71
I	-	6	5	7	4	8	6	3	5	6	3	3	5	7	4	-	72
J	-	4	5	4	4	3	6	0	5	0	2	5	4	5	5	-	52
Totals	-	32	25	37	21	45	33	44	54	36	37	44	33	38	47	-	526

- Data are not available due to adult mortality

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

- 180 -

*Reproductive Performance by Week and Pen
Appendix VIII - Table 6b
Hatchlings by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid*

Experimental Group (ppm)	P E N S																Totals
	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	
LOT ¹																	
A	1	2	3	0	0	3	0	2	0	0	0	0	0	0	3	3	17
B	5	5	4	0	0	2	4	3	2	1	0	2	0	0	5	2	35
C	5	7	5	2	3	3	5	6	1	4	2	7	2	1	5	4	62
D	7	4	6	4	5	3	6	5	5	6	4	2	6	2	7	5	77
1000 E	4	5	6	5	6	5	6	7	4	6	5	7	6	4	6	6	88
F	7	5	7	4	7	1	6	5	6	5	5	4	7	1	4	5	79
G	6	6	6	7	2	4	6	6	5	7	3	6	2	5	4	6	81
H	2	5	6	5	5	1	7	6	6	3	0	6	5	5	7	6	75
I	5	5	5	1	5	2	5	8	6	6	0	8	4	7	6	7	80
J	5	3	5	4	3	0	5	4	6	4	0	3	3	4	5	4	58
Totals	47	47	53	32	36	24	50	52	41	42	19	45	35	29	52	48	652

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

- 181 -

*Reproductive Performance by Week and Pen
Appendix VIII - Table 6c
Hatchlings by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid*

Experimental Group (ppm)	P E N S																Totals
	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	
LOT ¹																	
A	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	4
B	3	0	5	2	3	0	0	1	5	0	1	4	0	0	4	0	28
C	5	4	5	5	4	4	0	3	7	0	4	5	0	0	5	0	51
D	4	4	5	3	4	4	0	5	5	0	4	5	0	1	6	0	50
5000 E	3	6	4	6	3	5	2	7	7	0	6	3	0	0	6	0	58
F	3	6	3	4	6	5	6	4	6	5	7	1	0	3	7	0	66
G	3	7	5	6	4	6	5	6	7	6	5	4	0	4	5	2	75
H	0	4	6	5	6	6	8	4	8	6	5	2	4	4	7	1	76
I	2	6	5	6	6	7	6	7	6	6	5	3	3	7	6	2	83
J	1	4	0	2	5	4	6	4	5	5	3	3	2	5	6	0	55
Totals	24	41	38	39	41	41	33	41	58	28	40	32	9	24	52	5	546

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

*Reproductive Performance by Week and Pen
Appendix VIII - Table 6d
Hatchlings by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid*

Experimental Group (ppm)	P E N S																
	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	Totals
LOT ¹																	
A	-	0	0	1	0	0	3	0	0	0	0	4	0	2	0	0	10
B	-	0	1	3	0	0	4	1	4	0	0	5	2	4	0	2	26
C	-	2	0	5	2	2	4	3	4	0	0	6	0	6	0	6	40
D	-	5	3	5	4	1	6	3	5	0	1	4	3	4	3	3	50
10000 E	-	3	0	4	5	4	5	5	5	1	4	6	1	7	5	5	60
F	-	5	3	5	5	2	6	4	5	1	5	5	3	6	5	6	66
G	-	7	2	5	5	3	4	5	2	3	5	4	2	6	1	7	61
H	-	6	4	6	8	1	5	4	5	3	8	4	3	5	0	6	68
I	-	6	2	6	6	0	2	6	3	4	5	3	3	5	2	7	60
J	-	4	3	4	5	0	3	5	4	3	4	5	3	5	2	5	55
Totals	-	38	18	44	40	13	42	36	37	15	32	46	20	50	18	47	496

- Data are not available due to adult mortality

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

*Reproductive Performance by Week and Pen
Appendix VIII - Table 7a
14-Day Old Survivors by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid*

Experimental Group (ppm)	P E N S																Totals
	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	
<i>LOT¹</i>																	
A	-	0	0	0	0	0	0	3	3	2	0	0	0	0	1	-	9
B	-	0	0	0	0	3	0	2	6	0	4	4	0	0	3	-	22
C	-	0	0	1	0	5	0	3	5	3	2	4	0	0	5	-	28
D	-	3	0	2	1	3	1	3	6	3	5	5	3	4	6	-	45
Control E	-	6	0	4	1	7	4	6	6	6	6	6	5	5	4	-	66
F	-	5	5	3	3	6	3	7	7	5	4	6	5	5	6	-	70
G	-	3	4	4	1	4	7	6	5	5	1	7	4	4	5	-	60
H	-	5	5	6	3	5	6	7	5	5	2	2	7	2	6	-	66
I	-	6	3	6	4	8	6	3	5	6	3	3	5	7	4	-	69
J	-	4	5	4	3	3	6	0	5	0	2	5	4	5	5	-	51
Totals	-	32	22	30	16	44	33	40	53	35	29	42	33	32	45	-	486

- Data are not available due to adult mortality

¹LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

*Reproductive Performance by Week and Pen
Appendix VIII - Table 7b
14-Day Old Survivors by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid*

Experimental Group (ppm)	P E N S																Totals
	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	
LOT ¹																	
A	0	1	3	0	0	1	0	2	0	0	0	0	0	0	1	1	9
B	4	5	4	0	0	1	4	3	1	1	0	2	0	0	5	2	32
C	4	5	4	1	1	3	5	6	0	4	2	6	2	1	5	3	52
D	7	3	5	4	5	2	6	5	3	5	4	1	6	2	7	5	70
1000																	
E	4	5	6	4	6	5	6	7	3	6	5	7	6	4	6	6	86
F	6	5	7	4	6	1	6	4	6	3	5	1	6	1	2	2	65
G	6	6	6	7	2	4	6	6	5	5	3	6	2	4	3	6	77
H	2	5	6	5	4	1	7	6	6	3	0	5	4	5	6	5	70
I	5	5	5	1	5	2	5	8	6	6	0	7	3	7	6	7	78
J	5	3	5	4	3	0	5	4	5	3	0	3	3	4	5	4	56
Totals	43	43	51	30	32	20	50	51	35	36	19	38	32	28	46	41	595

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

*Reproductive Performance by Week and Pen
Appendix VIII - Table 7c
14-Day Old Survivors by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid*

Experimental Group (ppm)	P E N S																Totals	
	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248		
LOT ¹																		
A	0	0	0	0	0	0	0	0	1	0	0	2	0	0	0	0	3	
B	3	0	1	1	2	0	0	1	5	0	0	2	0	0	4	0	19	
C	5	1	1	5	4	1	0	3	6	0	2	3	0	0	5	0	36	
D	4	3	3	3	4	3	0	5	5	0	4	2	0	1	6	0	43	
5000	E	3	6	3	6	3	5	2	7	7	0	6	2	0	0	6	0	56
F	3	3	1	4	5	3	4	4	6	1	7	1	0	2	7	0	51	
G	3	6	4	6	2	4	5	6	7	6	3	4	0	4	5	2	67	
H	0	4	6	5	6	6	8	4	8	6	4	2	4	4	7	1	75	
I	2	6	5	6	6	7	6	6	6	6	4	3	3	7	6	2	81	
J	1	4	0	2	3	4	6	4	5	5	3	2	2	5	6	0	52	
Totals	24	33	24	38	35	33	31	40	56	24	33	23	9	23	52	5	483	

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

*Reproductive Performance by Week and Pen
Appendix VIII - Table 7d
14-Day Old Survivors by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid*

Experimental Group (ppm)	P E N S																Totals
	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	
LOT ¹																	
A	-	0	0	0	0	0	3	0	0	0	0	4	0	1	0	0	8
B	-	0	1	2	0	0	4	0	3	0	0	5	2	4	0	2	23
C	-	2	0	5	0	2	4	3	4	0	0	6	0	6	0	6	38
D	-	5	3	5	1	1	5	3	4	0	1	4	3	4	3	3	45
10000 E	-	3	0	4	4	4	5	5	5	1	4	5	1	7	4	5	57
F	-	5	3	5	3	2	6	4	4	0	5	5	3	2	5	4	56
G	-	6	2	5	1	3	3	5	1	1	3	4	2	5	1	5	47
H	-	5	3	6	3	1	5	4	5	0	8	4	3	5	0	5	57
I	-	5	2	5	3	0	2	5	3	2	5	3	2	4	2	4	47
J	-	4	3	4	1	0	1	5	4	1	4	5	3	5	2	5	47
Totals	-	35	17	41	16	13	38	34	33	5	30	45	19	43	17	39	425

- Data are not available due to adult mortality

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

Appendix IX - Table 1
Eggshell Thickness (mm) per Pen by Week
from a Northern Bobwhite Reproduction Study with C6 Acid
(Control)

Pen	Weeks										Mean	SD	[n]		
	A	B	C	D	E	F	G	H	I	J					
201	-		-												
202		0.223		0.238		0.236		0.238		0.236	0.234	0.007	5		
203	-		-		0.230		0.234		0.233		0.233	0.002	3		
204		0.213		0.211		0.213		0.212		0.211	0.212	0.001	5		
205	-		-		0.229		0.221		0.232		0.227	0.005	3		
206		0.217		0.216		0.225		0.230		0.236	0.225	0.009	5		
207	-		-		0.196		0.200		0.209		0.202	0.007	3		
208		0.236		0.247		0.237		0.239		-	0.240	0.005	4		
209	0.256		0.253		0.243		0.251		0.254		0.251	0.005	5		
210		0.236		0.227		0.237		0.235		-	0.234	0.005	4		
211	0.248		0.255		0.252		0.244		0.238		0.247	0.007	5		
212		0.235		0.230		0.232		0.230		0.215	0.228	0.008	5		
213	-		-		0.222		0.224		0.218		0.221	0.003	3		
214		0.212		0.211		0.211		0.210		0.219	0.213	0.004	5		
215	0.236		0.237		0.236		0.238		0.232		0.236	0.002	5		
216		-		-		-		-		-					
Mean and standard deviation of pen means:											Mean	SD			
											0.229	0.014	60		

- No eggs available.

Appendix IX - Table 2
Eggshell Thickness (mm) per Pen by Week
from a Northern Bobwhite Reproduction Study with C6 Acid
(1000 PPM)

Pen	Weeks										Mean	SD	[n]
	A	B	C	D	E	F	G	H	I	J			
217	0.210		0.212		0.196		0.211		0.214		0.209	0.007	5
218		0.217		0.209		0.214		0.211		0.210	0.212	0.003	5
219	0.272		0.262		0.268		0.258		0.251		0.263	0.009	5
220		0.211		0.210		0.216		0.213		0.196	0.209	0.007	5
221	-		0.269		0.241		0.220		0.224		0.239	0.022	4
222		0.238		0.254		0.238		0.258		0.231	0.244	0.012	5
223	0.248		0.237		0.254		0.209		0.231		0.236	0.018	5
224		0.234		0.233		0.216		0.237		0.240	0.232	0.009	5
225	-		0.235		0.232		0.240		0.228		0.234	0.005	4
226		0.234		0.220		0.234		0.231		0.216	0.227	0.008	5
227	-		0.255		0.236		0.260		-		0.250	0.012	3
228		0.238		0.234		0.234		0.238		0.231	0.235	0.003	5
229	-		0.258		0.255		0.258		0.253		0.256	0.002	4
230		-		0.211		0.220		0.232		0.218	0.220	0.009	4
231	0.206		0.232		0.237		0.237		0.243		0.231	0.014	5
232		0.254		0.246		0.240		0.239		0.250	0.246	0.006	5
											Mean	SD	
Mean and standard deviation of pen means:											0.234	0.016	74

- No eggs available.

Differences between the control and this treatment group were not significant ($p > 0.05$).

Appendix IX - Table 3
Eggshell Thickness (mm) per Pen by Week
from a Northern Bobwhite Reproduction Study with C6 Acid
(5000 PPM)

Pen	Weeks										Mean	SD	[n]
	A	B	C	D	E	F	G	H	I	J			
233	0.210		0.213		0.199		0.212		0.198		0.206	0.007	5
234		0.216		0.213		0.212		0.210		0.204	0.211	0.004	5
235	0.256		0.238		0.236		0.242		0.232		0.241	0.009	5
236		0.239		0.237		0.228		0.230		0.234	0.234	0.005	5
237	0.194		0.191		0.187		0.187		0.192		0.190	0.003	5
238		0.232		0.212		0.228		0.228		0.231	0.226	0.008	5
239	-		0.237		0.236		0.237		0.238		0.237	0.001	4
240		0.240		0.252		0.252		0.247		0.246	0.247	0.005	5
241	0.249		0.216		0.212		0.221		0.211		0.222	0.016	5
242		0.222		0.230		0.231		0.230		0.231	0.229	0.004	5
243	-		0.221		0.230		0.232		0.231		0.229	0.005	4
244		0.255		0.267		0.231		0.250		0.257	0.252	0.013	5
245	-		-		-		0.192		0.212		0.202	0.014	2
246		0.218		0.228		0.214		0.211		0.232	0.221	0.009	5
247	0.232		0.234		0.234		0.231		0.232		0.233	0.001	5
248		-		-		0.196		0.213		0.212	0.207	0.010	3
											Mean	SD	
Mean and standard deviation of pen means:											0.224	0.017	73

- No eggs available.

Differences between the control and this treatment group were not significant ($p > 0.05$).

Appendix IX - Table 4
Eggshell Thickness (mm) per Pen by Week
from a Northern Bobwhite Reproduction Study with C6 Acid
(10000 PPM)

Pen	W e e k s										Mean	SD	[n]	
	A	B	C	D	E	F	G	H	I	J				
249	-		-		-									
250		0.211		0.227		0.230		0.231		0.228	0.225	0.008	5	
251	-		0.234		0.225		0.258		0.218		0.234	0.018	4	
252		0.238		0.249		0.255		0.252		0.253	0.250	0.007	5	
253	-		0.229		0.239		0.249		0.239		0.239	0.008	4	
254		-		0.206		0.211		0.197		0.194	0.202	0.008	4	
255	0.256		0.255		0.249		0.246		0.248		0.251	0.004	5	
256		0.237		0.246		0.240		0.248		0.241	0.242	0.004	5	
257	0.247		0.258		0.259		0.249		0.256		0.254	0.005	5	
258		-		-		0.195		0.213		0.215	0.208	0.011	3	
259	-		-		0.214		0.211		0.213		0.213	0.002	3	
260		0.232		0.228		0.232		0.235		0.231	0.232	0.002	5	
261	-		0.213		0.222		0.226		0.229		0.223	0.007	4	
262		0.202		0.203		0.200		0.194		0.200	0.200	0.004	5	
263	-		0.228		0.216		0.228		0.229		0.225	0.006	4	
264		0.195		0.208		0.218		0.217		0.216	0.211	0.010	5	
Mean and standard deviation of pen means:											0.227	0.018	66	

- No eggs available.

Differences between the control and this treatment group were not significant ($p > 0.05$).

Appendix X - Table 1
Mean Hatchling Body Weight (g) per Pen by Week
from a Northern Bobwhite Reproduction Study with C6 Acid
(Control)

Pen	Weeks [No. of Hatchlings]										Mean	SD	Total Hatch
	A [n]	B [n]	C [n]	D [n]	E [n]	F [n]	G [n]	H [n]	I [n]	J [n]			
201	-	-	-	-	-	-	-	-	-	-			
202	[0]	[0]	[0]	5[3]	5[6]	5[5]	5[3]	6[5]	6[6]	6[4]	6	0	32
203	[0]	[0]	[0]	[0]	[0]	5[5]	6[5]	6[5]	5[5]	6[5]	6	0	25
204	[0]	[0]	4[2]	6[2]	5[5]	6[5]	5[6]	6[6]	6[7]	6[4]	6	1	37
205	[0]	[0]	[0]	5[2]	5[1]	6[3]	5[3]	6[3]	6[4]	6[4]	6	0	20
206	[0]	6[3]	6[5]	6[4]	6[7]	6[6]	6[4]	7[5]	6[8]	6[3]	6	0	45
207	[0]	[0]	[0]	6[1]	6[4]	6[3]	6[7]	7[6]	6[6]	6[6]	6	0	33
208	5[3]	6[4]	5[5]	5[3]	6[6]	6[7]	6[6]	6[7]	6[3]	[0]	6	0	44
209	6[3]	6[7]	6[5]	6[6]	7[6]	6[7]	6[5]	7[5]	6[5]	6[5]	6	0	54
210	6[2]	[0]	6[3]	6[3]	6[6]	6[5]	6[6]	7[5]	7[6]	[0]	6	0	36
211	4[3]	5[5]	5[5]	5[5]	6[6]	6[5]	6[1]	7[2]	6[3]	6[2]	5	1	37
212	[0]	6[4]	6[4]	6[5]	6[6]	6[6]	6[7]	6[3]	6[3]	6[5]	6	0	43
213	[0]	[0]	[0]	6[3]	6[5]	6[5]	6[4]	6[7]	6[5]	6[4]	6	0	33
214	[0]	[0]	[0]	6[4]	6[6]	6[6]	5[5]	5[5]	6[7]	6[5]	6	0	38
215	6[2]	7[3]	6[5]	7[6]	7[4]	7[7]	7[5]	8[6]	7[4]	7[5]	7	0	47
216	-	-	-	-	-	-	-	-	-	-			
											Mean	SD	
											6	0	524

The number of hatchlings weighed may differ from the total number of hatchlings since those hatchlings found dead were not weighed.

- Data are not available due to adult mortality.

SD = Standard deviation of mean body weight, by parental pen, by week.

Appendix X - Table 2
Mean Hatchling Body Weight (g) per Pen by Week
from a Northern Bobwhite Reproduction Study with C6 Acid
(1000 PPM)

Pen	Weeks [No. of Hatchlings]										Mean	SD	Total Hatch
	A[n]	B[n]	C[n]	D[n]	E[n]	F[n]	G[n]	H[n]	I[n]	J[n]			
217	5[1]	5[5]	5[5]	6[7]	6[4]	5[6]	6[6]	6[2]	6[5]	6[5]	6	0	46
218	5[2]	6[5]	6[7]	6[4]	6[5]	6[5]	6[6]	6[5]	6[5]	6[3]	6	0	47
219	6[3]	6[4]	6[5]	7[6]	7[6]	7[7]	8[6]	8[6]	7[5]	7[5]	7	1	53
220	[0]	[0]	5[2]	6[4]	6[5]	6[4]	6[7]	6[5]	6[1]	7[4]	6	0	32
221	[0]	[0]	5[3]	7[5]	7[6]	6[7]	6[2]	7[5]	6[5]	6[3]	6	0	36
222	5[3]	5[2]	5[3]	6[3]	6[5]	6[1]	6[4]	6[1]	6[2]	[0]	6	1	24
223	[0]	6[4]	6[5]	6[6]	6[6]	6[6]	7[6]	6[7]	7[5]	7[5]	6	0	50
224	6[2]	6[3]	6[6]	6[5]	6[7]	6[5]	7[6]	7[6]	7[8]	7[4]	6	1	52
225	[0]	5[2]	4[1]	5[5]	6[4]	6[6]	6[5]	6[6]	6[6]	6[6]	6	1	41
226	[0]	4[1]	5[4]	6[6]	6[6]	5[5]	6[7]	6[3]	6[6]	6[4]	6	0	42
227	[0]	[0]	5[2]	6[4]	6[5]	6[5]	6[3]	[0]	[0]	[0]	6	0	19
228	[0]	6[2]	5[7]	6[2]	6[7]	6[4]	6[6]	6[6]	6[8]	6[3]	6	0	45
229	[0]	[0]	5[2]	6[6]	6[6]	6[7]	6[2]	6[5]	6[3]	6[3]	6	0	34
230	[0]	[0]	4[1]	7[2]	6[4]	6[1]	6[5]	6[5]	7[7]	6[4]	6	1	29
231	5[3]	5[5]	5[5]	6[7]	6[6]	5[4]	5[4]	6[6]	6[6]	6[5]	6	0	51
232	5[3]	5[2]	5[4]	6[5]	6[6]	5[5]	6[6]	6[6]	6[7]	6[4]	6	0	48
											Mean	SD	
											6	0	649

The number of hatchlings weighed may differ from the total number of hatchlings since those hatchlings found dead were not weighed.
Differences between the control and this treatment group were not significant ($p > 0.05$).
SD = Standard deviation of mean body weight, by parental pen, by week.

Appendix X - Table 3
Mean Hatchling Body Weight (g) per Pen by Week
from a Northern Bobwhite Reproduction Study with C6 Acid
(5000 PPM)

Pen	Weeks [No. of Hatchlings]										Mean	SD	Total Hatch
	A [n]	B [n]	C [n]	D [n]	E [n]	F [n]	G [n]	H [n]	I [n]	J [n]			
233	[0]	6 [3]	6 [5]	7 [4]	7 [3]	7 [3]	7 [3]	[0]	7 [2]	7 [1]	6	0	24
234	[0]	[0]	4 [4]	5 [4]	6 [6]	5 [6]	6 [7]	6 [4]	6 [6]	6 [4]	5	0	41
235	[0]	4 [5]	4 [5]	5 [5]	5 [4]	5 [3]	5 [5]	5 [6]	5 [5]	[0]	5	0	38
236	[0]	5 [2]	6 [5]	6 [3]	6 [6]	6 [4]	6 [6]	6 [5]	7 [6]	6 [2]	6	1	39
237	[0]	6 [3]	6 [4]	6 [4]	6 [3]	5 [5]	6 [4]	6 [6]	6 [6]	6 [5]	6	0	40
238	[0]	[0]	5 [4]	5 [4]	6 [5]	5 [5]	6 [6]	6 [6]	6 [7]	6 [4]	5	0	41
239	[0]	[0]	[0]	[0]	6 [2]	5 [6]	6 [5]	6 [8]	6 [6]	6 [6]	6	0	33
240	[0]	6 [1]	6 [3]	6 [5]	6 [7]	6 [4]	6 [6]	6 [4]	7 [7]	7 [4]	6	0	41
241	5 [2]	6 [5]	6 [7]	6 [5]	6 [7]	6 [6]	6 [7]	6 [8]	6 [6]	7 [5]	6	0	58
242	[0]	[0]	[0]	[0]	[0]	5 [5]	6 [6]	6 [6]	7 [6]	6 [5]	6	0	28
243	[0]	5 [1]	5 [4]	6 [4]	6 [6]	5 [7]	6 [5]	6 [5]	6 [5]	6 [3]	6	0	40
244	5 [2]	5 [4]	5 [5]	5 [5]	5 [3]	5 [1]	5 [4]	6 [2]	5 [3]	5 [3]	5	0	32
245	[0]	[0]	[0]	[0]	[0]	[0]	[0]	7 [4]	7 [3]	7 [2]	7	0	9
246	[0]	[0]	[0]	5 [1]	[0]	5 [3]	6 [4]	6 [4]	6 [7]	6 [5]	6	0	24
247	[0]	6 [4]	6 [5]	6 [6]	7 [6]	6 [7]	7 [5]	6 [7]	7 [6]	7 [6]	6	0	52
248	[0]	[0]	[0]	[0]	[0]	[0]	5 [2]	6 [1]	6 [2]	[0]	6	1	5
											Mean	SD	
											6	1	545

The number of hatchlings weighed may differ from the total number of hatchlings since those hatchlings found dead were not weighed.

Differences between the control and this treatment group were not significant ($p > 0.05$).

SD = Standard deviation of mean body weight, by parental pen, by week.

Appendix X - Table 4
 Mean Hatchling Body Weight (g) per Pen by Week
 from a Northern Bobwhite Reproduction Study with C6 Acid
 (10000 PPM)

Pen	Weeks [No. of Hatchlings]										Mean	SD	Total Hatch
	A [n]	B [n]	C [n]	D [n]	E [n]	F [n]	G [n]	H [n]	I [n]	J [n]			
249	-	-	-	-	-	-	-	-	-	-			
250	[0]	[0]	7 [2]	6 [5]	6 [3]	6 [5]	6 [7]	6 [6]	7 [6]	7 [4]	6	0	38
251	[0]	5 [1]	[0]	6 [3]	[0]	5 [3]	6 [2]	6 [4]	6 [2]	6 [3]	6	0	18
252	4 [1]	6 [3]	6 [5]	6 [5]	6 [4]	6 [5]	6 [5]	6 [6]	6 [6]	6 [4]	6	0	44
253	[0]	[0]	5 [2]	6 [4]	6 [5]	5 [4]	5 [4]	5 [8]	6 [5]	6 [3]	5	0	35
254	[0]	[0]	6 [2]	7 [1]	6 [4]	6 [2]	6 [3]	6 [1]	[0]	[0]	6	0	13
255	5 [3]	6 [4]	6 [4]	6 [6]	6 [5]	6 [6]	6 [4]	6 [5]	6 [2]	5 [3]	6	0	42
256	[0]	6 [1]	6 [3]	6 [3]	6 [5]	6 [4]	6 [5]	5 [4]	6 [6]	6 [5]	6	0	36
257	[0]	6 [4]	6 [4]	6 [5]	6 [5]	6 [5]	6 [2]	6 [5]	6 [3]	6 [4]	6	0	37
258	[0]	[0]	[0]	[0]	5 [1]	4 [1]	5 [2]	5 [2]	5 [3]	5 [3]	5	0	12
259	[0]	[0]	[0]	5 [1]	6 [4]	6 [5]	6 [5]	6 [8]	6 [5]	7 [4]	6	0	32
260	6 [4]	6 [5]	6 [6]	6 [4]	6 [6]	6 [5]	7 [4]	7 [4]	6 [3]	7 [5]	6	0	46
261	[0]	5 [2]	[0]	6 [3]	6 [1]	6 [3]	7 [2]	7 [3]	7 [3]	7 [3]	6	1	20
262	5 [1]	6 [4]	6 [6]	6 [4]	6 [7]	6 [6]	6 [6]	6 [5]	6 [5]	6 [5]	6	0	49
263	[0]	[0]	[0]	5 [3]	6 [5]	6 [5]	6 [1]	[0]	6 [2]	7 [2]	6	0	18
264	[0]	6 [2]	6 [6]	5 [3]	5 [5]	6 [6]	6 [7]	6 [6]	6 [7]	6 [5]	6	0	47
											Mean	SD	
											6	0	487

The number of hatchlings weighed may differ from the total number of hatchlings since those hatchlings found dead were not weighed.

- Data are not available due to adult mortality.

Differences between the control and this treatment group were not significant ($p > 0.05$).

SD = Standard deviation of mean body weight, by parental pen, by week.

Appendix XI - Table 1
Mean 14-Day Old Survivors Body Weight (g) per Pen by Week
from a Northern Bobwhite Reproduction Study with C6 Acid
(Control)

Pen	Weeks [No. of 14-Day Old Survivors]										Mean	SD	14-Day Total			
	A [n]	B [n]	C [n]	D [n]	E [n]	F [n]	G [n]	H [n]	I [n]	J [n]						
201	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
202	[0]	[0]	[0]	22[3]	22[6]	22[5]	25[3]	26[5]	27[6]	23[4]	24	2	32			
203	[0]	[0]	[0]	[0]	[0]	22[5]	24[4]	26[5]	26[3]	25[5]	24	2	22			
204	[0]	[0]	21[1]	23[2]	19[4]	23[3]	22[4]	25[6]	25[6]	26[4]	24	2	30			
205	[0]	[0]	[0]	19[1]	22[1]	19[3]	22[1]	25[3]	29[4]	20[3]	23	4	16			
206	[0]	26[3]	28[5]	25[3]	27[7]	27[6]	26[4]	28[5]	27[8]	28[3]	27	1	44			
207	[0]	[0]	[0]	28[1]	26[4]	31[3]	31[7]	31[6]	27[6]	28[6]	29	2	33			
208	14[3]	24[2]	23[3]	21[3]	19[6]	22[7]	25[6]	25[7]	24[3]	[0]	22	3	40			
209	29[3]	30[6]	29[5]	34[6]	30[6]	29[7]	30[5]	34[5]	30[5]	32[5]	31	2	53			
210	26[2]	[0]	26[3]	29[3]	27[6]	31[5]	27[5]	32[5]	31[6]	[0]	29	2	35			
211	[0]	24[4]	18[2]	27[5]	25[6]	23[4]	24[1]	27[2]	28[3]	25[2]	25	3	29			
212	[0]	23[4]	28[4]	25[5]	27[6]	26[6]	28[7]	30[2]	26[3]	29[5]	27	2	42			
213	[0]	[0]	[0]	26[3]	25[5]	33[5]	32[4]	31[7]	33[5]	28[4]	30	3	33			
214	[0]	[0]	[0]	27[4]	24[5]	24[5]	25[4]	26[2]	29[7]	31[5]	27	3	32			
215	24[1]	27[3]	30[5]	34[6]	31[4]	30[6]	31[5]	32[6]	31[4]	34[5]	31	2	45			
216	-	-	-	-	-	-	-	-	-	-	-	-	-			
											Mean	SD				
											27	3	486			

- Data are not available due to adult mortality.

SD = Standard deviation of mean body weight, by parental pen, by week.

Appendix XI - Table 2
Mean 14-Day Old Survivors Body Weight (g) per Pen by Week
from a Northern Bobwhite Reproduction Study with C6 Acid
(1000 PPM)

Pen	Weeks [No. of 14-Day Old Survivors]										Mean	SD	14-Day Total
	A [n]	B [n]	C [n]	D [n]	E [n]	F [n]	G [n]	H [n]	I [n]	J [n]			
217	[0]	25[4]	28[4]	23[7]	29[4]	25[6]	30[6]	26[2]	28[5]	33[5]	27	3	43
218	11[1]	23[5]	27[5]	27[3]	29[5]	26[5]	29[6]	30[5]	30[5]	31[3]	27	3	43
219	22[3]	24[4]	24[4]	27[5]	25[6]	27[7]	26[6]	29[6]	29[5]	27[5]	26	2	51
220	[0]	[0]	26[1]	28[4]	28[4]	29[4]	30[7]	31[5]	36[1]	35[4]	30	3	30
221	[0]	[0]	23[1]	29[5]	26[6]	23[6]	30[2]	25[4]	27[5]	24[3]	26	2	32
222	16[1]	24[1]	22[3]	24[2]	31[5]	22[1]	29[4]	31[1]	23[2]	[0]	26	4	20
223	[0]	24[4]	24[5]	25[6]	24[6]	25[6]	28[6]	30[7]	28[5]	29[5]	26	2	50
224	24[2]	27[3]	28[6]	29[5]	30[7]	26[4]	28[6]	30[6]	33[8]	31[4]	29	2	51
225	[0]	20[1]	[0]	24[3]	23[3]	25[6]	25[5]	25[6]	29[6]	27[5]	26	2	35
226	[0]	19[1]	24[4]	28[5]	25[6]	22[3]	26[5]	28[3]	28[6]	30[3]	26	2	36
227	[0]	[0]	21[2]	28[4]	26[5]	24[5]	27[3]	[0]	[0]	[0]	26	2	19
228	[0]	24[2]	25[6]	31[1]	31[7]	27[1]	28[6]	25[5]	30[7]	28[3]	28	3	38
229	[0]	[0]	21[2]	29[6]	27[6]	26[6]	28[2]	31[4]	31[3]	27[3]	28	3	32
230	[0]	[0]	27[1]	22[2]	27[4]	31[1]	25[4]	26[5]	31[7]	30[4]	28	3	28
231	17[1]	26[5]	28[5]	31[7]	29[6]	26[2]	28[3]	30[6]	25[6]	32[5]	28	3	46
232	20[1]	24[2]	21[3]	26[5]	27[6]	21[2]	27[6]	24[5]	28[7]	30[4]	26	3	41
											Mean	SD	
											27	1	595

Differences between the control and this treatment group were not significant ($p > 0.05$).

SD = Standard deviation of mean body weight, by parental pen, by week.

Appendix XI - Table 3
Mean 14-Day Old Survivors Body Weight (g) per Pen by Week
from a Northern Bobwhite Reproduction Study with C6 Acid
(5000 PPM)

Pen	Weeks [No. of 14-Day Old Survivors]										Mean	SD	14-Day Total
	A[n]	B[n]	C[n]	D[n]	E[n]	F[n]	G[n]	H[n]	I[n]	J[n]			
233	[0]	25[3]	27[5]	30[4]	31[3]	29[3]	31[3]	[0]	30[2]	33[1]	29	2	24
234	[0]	[0]	22[1]	27[3]	26[6]	22[3]	27[6]	26[4]	22[6]	27[4]	25	2	33
235	[0]	19[1]	17[1]	22[3]	23[3]	22[1]	19[4]	26[6]	24[5]	[0]	23	3	24
236	[0]	24[1]	28[5]	29[3]	27[6]	27[4]	29[6]	31[5]	28[6]	28[2]	28	1	38
237	[0]	30[2]	26[4]	30[4]	28[3]	24[5]	30[2]	27[6]	27[6]	29[3]	27	2	35
238	[0]	[0]	26[1]	27[3]	27[5]	25[3]	28[4]	29[6]	28[7]	28[4]	28	1	33
239	[0]	[0]	[0]	[0]	30[2]	24[4]	28[5]	30[8]	25[6]	34[6]	28	3	31
240	[0]	26[1]	32[3]	30[5]	29[7]	29[4]	32[6]	29[4]	30[6]	30[4]	30	1	40
241	17[1]	24[5]	25[6]	24[5]	26[7]	25[6]	24[7]	28[8]	29[6]	29[5]	26	2	56
242	[0]	[0]	[0]	[0]	[0]	26[1]	27[6]	29[6]	29[6]	29[5]	28	1	24
243	[0]	[0]	22[2]	21[4]	21[6]	23[7]	23[3]	23[4]	27[4]	26[3]	23	2	33
244	13[2]	18[2]	22[3]	27[2]	28[2]	22[1]	22[4]	16[2]	25[3]	27[2]	22	5	23
245	[0]	[0]	[0]	[0]	[0]	[0]	[0]	27[4]	28[3]	28[2]	28	1	9
246	[0]	[0]	[0]	26[1]	[0]	21[2]	23[4]	30[4]	28[7]	26[5]	26	3	23
247	[0]	27[4]	28[5]	29[6]	28[6]	26[7]	30[5]	30[7]	28[6]	33[6]	29	2	52
248	[0]	[0]	[0]	[0]	[0]	[0]	22[2]	29[1]	28[2]	[0]	25	4	5
											Mean	SD	
											27	2	483

Differences between the control and this treatment group were not significant ($p > 0.05$).
SD = Standard deviation of mean body weight, by parental pen, by week.

- 198 -

Appendix XI - Table 4
 Mean 14-Day Old Survivors Body Weight (g) per Pen by Week
 from a Northern Bobwhite Reproduction Study with C6 Acid
 (10000 PPM)

Pen	Weeks [No. of 14-Day Old Survivors]										14-Day		
	A[n]	B[n]	C[n]	D[n]	E[n]	F[n]	G[n]	H[n]	I[n]	J[n]	Mean	SD	Total
249	-	-	-	-	-	-	-	-	-	-			
250	[0]	[0]	28[2]	27[5]	24[3]	22[5]	26[6]	26[5]	29[5]	27[4]	26	2	35
251	[0]	20[1]	[0]	21[3]	[0]	22[3]	20[2]	25[3]	18[2]	26[3]	22	3	17
252	[0]	26[2]	32[5]	30[5]	32[4]	28[5]	31[5]	30[6]	30[5]	33[4]	30	2	41
253	[0]	[0]	[0]	27[1]	25[4]	25[3]	24[1]	25[3]	25[3]	30[1]	25	1	16
254	[0]	[0]	25[2]	20[1]	25[4]	25[2]	19[3]	28[1]	[0]	[0]	23	3	13
255	20[3]	28[4]	33[4]	30[5]	25[5]	24[6]	24[3]	29[5]	26[2]	34[1]	27	4	38
256	[0]	[0]	28[3]	22[3]	22[5]	20[4]	23[5]	24[4]	28[5]	29[5]	25	3	34
257	[0]	29[3]	28[4]	30[4]	26[5]	27[4]	24[1]	29[5]	30[3]	32[4]	29	2	33
258	[0]	[0]	[0]	[0]	27[1]	[0]	28[1]	[0]	21[2]	27[1]	25	4	5
259	[0]	[0]	[0]	19[1]	26[4]	23[5]	25[3]	26[8]	30[5]	34[4]	27	4	30
260	20[4]	25[5]	26[6]	25[4]	27[5]	22[5]	23[4]	24[4]	24[3]	25[5]	24	2	45
261	[0]	18[2]	[0]	25[3]	10[1]	19[3]	23[2]	24[3]	29[2]	29[3]	23	5	19
262	18[1]	21[4]	24[6]	25[4]	23[7]	18[2]	20[5]	23[5]	28[4]	28[5]	24	3	43
263	[0]	[0]	[0]	28[3]	25[4]	22[5]	30[1]	[0]	30[2]	29[2]	26	3	17
264	[0]	22[2]	25[6]	25[3]	22[5]	15[4]	21[5]	26[5]	21[4]	28[5]	23	4	39
											Mean	SD	
											25	2	425

- Data are not available due to adult mortality.

Differences between the control and this treatment group were not significant ($p > 0.05$).

SD = Standard deviation of mean body weight, by parental pen, by week.

- 199 -

Appendix XII

The Analysis of C6 Acid in Avian Blood

- 200 -

Appendix XII

Table 1
Typical LC/MS Operational Parameters

INSTRUMENT:	Agilent Series High Performance Liquid Chromatograph with a Perkin-Elmer SCIEX API 100 LC Mass Spectrometer equipped with a Perkin-Elmer SCIEX TurboIonSpray ion source		
ANALYTICAL COLUMN:	Thermo Electron Betasil C-18 (50mm x 2.1 mm, 5- μ m particle size).		
GUARD COLUMN:	Thermo, Betasil C-18 column (20 mm x 2.1 mm I.D.)		
STOP TIME:	8.00 minutes		
FLOW RATE:	300 μ L/minute		
OVEN TEMPERATURE:	40°C		
MOBILE PHASE:	Channel A: 0.1% Formic Acid Channel B: Acetonitrile		
GRADIENT PROFILE	<u>Time</u>	<u>%A</u>	<u>%B</u>
	0.00	75.0	25.0
	0.10	75.0	25.0
	0.50	75.0	25.0
	2.50	25.0	75.0
	4.00	25.0	75.0
	4.10	75.0	25.0
	8.00	75.0	25.0
INJECTION VOLUME:	5.00 μ l		
C ₆ ACID RETENTION TIME:	Approximately 4.4 minutes		
C ₆ ACID MONITORED MASS:	312.8 amu		

- 201 -

Appendix XII

Table 1 (continued)

Typical LC/MS/MS Operational Parameters

INSTRUMENT:	Agilent Series 1100 High Performance Liquid Chromatograph (HPLC) coupled with an Applied Biosystems MSD SCIEX API 3000 LC Mass Spectrometer (MS/MS)		
ANALYTICAL COLUMN:	Thermo Betasil C-18 (50 mm x 2.1 mm, 5- μ m particle size) analytical column. Guard Column Thermo Betasil C18 (10 mm x 2.1 mm)		
STOP TIME:	10.00 minutes		
FLOW RATE:	300 μ L/minute		
OVEN TEMPERATURE:	40.0 $^{\circ}$ C		
MOBILE PHASE:	Channel A: 0.1% Formic Acid Channel B: Acetonitrile		
GRADIENT PROFILE:	<u>Time</u>	<u>%A</u>	<u>%B</u>
	0.00	80.0	20.0
	0.500	80.0	20.0
	4.00	10.0	90.0
	6.00	10.0	90.0
	6.10	80.0	20.0
	10.00	80.0	20.0
INJECTION VOLUME:	50.0 μ l		
C ₆ ACID PEAK RETENTION TIME:	Approximately 6.3 minutes		
ION SOURCE:	Turbo Ion Spray, H \approx -10; L \approx -2		
MONITORED TRANSITIONS:	313.00 \rightarrow 269.00 amu (dwell time 250 msec.) quantification ion 313.00 \rightarrow 247.00 amu (dwell time 250 msec.) 313.00 \rightarrow 119.00 amu (dwell time 250 msec.)		

- 202 -

Appendix XII

Table 2

Examples of Equations Used in Calculations

The concentration of C₆ acid found at the instrument was determined using the following equation:

$$\text{C}_6 \text{ acid concentration found at the instrument (}\mu\text{g/mL)} = \frac{\text{Peak area response} - (\text{y-intercept})}{\text{Slope}}$$

Determination of Sample Residues (C₆ acid)

The concentration expressed as ppm for each sample was determined using the following equation:

$$\text{C}_6 \text{ acid found in sample (ppm)} = \frac{\text{C}_6 \text{ acid found at the instrument (}\mu\text{g/mL)} \times \text{Initial volume (mL)} \times \text{Final dilution}}{\text{Sample volume (mL)}}$$

$$\text{LOQ} = \frac{\text{Concentration of lowest standard (}\mu\text{g/mL)} \times \text{Initial volume (mL)} \times \text{Final dilution factor}}{\text{Blank volume (mL)}}$$

Fortification Recoveries

The ppm found in each sample is divided by the nominal concentration of each sample (fortified level, ppm). This ratio times 100 is the percent recovery of the method at that level of fortification.

$$\% \text{ Recovery} = \frac{\text{ppm found for each sample}}{\text{ppm fortified for each sample}} \times 100$$

- 203 -

Appendix XII

Table 3

Matrix Blanks and Fortifications Analyzed Concurrently with the Samples

Number (632-102-)	Sample Type	Concentration of C ₆ Acid (ppm)		Percent Recovery	Mean Percent Recovery
		Fortified	Measured ¹		
MAB-1	Matrix Blank	0	< LOQ	-	
MAS-1	Matrix Fortification	0.01	0.0094	94	105
MAS-2	Matrix Fortification	0.500	0.522	104	
MAS-3	Matrix Fortification	4.00	4.67	117	
MAB-2	Matrix Blank	0	< LOQ	-	
MAS-4	Matrix Fortification	0.01	0.0083	83	90
MAS-5	Matrix Fortification	0.500	0.457	91	
MAS-6	Matrix Fortification	4.00	3.79	95	
MAB-3	Matrix Blank	0	< LOQ	-	
MAS-7	Matrix Fortification	4.00	4.51 ²	113	115
MAS-8	Matrix Fortification	50.0	59.0 ²	118	
MAS-9	Matrix Fortification	100	115 ²	115	
MAS-10	Matrix Fortification	200	224 ²	112	
MAB-4	Matrix Blank	0	< LOQ	-	
MAS-11	Matrix Fortification	4.00	3.11 ²	78	92
MAS-12	Matrix Fortification	50.0	55.3 ²	111	
MAS-13	Matrix Fortification	100	96.0 ²	96	
MAS-14	Matrix Fortification	300	241 ²	81	

¹The method limit of quantitation (LOQ) for these analyses was set at 0.003 ppm based upon product of the lowest analytical standard 0.0001 µg/mL and the dilution factor (30) of the matrix blank extract. Samples analyzed on the triple quad.

²The method limit of quantitation (LOQ) for these analyses was set at 0.300 ppm based upon product of the lowest analytical standard 0.01 µg/mL and the dilution factor (30) of the matrix blank extract.

- 204 -

Appendix XII

Table 3 (continued)

Matrix Blanks and Fortifications Analyzed Concurrently with the Samples

Number (632-102-)	Sample Type	Concentration of C ₆ Acid (ppm)		Percent Recovery	Mean Percent Recovery
		Fortified	Measured ¹		
MAB-5	Matrix Blank	0	< LOQ	-	
MAS-15	Matrix Fortification	4.00	3.60	90	97
MAS-16	Matrix Fortification	50.0	53.9	108	
MAS-17	Matrix Fortification	100	101	101	
MAS-18	Matrix Fortification	300	266	89	
MAB-6	Matrix Blank	0	< LOQ	-	
MAS-19	Matrix Fortification	0.500	0.566	113	114
MAS-20	Matrix Fortification	4.00	4.60	115	
MAS-21	Matrix Fortification	50.0	59.8	120	
MAS-22	Matrix Fortification	100	106	106	
MAB-7	Matrix Blank	0	< LOQ	-	
MAS-23	Matrix Fortification	0.500	0.550	110	107
MAS-24	Matrix Fortification	4.00	4.30	107	
MAS-25	Matrix Fortification	50.0	51.9	104	
MAS-26	Matrix Fortification	100	107	107	

¹The method limit of quantitation (LOQ) for these analyses was set at 0.300 ppm based upon product of the lowest analytical standard 0.01 µg/mL and the dilution factor (30) of the matrix blank extract.

- 205 -

Appendix XII

Table 4

Determination of C₆ Acid Concentrations in Blood Serum of Northern Bobwhite

Nominal Concentration Diet (ppm)	Blood Serum Sample I.D. Number (632-102)	Blood Serum Collected	C ₆ Acid Concentration	
			Measured ^{2,3} (ppm)	Overall Mean Measured Standard Deviation (SD) Coefficient of Variation (CV)
			Sampling Interval Mean Measured Standard Deviation (SD) Coefficient of Variation (CV)	
0	205	March 02, 2010	0.0122 ¹	
	206	March 02, 2010	0.0047 ¹	
	245	March 02, 2010	< LOQ	
	246	March 02, 2010	< LOQ	
	303	March 03, 2010	< LOQ	
	304	March 03, 2010	< LOQ	
	305	March 03, 2010	< LOQ	
	306	March 03, 2010	< LOQ	
	1000	109	November 11, 2009	27.7
110		November 11, 2009	13.6	
111		November 11, 2009	18.6	
112		November 11, 2009	53.7	
113		November 11, 2009	8.58	
114		November 11, 2009	8.83	
115		November 11, 2009	10.7	
116		November 11, 2009	13.0	
141		December 16, 2009	38.9	\bar{x} = 16.3 SD = 10.8 CV = 66.3
142		December 16, 2009	6.73	
143		December 16, 2009	18.0	
144		December 16, 2009	10.7	
145		December 16, 2009	23.9	
146		December 16, 2009	13.0	
147		December 16, 2009	12.6	
148		December 16, 2009	6.72	

¹The method limit of quantitation (LOQ) for these analyses was set at 0.003 ppm based upon product of the lowest analytical standard 0.0001 µg/mL and the dilution factor (30) of the matrix blank extract. Samples analyzed on the triple quad.

²Measured values were not corrected for mean procedural recoveries based on sample sets (see Table 3).

³The method limit of quantitation (LOQ) for these analyses was set at 0.300 ppm based upon product of the lowest analytical standard 0.01 µg/mL and the dilution factor (30) of the matrix blank extract.

- 206 -

Appendix XII

Table 4 (continued)

Determination of C6 Acid Concentrations in Blood Serum of Northern Bobwhite

Nominal Concentration Diet (ppm)	Blood Serum Sample I.D. Number (632-102)	Blood Serum Collected	C ₆ Acid Concentration		Overall Mean Measured Standard Deviation (SD) Coefficient of Variation (CV)	Sampling Interval Mean Measured Standard Deviation (SD) Coefficient of Variation (CV)
			Measured ^{1,2} (ppm)			
1000	173	January 21, 2010	26.8		\bar{x} = 14.9 SD = 7.00 CV = 47.0	
	174	January 21, 2010	9.83			
	175	January 21, 2010	18.3			
	176	-	-			
	177	January 21, 2010	18.2			
	178	January 21, 2010	7.63			
	179	January 21, 2010	7.82			
	180	January 21, 2010	16.0			
	215	March 2, 2010	9.58		\bar{x} = 14.6 SD = 8.52 CV = 58.4	
	216	March 2, 2010	8.02			
	259	March 2, 2010	14.0			
	260	March 2, 2010	26.8			
	261	March 3, 2010	10.9		\bar{x} = 14.3 SD = 4.74 CV = 33.1	
	262	March 3, 2010	16.7			
	319	March 3, 2010	9.84			
	320	March 3, 2010	19.8			
	5000	117	November 11, 2009	58.8	\bar{x} = 58.5 SD = 37.6 CV = 64.3	\bar{x} = 71.2 SD = 33.5 CV = 47.1
118		November 11, 2009	45.7			
119		November 11, 2009	70.0			
120		November 11, 2009	63.1			
121		November 11, 2009	34.0			
122		November 11, 2009	69.8			
123		November 11, 2009	83.4			
124		November 11, 2009	145			

¹The method limit of quantitation (LOQ) for these analyses was set at 0.300 ppm based upon product of the lowest analytical standard 0.01 µg/mL and the dilution factor (30) of the matrix blank extract.

²Measured values were not corrected for mean procedural recoveries based on sample sets (see Table 3).

- 207 -

Appendix XII

Table 4 (continued)

Determination of C6 Acid Concentrations in Blood Serum of Northern Bobwhite

Nominal Concentration Diet (ppm)	Blood Serum Sample I.D. Number (632-102)	Blood Serum Collected	C ₆ Acid Concentration	Overall Mean Measured Standard Deviation (SD) Coefficient of Variation (CV)	Sampling Interval Mean Measured Standard Deviation (SD) Coefficient of Variation (CV)
			Measured ^{1,2} (ppm)		
5000	149	December 16, 2009	58.4	\bar{x} = 39.2 SD = 21.8 CV = 55.16	
	150	December 16, 2009	39.6		
	151	December 16, 2009	81.1		
	152	December 16, 2009	37.1		
	153	December 16, 2009	20.9		
	154	December 16, 2009	18.5		
	155	December 16, 2009	18.7		
	156	December 16, 2009	39.5		
	181	January 21, 2010	149		\bar{x} = 79.7 SD = 50.3 CV = 63.1
	182	January 21, 2010	150		
	183	January 21, 2010	85.4		
	184	January 21, 2010	57.1		
	185	January 21, 2010	35.9		
	186	January 21, 2010	26.0		
	187	January 21, 2010	33.0	\bar{x} = 41.7 SD = 36.2 CV = 86.8	
	188	January 21, 2010	101		
	223	March 2, 2010	7.30		
	224	March 2, 2010	14.2		
	277	March 2, 2010	78.9		
	278	March 2, 2010	66.2		
	333	March 3, 2010	37.9		\bar{x} = 45.8 SD = 21.5 CV = 46.9
	334	March 3, 2010	55.2		
	335	March 3, 2010	20.2		
	336	March 3, 2010	70.0		

¹The method limit of quantitation (LOQ) for these analyses was set at 0.300 ppm based upon product of the lowest analytical standard 0.01 µg/mL and the dilution factor (30) of the matrix blank extract.

²Measured values were not corrected for mean procedural recoveries based on sample sets (see Table 3).

- 208 -

Appendix XII

Table 4 (continued)

Determination of C6 Acid Concentrations in Blood Serum of Northern Bobwhite

Nominal Concentration Diet (ppm)	Blood Serum Sample I.D. Number (632-102)	Blood Serum Collected	C ₆ Acid Concentration	Overall Mean Measured Standard Deviation (SD) Coefficient of Variation (CV)	Sampling Interval Mean Measured Standard Deviation (SD) Coefficient of Variation (CV)
			Measured ^{1,2} (ppm)		
10000	125	November 11, 2009	277 ³	\bar{x} = 97.9 SD = 59.9 CV = 61.2	\bar{x} = 115 SD = 77.6 CV = 67.4
	126	November 11, 2009	129 ³		
	127	November 11, 2009	71.2 ³		
	128	November 11, 2009	70.9		
	129	November 11, 2009	51.9		
	130	November 11, 2009	67.8		
	131	November 11, 2009	178		
	132	November 11, 2009	74.7		
	157	December 16, 2009	91.2		\bar{x} = 96.7 SD = 42.3 CV = 43.7
	158	December 16, 2009	128		
	159	December 16, 2009	52.1		
	160	December 16, 2009	49.3		
	161	December 16, 2009	85.9		
	162	December 16, 2009	109		
	163	December 16, 2009	179		
	164	December 16, 2009	80.4		\bar{x} = 109 SD = 68.8 CV = 63.1
	189	January 21, 2010	242		
	190	January 21, 2010	169		
	191	January 21, 2010	95.5		
192	January 21, 2010	39.7			
193	January 21, 2010	62.5			
194	January 21, 2010	80.6			
195	January 21, 2010	130			
196	January 21, 2010	50.4			

¹The method limit of quantitation (LOQ) for these analyses was set at 0.300 ppm based upon product of the lowest analytical standard 0.01 µg/mL and the dilution factor (30) of the matrix blank extract.

²Measured values were not corrected for mean procedural recoveries based on sample sets (see Table 3).

³The sum of two elutions reported.

- 209 -

Appendix XII

Table 4 (continued)

Determination of C₆ Acid Concentrations in Blood Serum of Northern Bobwhite

Nominal Concentration Diet (ppm)	Blood Serum Sample I.D. Number (632-102)	Blood Serum Collected	C ₆ Acid Concentration	
			Measured ^{1,2} (ppm)	Overall Mean Measured Standard Deviation (SD) Coefficient of Variation (CV)
10000	231	March 2, 2010	70.4	\bar{x} = 56.9 SD = 22.9 CV = 40.2
	232	March 2, 2010	79.6	
	291	March 2, 2010	28.4	
	292	March 2, 2010	49.3	\bar{x} = 85.4 SD = 61.5 CV = 72.0
	349	March 3, 2010	29.8	
	350	March 3, 2010	127	
	351	March 3, 2010	149	
	352	March 3, 2010	35.7	

¹The method limit of quantitation (LOQ) for these analyses was set at 0.300 ppm based upon product of the lowest analytical standard 0.01 µg/mL and the dilution factor (30) of the matrix blank extract.

²Measured values were not corrected for mean procedural recoveries based on sample sets (see Table 3).

- 210 -

Appendix XII

1. Remove samples from freezer. Allow to come to room temperature.
2. Remove 0.400 mL of plasma from sample and transfer to a 10 mL centrifuge tube. Fortify samples as necessary with an aqueous C6 acid stock. Mix Samples well.
3. Add 2.6 mL of water: formic acid (50:50) vortex for 15 sec and sonicate in an ultrasonic water bath for ~15 minutes. Then centrifuge the sample at ~ 10000 rpm for ~ 30 minutes. Filter samples through 0.45 polypropylene filter.
4. Transfer 2.50 mL of the solution to a C-18 SPE column that was prepared by washing with 2 mL of methanol followed by 2 mL of HPLC Grade water. Do not use vacuum.
5. Wash the loaded cartridges with 2 mL of methanol:water (40:60), Do not use vacuum. When wash is finished eluting turn on full vacuum until dry.

For Quality Control Samples

6. Elute samples with concentration of 0 to 0.0100 ppm with 2.00 mL of MEOH. Elute samples with concentration of 0.500 ppm with 10.0 mL of MEOH. Elute samples with concentration of 4.00 ppm with 40 mL of MEOH. Do not use vacuum. When samples are finished eluting turn on vacuum to dry.

Or

Elute samples with concentration of 0 ppb with 2.00 mL of MEOH. Elute samples with concentration of 4.00 ppm with 10.0 mL of MEOH. Elute samples with concentration of 50.0 to 300 ppm with 40 mL of MEOH. Do not use vacuum. When samples are finished eluting turn on vacuum to dry.

or

Elute samples with concentration of 0 to 0.500 ppm with 2.00 mL of MEOH. Elute samples with concentration of 4.00 to 100 ppm with 10.0 mL of MEOH. Do not use vacuum. When samples are finished eluting turn on vacuum to dry.

7. Filter the extracts through 0.2 um polypropylene filter. Dilute samples as follows, with 0.1% Formic Acid:

For samples with concentrations of 0 to 0.01 ppm dilute 0.200 mL to 1.00 mL

For samples with concentrations of 0.500 ppm to 4.00 ppm dilute 0.200 mL to 1.00 mL then 0.100 to 1.00 mL with 20:80:0.1 MEOH:H₂O:Formic Acid.

or

For samples with concentrations of 0 to 0.01 ppm dilute 0.200 mL to 1.00 mL

For samples with concentrations of 4.00 to 200 ppm dilute 0.200 mL to 1.00 mL

For samples with concentrations of 300 ppm dilute 0.200 mL to 1.00 mL, then 0.200 mL to 1.00 mL using MeOH:H₂O:formic acid (20:80:0.1%)

or

For samples with concentrations of 0 to 50.0 ppm dilute 0.200 mL to 1.00 mL

- 211 -

For samples with concentrations of 100 ppm dilute 0.200 mL to 1.00 mL, then 0.200 mL to 1.00 mL using MeOH:H₂O:formic acid (20:80:0.1%)

Figure 1. Analytical method outline for the analysis of C₆ acid in avian diet.

For Study Samples

8. Elute samples with feed concentrations of 0 ppm with 2.00 mL of MEOH. Elute samples with feed concentrations of 1000 ppm with 10.0 mL of MEOH. Elute samples with feed concentrations of 5000 to 10000 ppm with 40.0 mL of MEOH. Do not use vacuum. When samples are finished eluting turn on vacuum to dry.
9. Filter the extracts through 0.2 um polypropylene filter. Dilute samples as follows, with 0.1% Formic Acid:

For samples with concentrations 0 to 10000 ppm in feed dilute 0.200 mL to 1.00 mL

10. Submit samples for analysis on LC/MS or LC/MS/MS.

Figure 1. Analytical method outline for the analysis of C₆ acid in avian diet. (continued)

Appendix XII

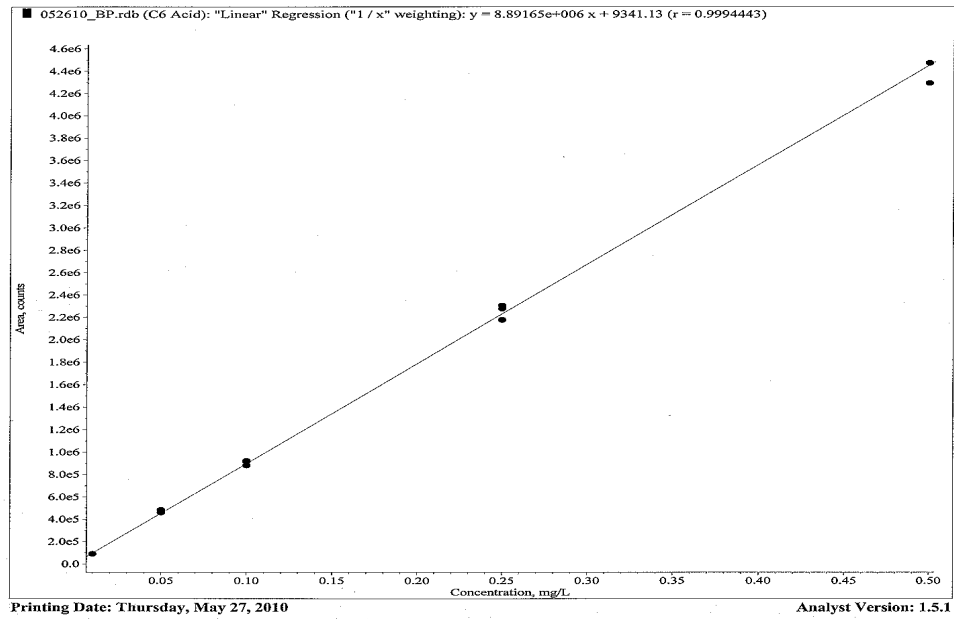
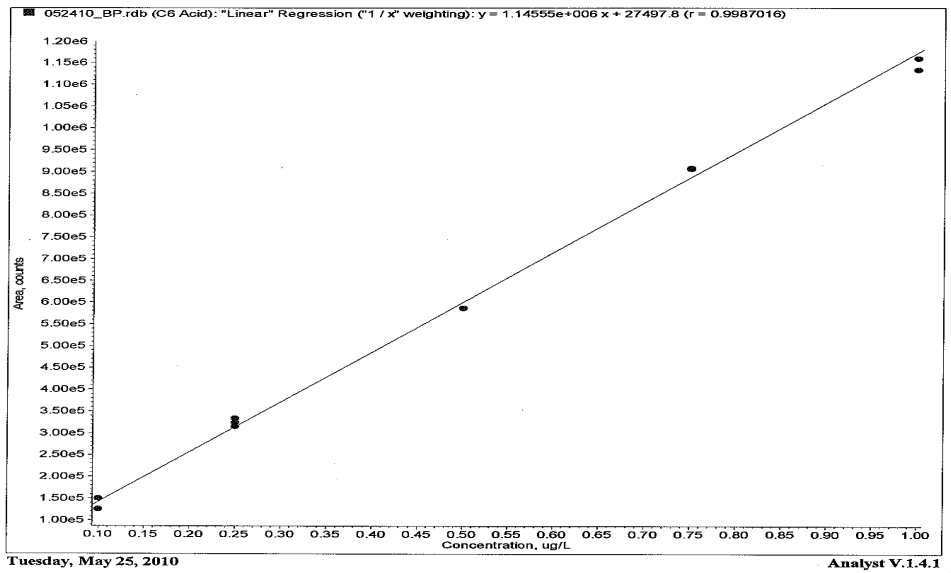


Figure 2. Typical calibration curve for C₆ acid. (Top: LC/MS/MS, Bottom: LC/MS)

Appendix XII

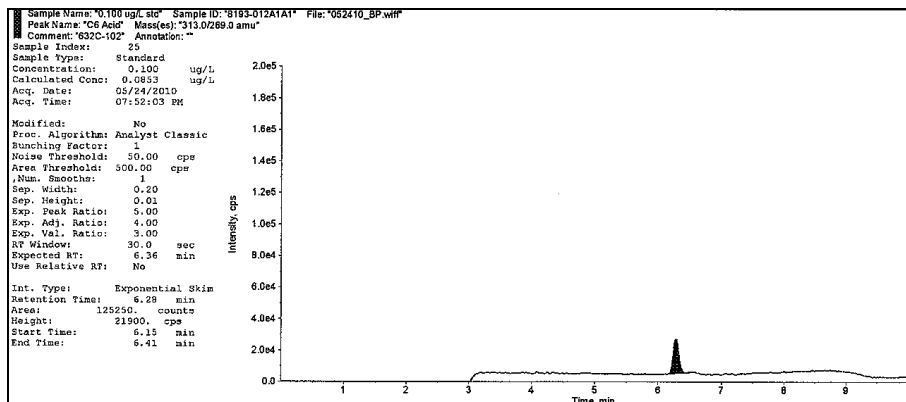


Figure 3. Typical chromatogram of a low-level C₆ acid LC/MS/MS calibration standard, 0.100 µg /L (0.005 ng on-column).

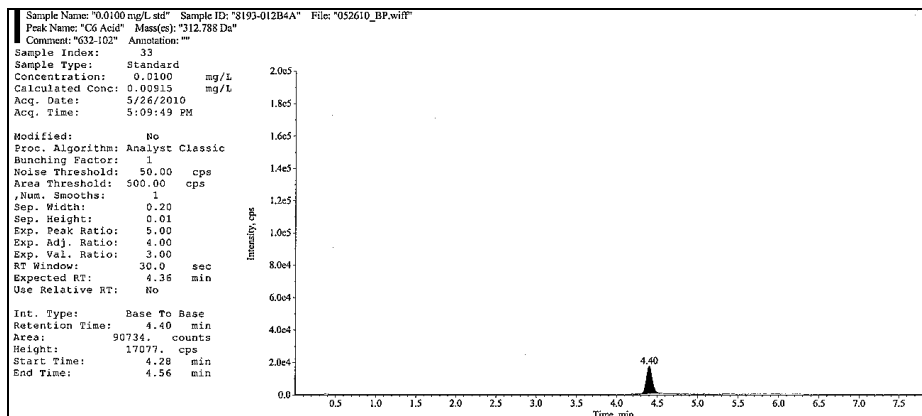


Figure 3. Typical chromatogram of a low-level C₆ acid LC/MS calibration standard, 10 µg /L (0.050 ng on-column).

Appendix XII

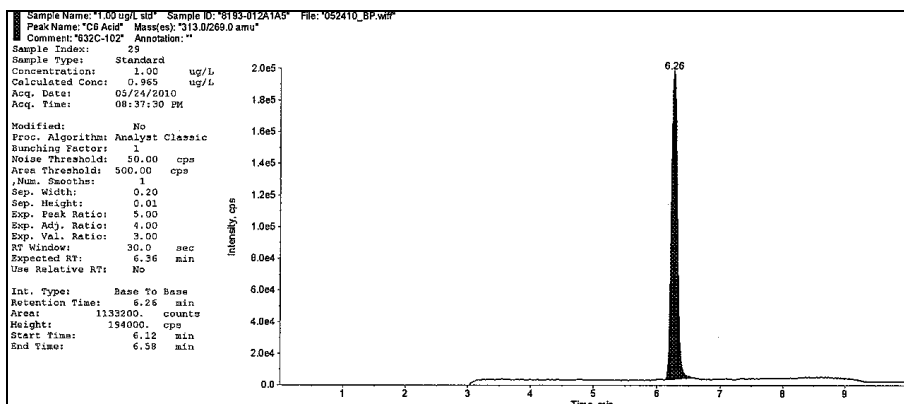


Figure 4. Typical chromatogram of a high-level C₆ acid LC/MS/MS calibration standard, 1.00 µg /L (0.05 ng on-column).

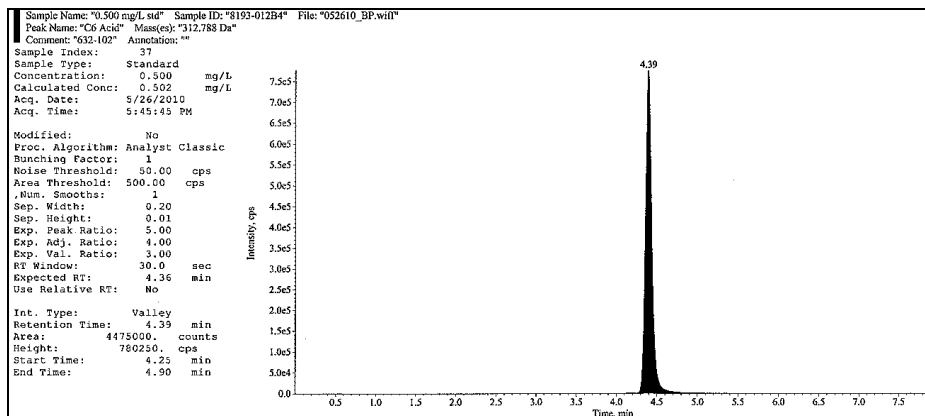


Figure 4. Typical chromatogram of a high-level C₆ acid LC/MS calibration standard, 500 µg /L (2.50 ng on-column).

Appendix XII

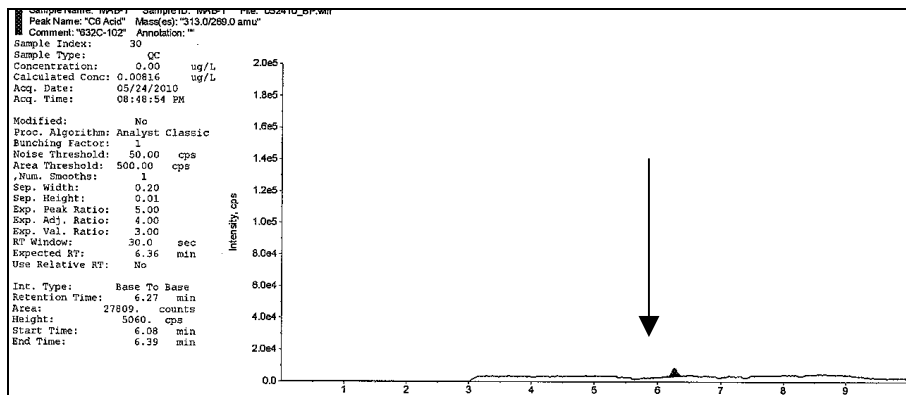


Figure 5. Typical chromatogram of a matrix blank on LC/MS/MS, (632-102-MAB-1). The arrow indicates the retention time of C₆ acid.

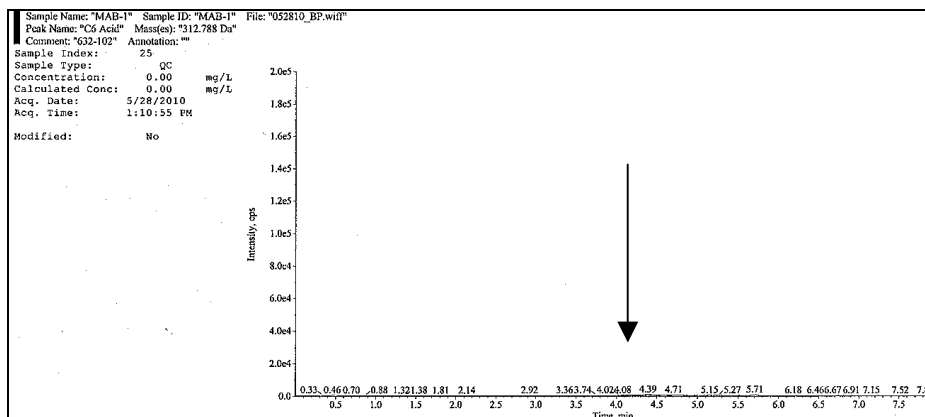


Figure 5. Typical chromatogram of a matrix blank on LC/MS, (632-102-MAB-3). The arrow indicates the retention time of C₆ acid.

Appendix XII

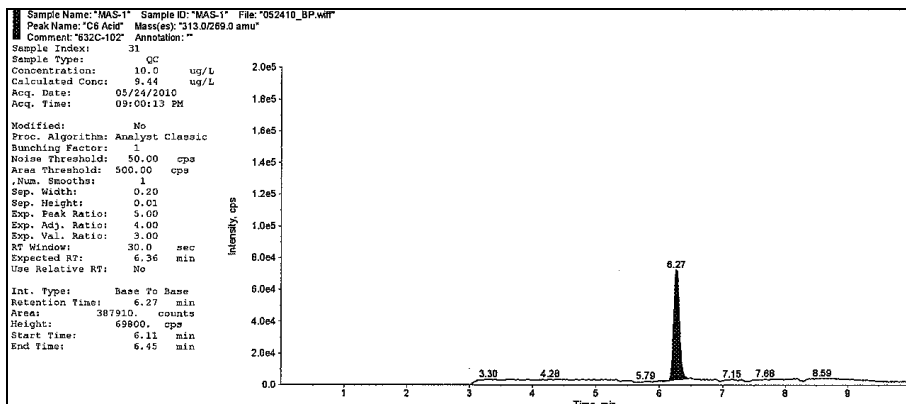


Figure 6. Typical chromatogram of a matrix fortification on LC/MS/MS 632-102-MAS-1, 0.01 ppm

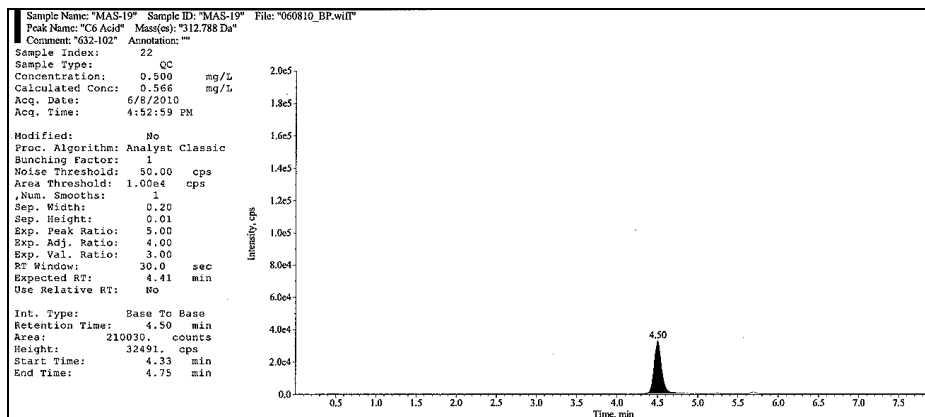


Figure 6. Typical chromatogram of a matrix fortification on LC/MS 632-102-MAS-19, 0.5 ppm

- 217 -

Appendix XII

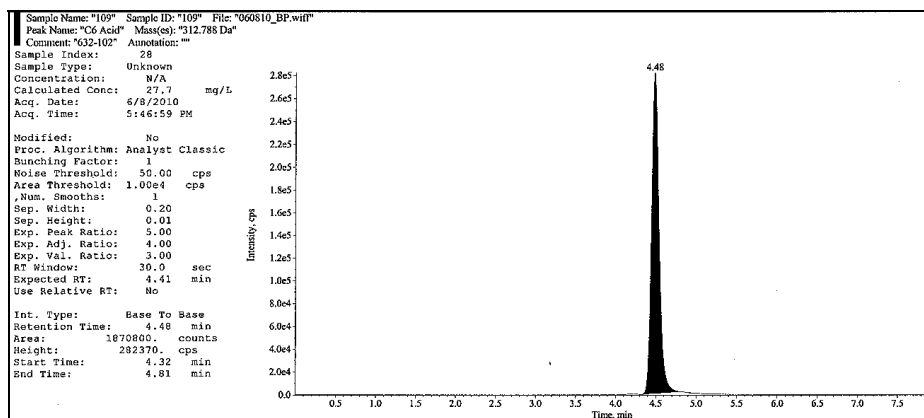
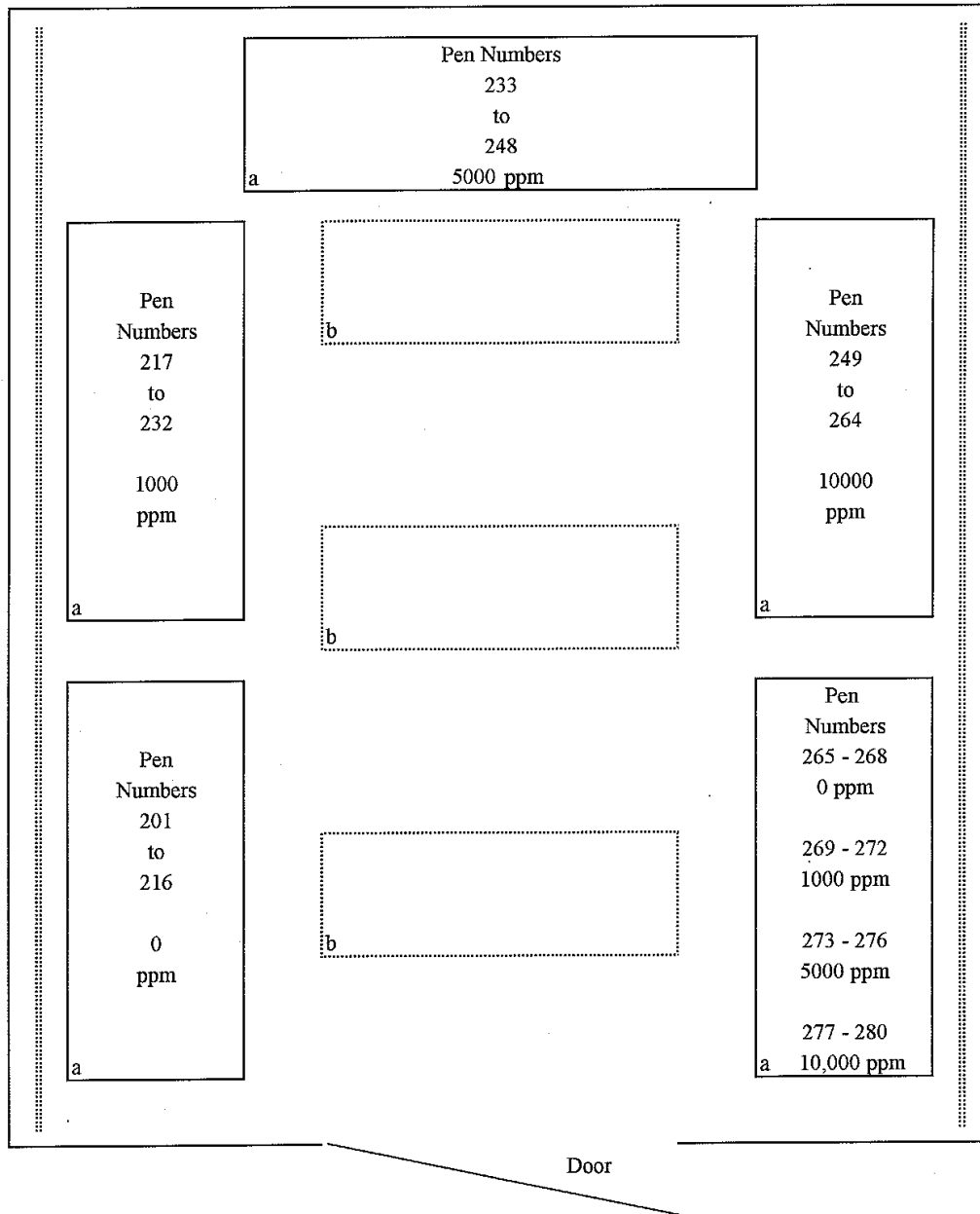


Figure 7. Typical chromatogram of an avian blood plasma sample, S-632-102-109 (1000 ppm in avian diet).

- 218 -

Appendix XIII
Diagram of Test Layout

Room Number: 74



a - GQF Model 0330 Battery Breeder

b - Chroma lights, four-foot

..... Six inch gutter

Diagram not to scale. Room approximately 14 x 16 ft. (4.3 x 4.9 m)

- 219 -

Appendix XIV

Reproductive Parameters

1. Eggs Laid

Definition - The number of eggs produced during the breeding season.

Sensitivity - This is a parameter that is frequently affected by chemicals that cause reproductive impairment. It is also highly sensitive to the general conditions under which the test is conducted, and may be adversely affected by improper diet, crowding, excessive disturbances, etc.

2. Eggs Cracked

Definition - Eggs determined to have cracked shells when inspected with a candling lamp. Fine cracks cannot be detected without utilizing a candling lamp, and if undetected, will bias the data by adversely affecting embryo development.

Sensitivity - This parameter is not frequently affected as cracking is directly related to shell thickness, and few chemicals have caused egg shell thinning. Improper pen design, overcrowding, and pecking by the birds can also increase egg cracking.

3. Eggs Set

Definition - All eggs placed under incubation, i.e., total eggs laid minus cracked eggs, mechanically damaged eggs, and those selected for egg shell thickness analysis. The reason for presenting this parameter is to establish a base of reference for the following parameter - viable embryos.

4. Viable Embryos

Definition - Eggs in which fertilization has occurred and embryonic development has begun. This is determined by candling the eggs 10-12 days after the initiation of incubation. It is difficult to distinguish between infertility and an early embryonic death.

Sensitivity - This is a frequently affected parameter with infertility or embryonic mortality caused by an unfavorable environment for fertilization in the oviduct, impotent males, or chemical residue in the egg.

- 220 -

Appendix XIV

Reproductive Parameters

Page 2

5. Live Three-Week Embryos

Definition - These are embryos that are developing normally after three weeks of incubation. This is determined by candling the eggs.

Sensitivity - This parameter is seldom affected.

6. Hatchlings

Definition - Embryos that mature, pip the shell, and liberate themselves from their eggs on Day 25 or 26 of incubation.

Sensitivity - This is a frequently affected parameter which is also highly sensitive to the conditions of incubation, such as rate and angle of rotation, humidity, and temperature.

- Humidity: If too dry, chicks will stick to their shells.

- Temperature: If too hot and humid, chicks will grow too fast and be too large for their shells; thereby not having the intra-egg mobility necessary to pip their shells.

7. Body Weight - Hatchlings

Definition - The average weight of hatchlings by parental pen of origin, taken immediately upon removal from the hatcher. Hatchlings from each weekly lot of eggs are weighed. Mean weight for each week and mean weight by pen are reported.

Sensitivity - This is an occasionally affected parameter and may reflect some residual or latent toxic effects from chemical residue in the egg.

8. 14-Day Old Survivors

Definition - Birds that survive brooding for two weeks following hatch.

Sensitivity - This is a seldom affected parameter and is probably more indicative of the conditions under which the birds were reared in battery brooders than the chemical to which the adults were exposed.

- 221 -

Appendix XIV

Reproductive Parameters

Page 3

9. Body Weight - 14-Day Old Survivors

Definition - The average body weight of the 14-day old survivors by parental pen of origin, taken upon removal from the brooder unit at 14 days of age. Fourteen-day old survivors from each weekly lot of eggs are weighed. Mean weight for each week and mean weight by pen are reported.

Sensitivity - This parameter is seldom affected, and more closely reflects the rearing practices utilized.

10. Egg Shell Thickness

Definition - The thickness of the shell and the membrane of the egg at its equator after having been opened, washed, and dried for at least one week at room temperature. Egg shell thickness measurements for each egg measured, and pen means are reported.

Sensitivity - This is a seldom affected parameter; however, measurements must be taken very carefully to ensure accuracy. Possible mechanical errors include membrane curling at the measurement surface, and calcium deposits on the measurement surface.

- 222 -

Appendix XV - Table 1
Individual Gross Pathological Observations
from a Northern Bobwhite Reproduction Study with C6 Acid

Birds Euthanized at Test Termination
0 ppm - Control

Males	Pens															
	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216 ¹
External - feather loss	-	-	X	-	-	-	X	-	-	-	X	-	-	-	-	-
Reproductive - right testis small (~1.4 cm)	-	-	X	-	-	-	-	-	-	-	-	-	-	X	-	-
Reproductive - right testis small (~1.3 cm)	-	-	-	-	-	X	-	-	X	X	-	-	-	-	-	-
Not remarkable	X	X	-	X	X	-	-	X	-	-	-	X	X	-	X	-

Females	Pens															
	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216 ²
External - feather loss	-	X	-	X	-	-	-	-	-	-	-	-	-	-	-	-
External - vent lesions	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-
External - pasty vent	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-
External - foot lesions	-	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-
Spleen - pale	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-
Abdominal cavity - egg yolk peritonitis, slight.	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-
Reproductive - ovary regressed	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
Not remarkable	X	-	-	-	X	X	X	-	X	-	X	X	X	X	X	-

¹ Bird euthanized during test. ² Bird found-dead during test.

- 223 -

Appendix XV - Table 2
Individual Gross Pathological Observations
from a Northern Bobwhite Reproduction Study with C6 Acid

Birds Euthanized at Test Termination
1000 ppm

Males	Pens																
	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	
External - feather loss	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	X
External - foot lesions	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-
Liver - pale, slight	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-
Spleen - pale	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Reproductive - testes small (~1.4 cm)	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-
Reproductive - testes small (~1.3 cm)	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-
Reproductive - left testis small (~1.4 cm)	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-
Reproductive - right testis small (~1.5 cm)	X	-	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-
Reproductive - right testis small (~1.4 cm)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-
Reproductive - right testis small (~1.3 cm)	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-
Reproductive - right testis small (~1.2 cm)	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-
Not remarkable	-	-	-	-	X	-	-	X	-	X	X	-	-	-	-	-	-

Females	Pens															
	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232
External - feather loss	-	-	-	-	-	-	-	-	X	X	-	X	X	-	X	-
External - head lesion	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-
External - foot lesions	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
Spleen - pale	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-
Urinary - left kidney pale	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Urinary - kidneys pale	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-
Urinary - kidneys mottled	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-
Abdominal cavity - egg yolk peritonitis, slight	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-
Reproductive - cystic follicles	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-
Not remarkable	X	-	X	-	-	-	X	X	-	-	-	-	-	X	-	X

- 224 -

Appendix XV - Table 3
Individual Gross Pathological Observations
from a Northern Bobwhite Reproduction Study with C6 Acid

Birds Euthanized at Test Termination
5000 ppm

Males	Pens															
	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248
External - feather loss	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
Reproductive - left testis small (~1.4 cm)	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Reproductive - left testis small (~1.3 cm)	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-
Reproductive - right testis small (~1.4 cm)	-	-	-	-	-	X	-	X	-	-	-	-	X	X	X	-
Reproductive - right testis small (~1.3 cm)	-	-	X	X	-	-	-	-	-	X	-	-	-	-	-	-
Reproductive - right testis small (~1.2 cm)	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	X
Reproductive - right testis small (~1 cm)	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-
Not remarkable	-	-	-	-	X	-	X	-	X	-	-	X	-	-	-	-

Females	Pens															
	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248
External - feather loss	X	-	-	-	-	X	-	X	X	-	-	-	-	-	X	X
External - head lesion with caseous necrosis	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-
External - foot lesions	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-
Gastrointestinal tract - hematoma in small intestine (~4 mm)	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-
Abdominal cavity - egg remnants	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-
Abdominal cavity - intra-abdominal egg	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-
Not remarkable	-	X	X	X	X	-	X	-	-	X	X	-	X	-	-	-

Appendix XV - Table 4
Individual Gross Pathological Observations
from a Northern Bobwhite Reproduction Study with C6 Acid

Birds Euthanized at Test Termination
10,000 ppm

Males	Pens															
	249 ²	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264
External - feather loss	-	-	-	-	-	-	-	X	-	-	X	-	-	-	-	-
Liver - pale	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-
Liver - mottled	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spleen - mottled	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-
Urinary - whitish plaques in ureter	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-
Reproductive - testes small (~1.4 cm)	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-
Reproductive - testes small (~1.3 cm)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X
Reproductive - left testis small (~1.4 cm)	-	-	X	-	-	X	-	-	-	-	-	-	-	-	X	-
Reproductive - right testis small (~1.4 cm)	-	-	-	-	-	-	X	-	-	-	-	-	-	X	-	-
Reproductive - right testis small (~1.3 cm)	-	X	-	-	-	-	-	-	-	X	-	X	X	-	X	-
Reproductive - right testis small (~1.2 cm)	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	-
Reproductive - right testis small (~1 cm)	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-
Not remarkable	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-

Females	Pens															
	249 ¹	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264
External - feather loss	-	X	-	-	-	-	X	-	-	-	X	-	-	-	-	-
External - head lesion	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-
External - foot lesions	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-
Liver - subcapsular hematoma on left lobe	-	-	-	-	-	-	X	-	-	-	-	-	X	-	-	-
Urinary - right kidney mottled	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-
Abdominal cavity - egg yolk peritonitis	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-
Reproductive - ovary regressing	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-
Not remarkable	-	-	X	X	X	-	-	-	X	X	-	X	-	X	X	X

¹ Bird euthanized during test. ² Bird found dead during test.

- 226 -

Appendix XVI

Changes To Study Protocol

This study was conducted in accordance with the study protocol signed on October 5, 2009 and the following amendments deviations:

1. Group body weight measurements of offspring at hatching and on Day 14 post-hatch were changed to individual body weight measurements, by amendment.
2. The maximum overall relative humidity in the room where eggs were stored prior to incubation was changed from 80% to 90%, by amendment.
3. Analysis of blood serum samples was changed from analyzing all samples to analyzing selected serum samples, by amendment.
4. Beginning at the date noted, the bird pairs from the following pens were housed in separate pens for some period of time during the study: Pen 201 of the control group on Day 0 of Week 16 (January 20, 2010). Pen 203 of the control group on Day 6 of Week 17 (February 2, 2010). Birds were periodically housed together for short periods of time for mating, as the condition of the birds permitted. Conjugal visits for the birds continued until just prior to termination, Day 5 of Week 21.
5. Two offspring from Lot F of the 5000 ppm treatment group could not be identified to pen of origin. The identification of one offspring was incorrectly recorded at the time it was Found Dead (FD) in the brooder pen. Two observations of a chick with a green (G) band numbered 322 FD were recorded in the offspring observation data on March 4, 2010. The second chick lost its leg band and could not be identified at the time the survivors were counted and body weight measurements taken at 14 days of age; March 15, 2010. At the termination and body weight measurement two offspring, G298 from Pen 234 and G336 from Pen 242, could not be accounted for.

- 227 -

Appendix XVII

Personnel Involved in Study

The following key personnel were involved in the conduct or management of this study:

Avian Toxicology

- (1) Mark Jaber, Wildlife Toxicologist
- (2) Joann B. Beavers, Director of Avian Toxicology
- (3) Larry T. Frey, Senior Biologist
- (4) Diana Temple, Senior Biologist
- (5) Patrick Hubbard, Biologist
- (6) Mike Hammond, Biologist
- (7) Tiffany Rein, Biologist
- (8) Megan Wikander, Biologist
- (9) Stephen Giarratano, Biologist
- (10) Joanne E. Harvey, Senior Technologist
- (11) Richard Wilson, Technologist
- (12) Michael Colombo, Technologist
- (13) James McAlpine, Technologist
- (14) Brian Vance, Technologist
- (15) Ryan Davis, Technologist

Chemistry

- (1) Willard B. Nixon, Ph.D., Director of Chemistry
- (2) Kathy H. Martin, Scientist
- (3) Keith Keller, Senior Chemist
- (4) Sean VanEvera, Chemist
- (5) Rachel Loss, Chemist
- (6) Jessica Luzier, Chemist

- 228 -

SECTION B

Results Tables and Appendices for the Blood Sample Satellite Groups

Table 1
Mean Adult Body Weight (g) from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)¹

Experimental Group (ppm)	Sex	Week 0	Change Week 0-2	Week 2	Change Week 2-4	Week 4	Change Week 4-6	Week 6	Change Week 6-8	Week 8	Change Week 8-Term	Test Term	Total Change
Control	Male	194	3	196	5	201	1	201	3	204	-1	203	9
	Female	196	1	197	5	202	-1	201	6	206	36	242	47
1000	Male	195	0	195	5	200	-3	197	3	200	5	204	10
	Female	195	1	196	2	198	1	198	4	202	32	234	40
5000	Male	195	2	197	3	200	2	202	4	206	8	214	19
	Female	188	0	188	2	190	2	192	5	197	17	214	26
10000	Male	182	-1	181	2	182	2	184	5	189	6	194	13
	Female	188	2	190	4	193	3	196	3	199	31	230	42

The means for body weights and body weight changes are calculated and rounded separately.

Differences between control and each treatment group were not significant ($p > 0.05$).

¹ Only surviving birds were included in the calculations for each body weight interval.

- 230 -

Table 2

**Mean Feed Consumption (g/bird/day) from a Northern Bobwhite Reproduction Study with
C6 Acid (Blood Sample Groups)**

Experimental Group (ppm)	W E E K S																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Control	12	14	14	13	14	13	13	14	14	16	16	18	20	21	22	22	22	23	25	24	23
1000	12	14	14	13	14	12	13	13	12	14	16	18	20	22	21	20	23	23	23	24	25
5000	12	15	14	13	14	14	14	15	14	17	16	19	22	22	24	23	24	24	25	22	23
10000	12	14	14	13	14	13	13	14	14	17	16	18	21	20	21	21	22	22	24	23	23

Differences between control and each treatment group were not significant ($p > 0.05$).

- 231 -

Table 3

*Summary of Reproductive Performance from a Northern Bobwhite Reproduction Study with
C6 Acid (Blood Sample Groups)*

Reproductive Parameter	Experimental Group (ppm)			
	Control	1000	5000	10000
Number of Replicates	4	4	4	4
Total Eggs Laid	187	156	217	176
Eggs Cracked	9	3	5	2
Eggs Set	161	137	193	156
Viable Embryos	156	134	164	148
Live 3-Week Embryos	155	134	160	147
Hatchlings	119	125	145	143
14-Day Old Survivors	112	118	132	131
Eggs Laid/Hen	47	39	54	44
Eggs Laid/Hen/Day ¹	0.48	0.40	0.56	0.45
14-Day Old Survivors/Hen	28	30	33	33

¹ Based on 97 days of eggs production.

Table 4
Summary of Reproductive Performance, Normalized as Percentages (%)
from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)¹

Reproductive Parameter	Experimental Group (ppm)			
	Control	1000	5000	10000
Number of Replicates	4	4	4	4
Total Eggs Laid ²	187	156	217	176
Eggs Laid/Maximum Laid (%)	71	59	82	67
Eggs Cracked/Eggs Laid (%)	4	1	2	1
Viable Embryos/Eggs Set (%)	98	98	84	96
Live 3-Week Embryos/Viable Embryos (%)	100	100	98	99
Hatchlings/Live 3-Week Embryos (%)	79	94	90	98
14-Day Old Survivors/Hatchlings (%)	96	94	92	92
Hatchlings/Eggs Set (%)	77	92	74	93
14-Day Old Survivors/Eggs Set (%)	73	87	68	85
Hatchlings/Maximum Set (%)	50	52	61	60
14-Day Old Survivors/Maximum Set (%)	47	49	55	55

Differences between the control and each treatment groups were not significant ($p > 0.05$).

¹ Values represent pen means for experimental group. Values for each pen are presented in Appendices VII and VIII.

² Represents the total number of eggs laid in each group.

- 233 -

Table 5
Mean Eggshell Thickness Measurements (mm)
from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)

Experimental Group (ppm)	No. Eggs Measured	Shell Thickness Mean (\pm SD)
Control	16	0.226 \pm 0.022
1000	14	0.235 \pm 0.015
5000	18	0.236 \pm 0.015
10000	18	0.235 \pm 0.009

Differences between the control and each treatment groups were not significant ($p > 0.05$).

- 234 -

Table 6

**Mean Body Weight (g) of Hatchlings and 14-Day Old Survivors
from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)**

Experimental Group (PPM)	Hatchlings		14-Day Old Survivors	
	Number	Mean (± SD)	Number	Mean (± SD)
Control	119	6 ± 0	112	28 ± 3
1000	124	6 ± 0	118	28 ± 1
5000	145	6 ± 0	132	26 ± 2
10000	143	6 ± 0	131	27 ± 4

The number of hatchlings weighed may differ from the total number of hatchlings since those hatchlings found dead were not weighed.

Differences between the control and each treatment group were not significant ($p > 0.05$).

- 235 -

Table 7
 Summary of Gross Pathological Observations
 from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)

Adult Birds Euthanized at Termination of the Test
 Blood Sample Satellite Group.

	Males - Treatment Group (ppm)				Females - Treatment Group (ppm)			
	Control	1000	5000	10,000	Control	1000	5000	10,000
Number of birds	4	4	4	4	4	4	4	4
External - feather loss	0	0	1	0	2	2	2	3
External - foot lesions	0	0	0	0	1	1	1	0
Liver - mottled	0	0	0	0	0	1	0	0
Liver - pale	0	0	1	0	0	0	0	0
Urinary - cyst on left kidney	0	1	0	0	0	0	0	0
Abdominal cavity - egg yolk peritonitis	-	-	-	-	1	0	0	0
Reproductive - ovary regressed	-	-	-	-	0	0	1	0
Reproductive - right testis small (≤ 1.5 cm)	1	3	2	1	-	-	-	-
Not remarkable	3	0	1	3	1	1	1	1

Appendix I
Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid

Key to Codes and Abbreviations (Abb.)

Abb.	Definition	Abb.	Definition
AN	Normal in appearance and behavior.	bf	both feet
EUT	Euthanized	lf	left foot
FD	Found Dead	rf	right foot
S	Same - Remains as previous observation	ll	left leg
4	Ataxia (loss of coordination)	rl	right leg
11	ruffled appearance	lw	left wing
14	Lethargy	rw	right wing
BkL	Back lesion	bd	bandaged
FeL	Feather loss	bs	blood sampling event
FtL	Foot lesion	cv	conjugal visit
Fx	Fracture	he	healing

Appendix I - Table 1
 Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
 Blood Sample Satellite Groups

Group	Pen	Sex	Week 1						Week 2							
			Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
0 ppm	265	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	266	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	267	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
268	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
1000 ppm	269	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	270	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	271	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
272	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
5000 ppm	273	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	274	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	275	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
276	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
10000 ppm	277	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	278	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	279	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
280	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN

AN - Appears normal; other observation codes - see Key.

Appendix I - Table 2
Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
Blood Sample Satellite Groups

Group	Pen	Sex	Week 3							Week 4						
			Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
0 ppm	265	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	266	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	267	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
1000 ppm	268	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	269	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	270	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
5000 ppm	271	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	272	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	273	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
10000 ppm	274	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	275	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	276	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	277	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	278	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	279	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	280	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN

AN - Appears normal; other observation codes - see Key.

Appendix I - Table 3
Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
Blood Sample Satellite Groups

Group	Week 5								Week 6							
	Pen	Sex	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
0 ppm	265	M	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN	AN
	266	M	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN	AN
	267	M	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN	AN
268	M	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN	AN
1000 ppm	269	M	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN	AN
		F	FtL(bf-sm)	S	S	S	S	S	S	FtL(bf-sm);(bs)	S	S	S	S	S	S
	270	M	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN	AN
	271	M	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN	AN
272	M	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN	AN
5000 ppm	273	M	FeL	S	S	S	S	S	S	FeL(bs)	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN	AN
	274	M	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN	AN
	275	M	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN	AN
276	M	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN	AN
10000 ppm	277	M	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN	AN
	278	M	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN	AN
	279	M	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN	AN
280	M	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN	AN

AN - Appears normal; other observation codes - see Key.

Appendix I - Table 4
Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
Blood Sample Satellite Groups

Group	Week 7		Week 8		Week 7		Week 8		Week 7		Week 8		Week 7		Week 8	
	Pen	Sex	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
0 ppm	265	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	266	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	267	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
268	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	
1000 ppm	269	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	FeL(lf-sm)	S	S	S	S	S	S	FeL(lf-sm)	S	S	S	S	AN	AN
	270	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	271	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
272	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	
5000 ppm	273	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	
	274	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	
	275	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	
276	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN		
	F	FeL,HdL(sm)	S	S	S	S	S	S	S	FeL,HdL(sm)	S	S	S	S	S	
10000 ppm	277	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	
	278	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	
	279	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	
280	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN		
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN		

AN - Appears normal; other observation codes - see Key.

Appendix I - Table 5
Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
Blood Sample Satellite Groups

Group			Week 9							Week 10						
	Pen	Sex	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
0 ppm	265	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	266	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	267	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
1000 ppm	268	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	269	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	FtL(bf-bd)	S
	270	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
5000 ppm	271	M	AN	AN	AN	AN	AN	AN	AN	FeL,HdL(he)	S	S	S	S	S	S
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	272	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	273	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	HdL(sm)	S	S	S	S	S	S
10000 ppm	274	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	275	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	276	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	FeL,HdL(sm)	S	S	S	S	S	S	FeL,HdL(sm)	S	S	S	S	S	S
10000 ppm	277	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	278	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	279	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
10000 ppm	280	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN

AN - Appears normal; other observation codes - see Key.

Appendix I - Table 6
Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
Blood Sample Satellite Groups

Group			Week 11						Week 12							
	Pen	Sex	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
0 ppm	265	M	AN(bs)	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN(bs)	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	266	M	AN(bs)	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN(bs)	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	267	M	11(sl)(bs)	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN(bs)	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
268	M	AN(bs)	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	
	F	AN(bs)	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	
1000 ppm	269	M	AN(bs)	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	FtL(bf-bd)(bs)	S	S	S	FtL(bf,rf-bd)	S	S	FtL(lf-he;rf-bd)	S	S	S	S	FtL(bf-bd,he)	S
	270	M	AN(bs)	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN(bs)	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	271	M	FeL;HdL(sm-he)(bs)	S	S	S	S	S	S	FeL	S	S	S	S	S	S
		F	AN(bs)	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
272	M	AN(bs)	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	
	F	AN(bs)	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	
5000 ppm	273	M	AN(bs)	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	HdL(sm)(bs)	S	S	S	S	S	S	AN	AN	AN	AN	AN	AN	AN
	274	M	AN(bs)	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN(bs)	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	275	M	AN(bs)	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN(bs)	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
276	M	AN(bs)	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	
	F	FeL;HdL(sm)(bs)	S	S	S	S	S	S	FeL;HdL(sm)	S	S	S	S	S	S	
10000 ppm	277	M	AN(bs)	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN(bs)	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	278	M	AN(bs)	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN(bs)	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	279	M	AN(bs)	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN(bs)	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	280	M	AN(bs)	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN(bs)	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN

AN - Appears normal; other observation codes - see Key.

Appendix I - Table 7
Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
Blood Sample Satellite Groups

Group			Week 13						Week 14							
	Pen	Sex	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
0 ppm	265	M	AN	AN	AN	AN	AN	AN	FtL(rf-bd)	FtL(rf-bd)	S	S	S	S	S	S
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	266	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	267	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
268	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
1000 ppm	269	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	FtL(bf-bd)	S	S	S	S	FtL(bf,rf-bd)	FtL(bf-bd)	FtL(bf-bd)	S	S	S	S	S	S
	270	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	271	M	FeL	S	S	S	S	S	S	FeL	S	S	S	S	S	S
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
272	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	
5000 ppm	273	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	274	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	275	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
276	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	
	F	FeL;HdL(sm)	S	S	S	S	S	S	S	FeL;HdL(sm)	S	S	S	S	S	
10000 ppm	277	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	278	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	279	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
280	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	

AN - Appears normal; other observation codes - see Key.

Appendix I - Table 8
Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
Blood Sample Satellite Groups

Group			Week 15							Week 16						
	Pen	Sex	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
0 ppm	265	M	FtL(rf-bd)	S	S	S	S	S	AN	AN	AN(bs)	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN
	266	M	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN
	267	M	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN
268	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN
	F	FeL	S	S	S	S	S	S	AN	AN(bs)	AN	AN	AN	AN	AN	
1000 ppm	269	M	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)	11(sl)	11	S	S	S
		F	FtL(bf-bd)	S	S	S	S	S	S	FtL(bf-bd)	S(bs)	S	S	S	S	S
	270	M	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN
	271	M	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN
272	M	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN	
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN	
5000 ppm	273	M	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN
	274	M	FeL	S	S	S	S	S	S	FeL	S(bs)	S	S	S	S	S
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN
	275	M	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN
276	M	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN	
	F	FeL;HdL(sm)	S	S	S	S	S	S	FeL;HdL(sm)	S(bs)	S	S	S	S	S	
10000 ppm	277	M	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	FeL	FeL	S(bs)	S	S	S	S	
	278	M	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN
	279	M	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	FeL	FeL	S(bs)	S	S	S	S	
280	M	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN	
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)	AN	AN	AN	AN	AN	

AN - Appears normal; other observation codes - see Key.

Appendix I - Table 9
Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
Blood Sample Satellite Groups

Group			Week 17							Week 18						
	Pen	Sex	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
0 ppm	265	M	AN	AN	AN	AN	AN	AN	AN	FeL;HdL	S	S	S	S	S	S
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	266	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	267	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
268	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	FeL	S	S	S	S	S	S	FeL	S	S	S	S	S	S
1000 ppm	269	M	11	S	S	S	S	S	S	11	S	S	S	S	S	S
		F	FtL(bf-bd)	S	S	S	S	S	S	FtL(lf-bd;rf-he)	S	S	S	S	S	S
	270	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	271	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
272	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
5000 ppm	273	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	274	M	FeL	S	S	S	S	S	S	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	275	M	AN	AN	AN	AN	AN	AN	AN	FeL	S	S	S	S	S	S
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
276	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	FeL;HdL(sm)	S	S	S	S	S	S	S	FeL	S	S	S	S	S	S
10000 ppm	277	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	FeL	S	S	S	S	S	S	FeL	S	S	S	S	S	S
	278	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	FeL	S	S	S	S	S	S
	279	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	FeL	S	S	S	S	S	S	FeL	S	S	S	S	S	S
280	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN

AN - Appears normal; other observation codes - see Key.

Appendix I - Table 10
Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
Blood Sample Satellite Groups

Group	Pen	Sex	Week 19							Week 20						
			Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
0 ppm	265	M	HdL	S	S	S	S	S	S	AN	AN	AN	FtL(lf)Lm(sl)	S	S	S
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	266	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	267	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
268	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	FeL	S	S	S	S	S	S	FeL	S	S	S	S	S	S	
1000 ppm	269	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	FtL(lf)	S	FtL(lf)	S	S	S	S	S	S
	270	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	271	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
272	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	
5000 ppm	273	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	274	M	FeL	S	S	S	S	S	S	FeL	S	S	S	S	S	S
		F	AN	AN	AN	AN	AN	AN	AN	AN	FtL(rf-he)	S	FtL(bf);Lm	S	S	S+(bf-bd)
	275	M	FeL	S	S	S	S	S	S	FeL	S	S	S	S	S	S
		F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
276	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	FeL	S	S	S	S	S	S	FeL	S	S	S	S	S	S	
10000 ppm	277	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	FeL	S	S	S	S	S	S	FeL	S	S	S	S	S	S
	278	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	FeL	S	S	S	S	S	S	FeL	S	S	S	S	S	S
	279	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
		F	FeL	S	S	S	S	S	S	FeL	S	S	S	S	S	S
280	M	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	

AN - Appears normal; other observation codes - see Key.

Appendix I - Table 11
Daily Clinical Observations from a N. Bobwhite Reproduction Study with C6 Acid
Blood Sample Satellite Groups

Group	Week 21									
	Pen	Sex	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
0 ppm	265	M	AN	AN	AN	AN	AN	AN	AN(bs)	-
		F	AN	AN	AN	AN	AN	AN	AN(bs)	-
	266	M	AN	AN	AN	AN	AN	AN	AN(bs)	-
		F	AN	AN	AN	AN	AN	AN	AN(bs)	-
	267	M	AN	AN	AN	AN	AN	AN	AN	AN(bs)
		F	AN	AN	AN	AN	AN	AN	FtL(bf)	S(bs)
268	M	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)
	F	FeL	S	S	S	S	S	S	S	S(bs)
1000 ppm	269	M	AN	AN	AN	AN	AN	AN	AN(bs)	-
		F	FtL(lf-bd)	S	S	S	FtL(lf-sm,he)	S	S(bs)	-
	270	M	AN	AN	AN	AN	AN	AN	AN(bs)	-
		F	AN	AN	AN	AN	AN	AN	AN(bs)	-
	271	M	AN	AN	AN	AN	AN	AN	AN	AN(bs)
		F	FeL	S	S	S	S	S	S	S(bs)
272	M	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)
5000 ppm	273	M	AN	AN	AN	AN	AN	AN	AN(bs)	-
		F	FeL	S	S	S	S	S	S(bs)	-
	274	M	AN	AN	AN	AN	AN	AN	AN(bs)	-
		F	FtL(bf-bd)	S	S	S	FtL(bf,rf-bd)	S	S(bs)	-
	275	M	FeL	S	S	S	S	S	S	S(bs)
		F	AN	AN	AN	AN	AN	AN	AN	AN(bs)
276	M	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)
	F	FeL	S	S	S	S	S	S	S	S(bs)
10000 ppm	277	M	AN	AN	AN	AN	AN	AN	AN(bs)	-
		F	FeL	S	S	S	S	S	S(bs)	-
	278	M	AN	AN	AN	AN	AN	AN	AN(bs)	-
		F	FeL	S	S	S	S	S	S(bs)	-
	279	M	AN	AN	AN	AN	AN	AN	AN	AN(bs)
		F	FeL	S	S	S	S	S	S	S(bs)
280	M	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)
	F	AN	AN	AN	AN	AN	AN	AN	AN	AN(bs)

AN - Appears normal; other observation codes - see Key.

- 248 -

Appendix II - Table 1

*Adult Body Weight (g) from a Northern Bobwhite Reproduction Study with
C6 Acid (Blood Sample Groups) (Control, Males)*

Pen	Week 0	Change Week 0-2	Week 2	Change Week 2-4	Week 4	Change Week 4-6	Week 6	Change Week 6-8	Week 8	Change Week 8-Term	Test Term	Total Change
265	203	5	208	4	212	1	213	1	214	-4	210	7
266	178	6	184	3	187	1	188	2	190	4	194	16
267	195	-1	194	6	200	1	201	2	203	-3	200	5
268	198	0	198	5	203	-1	202	5	207	-1	206	8
Mean	194	3	196	5	201	1	201	3	204	-1	203	9
SD	11	4	10	1	10	1	10	2	10	4	7	5

The means for body weights and body weight changes are calculated and rounded separately.

- 249 -

Appendix II - Table 2

*Adult Body Weight (g) from a Northern Bobwhite Reproduction Study with
C6 Acid (Blood Sample Groups) (Control, Females)*

Pen	Week 0	Change Week 0-2	Week 2	Change Week 2-4	Week 4	Change Week 4-6	Week 6	Change Week 6-8	Week 8	Change Week 8-Term	Test Term	Total Change
265	195	0	195	4	199	-4	195	7	202	40	242	47
266	184	0	184	5	189	-3	186	9	195	36	231	47
267	201	3	204	5	209	2	211	2	213	37	250	49
268	202	2	204	6	210	1	211	4	215	30	245	43
Mean	196	1	197	5	202	-1	201	6	206	36	242	47
SD	8	2	10	1	10	3	12	3	9	4	8	3

The means for body weights and body weight changes are calculated and rounded separately.

- 250 -

Appendix II - Table 3

*Adult Body Weight (g) from a Northern Bobwhite Reproduction Study with
C6 Acid (Blood Sample Groups) (1000 PPM, Males)*

Pen	Week 0	Change Week 0-2	Week 2	Change Week 2-4	Week 4	Change Week 4-6	Week 6	Change Week 6-8	Week 8	Change Week 8-Term	Test Term	Total Change
269	198	0	198	7	205	-7	198	4	202	6	208	10
270	203	0	203	3	206	0	206	1	207	7	214	11
271	193	1	194	3	197	-5	192	6	198	0	198	5
272	185	-1	184	6	190	0	190	1	191	6	197	12
Mean	195	0	195	5	200	-3	197	3	200	5	204	10
SD	8	1	8	2	8	4	7	2	7	3	8	3

The means for body weights and body weight changes are calculated and rounded separately.
Differences between control and this treatment group were not significant ($p > 0.05$).

- 251 -

Appendix II - Table 4

*Adult Body Weight (g) from a Northern Bobwhite Reproduction Study with
C6 Acid (Blood Sample Groups) (1000 PPM, Females)*

Pen	Week 0	Change Week 0-2	Week 2	Change Week 2-4	Week 4	Change Week 4-6	Week 6	Change Week 6-8	Week 8	Change Week 8-Term	Test Term	Total Change
269	201	1	202	-6	196	5	201	4	205	22	227	26
270	199	-5	194	6	200	-3	197	4	201	42	243	44
271	186	6	192	3	195	-3	192	5	197	37	234	48
272	192	2	194	5	199	4	203	1	204	28	232	40
Mean	195	1	196	2	198	1	198	4	202	32	234	40
SD	7	5	4	5	2	4	5	2	4	9	7	10

The means for body weights and body weight changes are calculated and rounded separately.
Differences between control and this treatment group were not significant ($p > 0.05$).

Appendix II - Table 5

*Adult Body Weight (g) from a Northern Bobwhite Reproduction Study with
C6 Acid (Blood Sample Groups) (5000 PPM, Males)*

Pen	Week 0	Change Week 0-2	Week 2	Change Week 2-4	Week 4	Change Week 4-6	Week 6	Change Week 6-8	Week 8	Change Week 8-Term	Test Term	Total Change
273	189	0	189	0	189	0	189	7	196	30	226	37
274	210	7	217	3	220	5	225	-1	224	-2	222	12
275	184	0	184	3	187	1	188	3	191	5	196	12
276	198	1	199	6	205	0	205	7	212	-1	211	13
Mean	195	2	197	3	200	2	202	4	206	8	214	19
SD	11	3	15	2	15	2	17	4	15	15	13	12

The means for body weights and body weight changes are calculated and rounded separately.
Differences between control and this treatment group were not significant ($p > 0.05$).

Appendix II - Table 6

*Adult Body Weight (g) from a Northern Bobwhite Reproduction Study with
C6 Acid (Blood Sample Groups) (5000 PPM, Females)*

Pen	Week 0	Change Week 0-2	Week 2	Change Week 2-4	Week 4	Change Week 4-6	Week 6	Change Week 6-8	Week 8	Change Week 8-Term	Test Term	Total Change
273	182	-1	181	3	184	2	186	7	193	34	227	45
274	191	1	192	2	194	2	196	8	204	-23	181	-10
275	193	-1	192	1	193	2	195	2	197	39	236	43
276	186	1	187	3	190	2	192	3	195	18	213	27
Mean	188	0	188	2	190	2	192	5	197	17	214	26
SD	5	1	5	1	5	0	5	3	5	28	24	25

The means for body weights and body weight changes are calculated and rounded separately. Differences between control and this treatment group were not significant ($p > 0.05$).

Appendix II - Table 7

*Adult Body Weight (g) from a Northern Bobwhite Reproduction Study with
C6 Acid (Blood Sample Groups) (10000 PPM, Males)*

Pen	Week 0	Change Week 0-2	Week 2	Change Week 2-4	Week 4	Change Week 4-6	Week 6	Change Week 6-8	Week 8	Change Week 8-Term	Test Term	Total Change
277	172	2	174	-2	172	4	176	10	186	3	189	17
278	182	-2	180	1	181	-2	179	4	183	18	201	19
279	187	0	187	2	189	2	191	4	195	-2	193	6
280	186	-5	181	5	186	3	189	2	191	3	194	8
Mean	182	-1	181	2	182	2	184	5	189	6	194	13
SD	7	3	5	3	7	3	7	3	5	9	5	6

The means for body weights and body weight changes are calculated and rounded separately.
Differences between control and this treatment group were not significant ($p > 0.05$).

Appendix II - Table 8

*Adult Body Weight (g) from a Northern Bobwhite Reproduction Study with
C6 Acid (Blood Sample Groups) (10000 PPM, Females)*

Pen	Week 0	Change Week 0-2	Week 2	Change Week 2-4	Week 4	Change Week 4-6	Week 6	Change Week 6-8	Week 8	Change Week 8-Term	Test Term	Total Change
277	193	0	193	3	196	2	198	5	203	37	240	47
278	186	4	190	2	192	4	196	6	202	26	228	42
279	176	-1	175	5	180	2	182	1	183	26	209	33
280	197	3	200	5	205	3	208	-1	207	34	241	44
Mean	188	2	190	4	193	3	196	3	199	31	230	42
SD	9	2	11	2	10	1	11	3	11	6	15	6

The means for body weights and body weight changes are calculated and rounded separately.
Differences between control and this treatment group were not significant ($p > 0.05$).

- 256 -

Appendix III - Table 1
 Feed Consumption (g/bird/day) from a Northern Bobwhite Reproduction Study with
 C6 Acid (Blood Sample Groups) (Control)

Pen	W E E K S																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
265	11	13	13	12	13	13	12	14	12	14	13	15	15	18	19	18	20	20	22	21	23
266	12	13	12	11	12	11	11	14	16	17	17	19	22	23	22	20	21	21	24	24	22
267	12	16	15	14	16	14	15	15	13	16	16	19	23	22	22	24	23	23	25	24	24
268	13	15	14	14	14	13	13	14	14	15	16	17	21	22	24	25	26	27	29	27	25
Mean	12	14	14	13	14	13	13	14	14	16	16	18	20	21	22	22	22	23	25	24	23
SD	1	2	1	2	2	1	2	0	1	1	2	2	3	2	2	4	3	3	3	3	1

Appendix III - Table 2
 Feed Consumption (g/bird/day) from a Northern Bobwhite Reproduction Study with
 C6 Acid (Blood Sample Groups) (1000 PPM)

Pen	W E E K S																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
269	12	13	12	11	13	12	12	12	11	8	15	15	15	20	18	17	22	22	20	22	22
270	11	14	13	12	13	12	12	13	12	14	16	18	21	22	22	18	26	23	24	26	27
271	12	14	14	13	15	13	15	16	14	17	18	22	24	23	22	23	20	24	25	26	26
272	13	14	15	14	14	13	14	13	13	16	14	18	22	23	24	23	24	24	24	24	25
Mean	12	14	14	13	14	12	13	13	12	14	16	18	20	22	21	20	23	23	23	24	25
SD	1	1	1	1	1	0	2	2	1	4	1	3	4	2	2	3	2	1	2	2	2

Differences between control and this treatment group were not significant ($p > 0.05$).

Appendix III - Table 3
 Feed Consumption (g/bird/day) from a Northern Bobwhite Reproduction Study with
 C6 Acid (Blood Sample Groups) (5000 PPM)

Pen	W E E K S																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
273	14	15	17	13	16	16	15	17	15	19	17	19	22	22	26	26	26	28	28	27	29
274	13	16	15	14	15	14	15	14	14	17	17	20	23	24	24	24	25	24	23	14	18
275	11	13	12	12	13	12	13	13	14	17	17	19	21	21	22	21	22	21	25	22	24
276	11	15	13	13	14	13	14	15	15	16	16	18	21	21	23	21	23	21	23	23	23
Mean	12	15	14	13	14	14	14	15	14	17	16	19	22	22	24	23	24	24	25	22	23
SD	1	1	2	1	1	1	1	2	1	1	1	1	1	1	2	2	2	3	2	6	5

Differences between control and this treatment group were not significant ($p > 0.05$).

Appendix III - Table 4
 Feed Consumption (g/bird/day) from a Northern Bobwhite Reproduction Study with
 C6 Acid (Blood Sample Groups) (10000 PPM)

Pen	W E E K S																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
277	12	15	13	13	14	13	12	16	16	18	17	20	22	23	23	23	25	25	26	25	24
278	13	15	15	14	16	14	14	15	14	17	16	19	21	21	20	22	23	23	24	25	22
279	12	14	14	15	15	13	14	15	13	18	17	16	21	19	21	19	23	22	24	20	25
280	11	13	13	12	12	11	11	12	12	14	14	16	19	18	18	18	19	19	21	21	20
Mean	12	14	14	13	14	13	13	14	14	17	16	18	21	20	21	21	22	22	24	23	23
SD	1	1	1	1	2	1	2	2	2	2	1	2	1	2	2	3	3	2	2	3	2

Differences between control and this treatment group were not significant ($p > 0.05$).

- 260 -

Reproductive Performance by Pen

Appendix IV - Table 1

Eggs Laid / Maximum Laid (%)

from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)

Replicate	0 PPM				1000 PPM				5000 PPM				10000 PPM			
	Eggs Laid	Max. Laid	%	Arcsin Trans.	Eggs Laid	Max. Laid	%	Arcsin Trans.	Eggs Laid	Max. Laid	%	Arcsin Trans.	Eggs Laid	Max. Laid	%	Arcsin Trans.
1	18	66	27	31.48	23	66	35	36.18	44	66	67	54.74	55	66	83	65.91
2	65	66	98	82.93	48	66	73	58.52	49	66	74	59.50	35	66	53	46.74
3	55	66	83	65.91	19	66	29	32.45	66	66	100	90.00	52	66	79	62.58
4	49	66	74	59.50	66	66	100	90.00	58	66	88	69.63	34	66	52	45.87
Total	187	264			156	264			217	264			176	264		
Mean	47	66	71	59.96	39	66	59	54.29	54	66	82	68.47	44	66	67	55.27
SD	20	0	31	21.40	22	0	33	26.45	10	0	15	15.64	11	0	17	10.45

Differences between the control and each treatment group were not significant ($p > 0.05$).

- 261 -

Reproductive Performance by Pen

Appendix IV - Table 2

Eggs Cracked / Eggs Laid (%)

from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)

Replicate	0 PPM				1000 PPM				5000 PPM				10000 PPM			
	Eggs Crack	Eggs Laid	%	Arcsin Trans.	Eggs Crack	Eggs Laid	%	Arcsin Trans.	Eggs Crack	Eggs Laid	%	Arcsin Trans.	Eggs Crack	Eggs Laid	%	Arcsin Trans.
1	0	18	0	0.00	0	23	0	0.00	0	44	0	0.00	2	55	4	10.99
2	3	65	5	12.41	1	48	2	8.30	0	49	0	0.00	0	35	0	0.00
3	6	55	11	19.29	0	19	0	0.00	1	66	2	7.07	0	52	0	0.00
4	0	49	0	0.00	2	66	3	10.02	4	58	7	15.23	0	34	0	0.00
Total	9	187			3	156			5	217			2	176		
Mean	2	47	4	7.92	1	39	1	4.58	1	54	2	5.57	1	44	1	2.75
SD	3	20	5	9.57	1	22	2	5.34	2	10	3	7.25	1	11	2	5.50

Differences between the control and each treatment group were not significant ($p > 0.05$).

- 262 -

Reproductive Performance by Pen

Appendix IV - Table 3

Viable Embryos / Eggs Set (%)

from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)

Replicate	0 PPM				1000 PPM				5000 PPM				10000 PPM			
	Viable Eggs		%	Arcsin Trans.	Viable Eggs		%	Arcsin Trans.	Viable Eggs		%	Arcsin Trans.	Viable Eggs		%	Arcsin Trans.
Embr.	Set	Embr.			Set	Embr.			Set	Embr.			Set	Embr.		
1	16	16	100	90.00	20	21	95	77.40	37	40	93	74.11	46	48	96	78.22
2	52	56	93	74.50	39	40	97	80.90	23	45	51	45.64	31	31	100	90.00
3	43	44	98	81.33	17	17	100	90.00	59	60	98	82.58	41	47	87	69.07
4	45	45	100	90.00	58	59	98	82.52	45	48	94	75.52	30	30	100	90.00
Total	156	161			134	137			164	193			148	156		
Mean	39	40	98	83.96	34	34	98	82.70	41	48	84	69.46	37	39	96	81.82
SD	16	17	3	7.51	19	19	2	5.31	15	9	22	16.31	8	10	6	10.16

Differences between the control and each treatment group were not significant ($p > 0.05$).

- 263 -

Reproductive Performance by Pen

Appendix IV - Table 4

Live 3-Week Embryos / Viable Embryos (%)

from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)

Replicate	0 PPM				1000 PPM				5000 PPM				10000 PPM			
	Live 3-Week	Viable Embr.	%	Arcsin Trans.	Live 3-Week	Viable Embr.	%	Arcsin Trans.	Live 3-Week	Viable Embr.	%	Arcsin Trans.	Live 3-Week	Viable Embr.	%	Arcsin Trans.
1	16	16	100	90.00	20	20	100	90.00	36	37	97	80.54	46	46	100	90.00
2	52	52	100	90.00	39	39	100	90.00	23	23	100	90.00	30	31	97	79.65
3	42	43	98	81.23	17	17	100	90.00	56	59	95	76.97	41	41	100	90.00
4	45	45	100	90.00	58	58	100	90.00	45	45	100	90.00	30	30	100	90.00
Total	155	156			134	134			160	164			147	148		
Mean	39	39	100	87.81	34	34	100	90.00	40	41	98	84.38	37	37	99	87.41
SD	16	16	1	4.39	19	19	0	0.00	14	15	2	6.66	8	8	2	5.17

Differences between the control and each treatment group were not significant ($p > 0.05$).

- 264 -

Reproductive Performance by Pen
Appendix IV - Table 5
Hatchlings / Live 3-Week Embryos (%)
from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)

Replicate	0 PPM				1000 PPM				5000 PPM				10000 PPM			
	Number Hatch.	Live 3-Week	%	Arcsin Trans.	Number Hatch.	Live 3-Week	%	Arcsin Trans.	Number Hatch.	Live 3-Week	%	Arcsin Trans.	Number Hatch.	Live 3-Week	%	Arcsin Trans.
1	14	16	88	69.30	19	20	95	77.08	33	36	92	73.22	44	46	96	77.96
2	38	52	73	58.74	33	39	85	66.91	21	23	91	72.85	29	30	97	79.48
3	42	42	100	90.00	17	17	100	90.00	55	56	98	82.32	40	41	98	81.02
4	25	45	56	48.19	56	58	97	79.30	36	45	80	63.43	30	30	100	90.00
Total	119	155			125	134			145	160			143	147		
Mean	30	39	79	66.56	31	34	94	78.32	36	40	90	72.96	36	37	98	82.12
SD	13	16	19	17.85	18	19	7	9.47	14	14	8	7.71	7	8	2	5.40

Differences between the control and each treatment group were not significant ($p > 0.05$).

- 265 -

*Reproductive Performance by Pen
Appendix IV - Table 6*

14-Day Old Survivors / Hatchlings (%)

from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)

Replicate	0 PPM				1000 PPM				5000 PPM				10000 PPM			
	14-Day Old	Number Hatch.	%	Arcsin Trans.	14-Day Old	Number Hatch.	%	Arcsin Trans.	14-Day Old	Number Hatch.	%	Arcsin Trans.	14-Day Old	Number Hatch.	%	Arcsin Trans.
1	14	14	100	90.00	17	19	89	71.07	29	33	88	69.63	39	44	89	70.30
2	35	38	92	73.68	29	33	88	69.63	21	21	100	90.00	29	29	100	90.00
3	38	42	90	72.02	17	17	100	90.00	49	55	89	70.71	37	40	93	74.11
4	25	25	100	90.00	55	56	98	82.32	33	36	92	73.22	26	30	87	68.58
Total	112	119			118	125			132	145			131	143		
Mean	28	30	96	81.43	30	31	94	78.25	33	36	92	75.89	33	36	92	75.75
SD	11	13	5	9.92	18	18	6	9.67	12	14	5	9.53	6	7	6	9.78

Differences between the control and each treatment group were not significant ($p > 0.05$).

Reproductive Performance by Pen

Appendix IV - Table 7

Hatchlings / Eggs Set (%)

from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)

Replicate	0 PPM				1000 PPM				5000 PPM				10000 PPM			
	Number Hatch.	Eggs Set	%	Arcsin Trans.	Number Hatch.	Eggs Set	%	Arcsin Trans.	Number Hatch.	Eggs Set	%	Arcsin Trans.	Number Hatch.	Eggs Set	%	Arcsin Trans.
1	14	16	88	69.30	19	21	90	72.02	33	40	82	65.27	44	48	92	73.22
2	38	56	68	55.46	33	40	82	65.27	21	45	47	43.09	29	31	94	75.29
3	42	44	95	77.69	17	17	100	90.00	55	60	92	73.22	40	47	85	67.30
4	25	45	56	48.19	56	59	95	76.97	36	48	75	60.00	30	30	100	90.00
Total	119	161			125	137			145	193			143	156		
Mean	30	40	77	62.66	31	34	92	76.07	36	48	74	60.40	36	39	93	76.45
SD	13	17	18	13.31	18	19	8	10.45	14	9	19	12.75	7	10	6	9.65

Differences between the control and each treatment group were not significant ($p > 0.05$).

- 267 -

Reproductive Performance by Pen
Appendix IV - Table 8
14-Day Old Survivors / Eggs Set (%)
from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)

Replicate	0 PPM				1000 PPM				5000 PPM				10000 PPM			
	14-Day Old	Eggs Set	%	Arcsin Trans.	14-Day Old	Eggs Set	%	Arcsin Trans.	14-Day Old	Eggs Set	%	Arcsin Trans.	14-Day Old	Eggs Set	%	Arcsin Trans.
1	14	16	88	69.30	17	21	81	64.12	29	40	72	58.37	39	48	81	64.34
2	35	56	63	52.24	29	40	72	58.37	21	45	47	43.09	29	31	94	75.29
3	38	44	86	68.33	17	17	100	90.00	49	60	82	64.65	37	47	79	62.53
4	25	45	56	48.19	55	59	93	74.91	33	48	69	56.01	26	30	87	68.58
Total	112	161			118	137			132	193			131	156		
Mean	28	40	73	59.51	30	34	87	71.85	33	48	68	55.53	33	39	85	67.69
SD	11	17	16	10.87	18	19	12	13.91	12	9	15	9.06	6	10	7	5.67

Differences between the control and each treatment group were not significant ($p > 0.05$).

Reproductive Performance by Pen
Appendix IV - Table 9
Hatchlings / Maximum Set (%)
from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)

Replicate	0 PPM				1000 PPM				5000 PPM				10000 PPM			
	Number Hatch.	Max. Set	%	Arcsin Trans.	Number Hatch.	Max. Set	%	Arcsin Trans.	Number Hatch.	Max. Set	%	Arcsin Trans.	Number Hatch.	Max. Set	%	Arcsin Trans.
1	14	60	23	28.88	19	60	32	34.24	33	60	55	47.87	44	60	73	58.91
2	38	60	63	52.73	33	60	55	47.87	21	60	35	36.27	29	60	48	44.04
3	42	60	70	56.79	17	60	28	32.16	55	60	92	73.22	40	60	67	54.74
4	25	60	42	40.20	56	60	93	75.04	36	60	60	50.77	30	60	50	45.00
Total	119	240			125	240			145	240			143	240		
Mean	30	60	50	44.65	31	60	52	47.33	36	60	61	52.03	36	60	60	50.67
SD	13	0	21	12.66	18	0	30	19.74	14	0	24	15.45	7	0	12	7.31

Differences between the control and each treatment group were not significant ($p > 0.05$).

- 269 -

Reproductive Performance by Pen

Appendix IV - Table 10

14-Day Old Survivors / Maximum Set (%)

from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)

Replicate	0 PPM				1000 PPM				5000 PPM				10000 PPM			
	14-Day Old	Max. Set	%	Arcsin Trans.	14-Day Old	Max. Set	%	Arcsin Trans.	14-Day Old	Max. Set	%	Arcsin Trans.	14-Day Old	Max. Set	%	Arcsin Trans.
1	14	60	23	28.88	17	60	28	32.16	29	60	48	44.04	39	60	65	53.73
2	35	60	58	49.80	29	60	48	44.04	21	60	35	36.27	29	60	48	44.04
3	38	60	63	52.73	17	60	28	32.16	49	60	82	64.65	37	60	62	51.75
4	25	60	42	40.20	55	60	92	73.22	33	60	55	47.87	26	60	43	41.17
Total	112	240			118	240			132	240			131	240		
Mean	28	60	47	42.90	30	60	49	45.40	33	60	55	48.21	33	60	55	47.67
SD	11	0	18	10.77	18	0	30	19.38	12	0	20	11.98	6	0	11	6.02

Differences between the control and each treatment group were not significant ($p > 0.05$).

- 270 -

*Reproductive Performance by Week and Pen
Appendix V - Table 1a
Eggs Laid by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)*

Experimental Group (ppm)	P E N S				Totals
	265	266	267	268	
LOT ¹					
A	0	8	1	0	9
B	0	5	4	0	9
C	0	6	5	4	15
D	0	7	4	6	17
Control E	0	7	7	6	20
F	2	7	7	6	22
G	3	6	7	7	23
H	4	7	8	7	26
I	5	7	6	7	25
J	4	5	6	6	21
Totals	18	65	55	49	187

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

- 271 -

*Reproductive Performance by Week and Pen
Appendix V - Table 1b
Eggs Laid by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)*

Experimental Group (ppm)	P E N S				Totals
	269	270	271	272	
LOT ¹					
A	0	2	0	5	7
B	0	4	0	7	11
C	0	5	0	8	13
D	0	5	0	6	11
1000 E	0	4	0	7	11
F	3	5	1	7	16
G	5	6	3	7	21
H	6	5	5	7	23
I	3	7	5	7	22
J	6	5	5	5	21
Totals	23	48	19	66	156

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

- 272 -

*Reproductive Performance by Week and Pen
Appendix V - Table 1c
Eggs Laid by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)*

Experimental Group (ppm)	P E N S				Totals
	273	274	275	276	
LOT ¹					
A	0	2	6	3	11
B	0	4	6	4	14
C	1	6	7	5	19
D	4	6	6	6	22
5000 E	6	7	7	6	26
F	6	7	7	7	27
G	7	7	7	7	28
H	7	7	7	7	28
I	7	3	7	7	24
J	6	0	6	6	18
Totals	44	49	66	58	217

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

- 273 -

Reproductive Performance by Week and Pen
Appendix V - Table 1d
Eggs Laid by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)

Experimental Group (ppm)	P E N S				Totals
	277	278	279	280	
LOT ¹					
A	1	0	1	0	2
B	4	0	4	0	8
C	5	3	5	0	13
D	5	4	5	2	16
10000 E	7	3	6	4	20
F	6	5	6	5	22
G	7	5	6	6	24
H	7	6	7	6	26
I	7	5	6	6	24
J	6	4	6	5	21
Totals	55	35	52	34	176

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

Reproductive Performance by Week and Pen
Appendix V - Table 2a
Eggs Cracked by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)

Experimental Group (ppm)	P E N S				Totals
	265	266	267	268	
LOT ¹					
A	0	0	0	0	0
B	0	1	0	0	1
C	0	1	0	0	1
D	0	0	0	0	0
Control					
E	0	0	0	0	0
F	0	0	2	0	2
G	0	1	0	0	1
H	0	0	2	0	2
I	0	0	2	0	2
J	0	0	0	0	0
Totals	0	3	6	0	9

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

*Reproductive Performance by Week and Pen
Appendix V - Table 2b
Eggs Cracked by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)*

Experimental Group (ppm)	P E N S				Totals
	269	270	271	272	
LOT ¹					
A	0	0	0	0	0
B	0	0	0	0	0
C	0	0	0	0	0
D	0	0	0	0	0
1000 E	0	1	0	0	1
F	0	0	0	0	0
G	0	0	0	1	1
H	0	0	0	0	0
I	0	0	0	1	1
J	0	0	0	0	0
Totals	0	1	0	2	3

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

- 276 -

*Reproductive Performance by Week and Pen
Appendix V - Table 2c
Eggs Cracked by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)*

Experimental Group (ppm)	P E N S				Totals
	273	274	275	276	
LOT ¹					
A	0	0	0	1	1
B	0	0	0	1	1
C	0	0	0	0	0
D	0	0	0	0	0
5000 E	0	0	0	1	1
F	0	0	0	0	0
G	0	0	1	1	2
H	0	0	0	0	0
I	0	0	0	0	0
J	0	0	0	0	0
Totals	0	0	1	4	5

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

- 277 -

*Reproductive Performance by Week and Pen
Appendix V - Table 2d
Eggs Cracked by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)*

Experimental Group (ppm)	P E N S				Totals
	277	278	279	280	
LOT ¹					
A	0	0	0	0	0
B	0	0	0	0	0
C	1	0	0	0	1
D	0	0	0	0	0
10000 E	1	0	0	0	1
F	0	0	0	0	0
G	0	0	0	0	0
H	0	0	0	0	0
I	0	0	0	0	0
J	0	0	0	0	0
Totals	2	0	0	0	2

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

Reproductive Performance by Week and Pen
Appendix V - Table 3a
Eggs Set by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)

Experimental Group (ppm)	P E N S				Totals
	265	266	267	268	
LOT ¹					
A	0	7	0	0	7
B	0	3	4	0	7
C	0	5	4	4	13
D	0	6	4	5	15
Control					
E	0	7	6	6	19
F	2	6	5	5	18
G	2	5	6	7	20
H	4	6	6	6	22
I	4	7	3	7	21
J	4	4	6	5	19
Totals	16	56	44	45	161

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

- 279 -

Reproductive Performance by Week and Pen

Appendix V - Table 3b

Eggs Set by Week and Pen

from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)

Experimental Group (ppm)	P E N S				Totals
	269	270	271	272	
LOT ¹					
A	0	2	0	5	7
B	0	2	0	6	8
C	0	5	0	8	13
D	0	4	0	5	9
1000 E	0	3	0	7	10
F	3	4	1	6	14
G	4	6	2	6	18
H	6	3	5	6	20
I	2	7	4	6	19
J	6	4	5	4	19
Totals	21	40	17	59	137

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

*Reproductive Performance by Week and Pen
Appendix V - Table 3c
Eggs Set by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)*

Experimental Group (ppm)	P E N S				Totals
	273	274	275	276	
LOT ¹					
A	0	2	5	2	9
B	0	3	6	2	11
C	0	6	6	5	17
D	4	5	6	5	20
5000 E	5	7	6	4	22
F	6	6	7	6	25
G	6	7	5	6	24
H	7	6	7	6	26
I	6	3	6	7	22
J	6	0	6	5	17
Totals	40	45	60	48	193

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

*Reproductive Performance by Week and Pen
Appendix V - Table 3d
Eggs Set by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)*

Experimental Group (ppm)	P E N S				Totals
	277	278	279	280	
LOT ¹					
A	0	0	0	0	0
B	4	0	4	0	8
C	3	3	4	0	10
D	5	3	5	1	14
10000 E	5	3	5	4	17
F	6	4	6	4	20
G	6	5	5	6	22
H	7	5	7	5	24
I	6	5	5	6	22
J	6	3	6	4	19
Totals	48	31	47	30	156

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

*Reproductive Performance by Week and Pen
Appendix V - Table 4a
Viable Embryos by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)*

Experimental Group (ppm)	P E N S				Totals
	265	266	267	268	
LOT ¹					
A	0	3	0	0	3
B	0	3	4	0	7
C	0	5	4	4	13
D	0	6	4	5	15
Control E	0	7	6	6	19
F	2	6	5	5	18
G	2	5	6	7	20
H	4	6	5	6	21
I	4	7	3	7	21
J	4	4	6	5	19
Totals	16	52	43	45	156

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

*Reproductive Performance by Week and Pen
Appendix V - Table 4b
Viable Embryos by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)*

Experimental Group (ppm)	P E N S				Totals
	269	270	271	272	
LOT ¹					
A	0	2	0	5	7
B	0	2	0	6	8
C	0	4	0	8	12
D	0	4	0	5	9
1000 E	0	3	0	7	10
F	3	4	1	6	14
G	3	6	2	6	17
H	6	3	5	6	20
I	2	7	4	5	18
J	6	4	5	4	19
Totals	20	39	17	58	134

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

- 284 -

*Reproductive Performance by Week and Pen
Appendix V - Table 4c*

Viable Embryos by Week and Pen

from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)

Experimental Group (ppm)	P E N S				Totals
	273	274	275	276	
LOT ¹					
A	0	0	5	1	6
B	0	0	6	2	8
C	0	5	6	5	16
D	1	4	6	5	16
5000 E	5	4	5	3	17
F	6	2	7	6	21
G	6	3	5	6	20
H	7	4	7	6	24
I	6	1	6	7	20
J	6	0	6	4	16
Totals	37	23	59	45	164

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

*Reproductive Performance by Week and Pen
Appendix V - Table 4d
Viable Embryos by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)*

Experimental Group (ppm)	P E N S				Totals
	277	278	279	280	
LOT ¹					
A	0	0	0	0	0
B	2	0	0	0	2
C	3	3	2	0	8
D	5	3	5	1	14
10000 E	5	3	5	4	17
F	6	4	6	4	20
G	6	5	5	6	22
H	7	5	7	5	24
I	6	5	5	6	22
J	6	3	6	4	19
Totals	46	31	41	30	148

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

- 286 -

Reproductive Performance by Week and Pen

Appendix V - Table 5a

Live Three-Week Embryos by Week and Pen

from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)

Experimental Group (ppm)	P E N S				Totals
	265	266	267	268	
LOT ¹					
A	0	3	0	0	3
B	0	3	4	0	7
C	0	5	4	4	13
D	0	6	3	5	14
Control E	0	7	6	6	19
F	2	6	5	5	18
G	2	5	6	7	20
H	4	6	5	6	21
I	4	7	3	7	21
J	4	4	6	5	19
Totals	16	52	42	45	155

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

- 287 -

*Reproductive Performance by Week and Pen
Appendix V - Table 5b
Live Three-Week Embryos by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)*

Experimental Group (ppm)	P E N S				Totals
	269	270	271	272	
LOT ¹					
A	0	2	0	5	7
B	0	2	0	6	8
C	0	4	0	8	12
D	0	4	0	5	9
1000 E	0	3	0	7	10
F	3	4	1	6	14
G	3	6	2	6	17
H	6	3	5	6	20
I	2	7	4	5	18
J	6	4	5	4	19
Totals	20	39	17	58	134

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

*Reproductive Performance by Week and Pen
Appendix V - Table 5c
Live Three-Week Embryos by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)*

Experimental Group (ppm)	P E N S				Totals
	273	274	275	276	
LOT ¹					
A	0	0	5	1	6
B	0	0	6	2	8
C	0	5	6	5	16
D	1	4	5	5	15
5000 E	5	4	5	3	17
F	6	2	5	6	19
G	6	3	5	6	20
H	7	4	7	6	24
I	5	1	6	7	19
J	6	0	6	4	16
Totals	36	23	56	45	160

¹LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

*Reproductive Performance by Week and Pen
Appendix V - Table 5d
Live Three-Week Embryos by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)*

Experimental Group (ppm)	P E N S				Totals
	277	278	279	280	
LOT ¹					
A	0	0	0	0	0
B	2	0	0	0	2
C	3	3	2	0	8
D	5	3	5	1	14
10000 E	5	3	5	4	17
F	6	3	6	4	19
G	6	5	5	6	22
H	7	5	7	5	24
I	6	5	5	6	22
J	6	3	6	4	19
Totals	46	30	41	30	147

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

- 290 -

Reproductive Performance by Week and Pen
Appendix V - Table 6a
Hatchlings by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)

Experimental Group (ppm)	P E N S				Totals
	265	266	267	268	
LOT ¹					
A	0	3	0	0	3
B	0	3	4	0	7
C	0	5	4	4	13
D	0	4	3	4	11
Control					
E	0	7	6	6	19
F	1	5	5	4	15
G	2	3	6	1	12
H	3	2	5	3	13
I	4	3	3	1	11
J	4	3	6	2	15
Totals	14	38	42	25	119

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

- 291 -

*Reproductive Performance by Week and Pen
Appendix V - Table 6b
Hatchlings by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)*

Experimental Group (ppm)	P E N S				Totals
	269	270	271	272	
LOT ¹					
A	0	2	0	5	7
B	0	2	0	6	8
C	0	4	0	8	12
D	0	4	0	5	9
1000 E	0	3	0	6	9
F	3	3	1	6	13
G	3	2	2	5	12
H	5	3	5	6	19
I	2	6	4	5	17
J	6	4	5	4	19
Totals	19	33	17	56	125

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

*Reproductive Performance by Week and Pen
Appendix V - Table 6c
Hatchlings by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)*

Experimental Group (ppm)	P E N S				Totals
	273	274	275	276	
LOT ¹					
A	0	0	5	1	6
B	0	0	6	2	8
C	0	4	6	5	15
D	1	3	5	5	14
5000 E	5	4	4	2	15
F	6	2	5	6	19
G	5	3	5	3	16
H	7	4	7	4	22
I	3	1	6	5	15
J	6	0	6	3	15
Totals	33	21	55	36	145

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

*Reproductive Performance by Week and Pen
Appendix V - Table 6d
Hatchlings by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)*

Experimental Group (ppm)	P E N S				Totals
	277	278	279	280	
LOT ¹					
A	0	0	0	0	0
B	2	0	0	0	2
C	3	3	2	0	8
D	5	3	5	1	14
10000 E	5	3	5	4	17
F	5	3	6	4	18
G	5	4	4	6	19
H	7	5	7	5	24
I	6	5	5	6	22
J	6	3	6	4	19
Totals	44	29	40	30	143

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

*Reproductive Performance by Week and Pen
Appendix V - Table 7a
14-Day Old Survivors by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)*

Experimental Group (ppm)	P E N S				Totals
	265	266	267	268	
LOT ¹					
A	0	3	0	0	3
B	0	3	4	0	7
C	0	5	3	4	12
D	0	2	3	4	9
Control					
E	0	7	5	6	18
F	1	4	5	4	14
G	2	3	5	1	11
H	3	2	5	3	13
I	4	3	2	1	10
J	4	3	6	2	15
Totals	14	35	38	25	112

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

- 295 -

*Reproductive Performance by Week and Pen
Appendix V - Table 7b
14-Day Old Survivors by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)*

Experimental Group (ppm)	P E N S				Totals
	269	270	271	272	
LOT ¹					
A	0	2	0	5	7
B	0	2	0	6	8
C	0	4	0	8	12
D	0	3	0	5	8
1000 E	0	2	0	6	8
F	3	3	1	6	13
G	3	1	2	5	11
H	4	3	5	6	18
I	2	6	4	5	17
J	5	3	5	3	16
Totals	17	29	17	55	118

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

*Reproductive Performance by Week and Pen
Appendix V - Table 7c
14-Day Old Survivors by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)*

Experimental Group (ppm)	P E N S				Totals
	273	274	275	276	
LOT ¹					
A	0	0	3	0	3
B	0	0	5	2	7
C	0	4	4	5	13
D	0	3	5	5	13
5000 E	4	4	4	2	14
F	5	2	4	6	17
G	5	3	5	3	16
H	7	4	7	4	22
I	2	1	6	3	12
J	6	0	6	3	15
Totals	29	21	49	33	132

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

- 297 -

*Reproductive Performance by Week and Pen
Appendix V - Table 7d
14-Day Old Survivors by Week and Pen
from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)*

Experimental Group (ppm)	P E N S				Totals
	277	278	279	280	
LOT ¹					
A	0	0	0	0	0
B	1	0	0	0	1
C	2	3	1	0	6
D	5	3	4	1	13
10000 E	4	3	5	2	14
F	4	3	5	3	15
G	5	4	4	6	19
H	7	5	7	5	24
I	6	5	5	5	21
J	5	3	6	4	18
Totals	39	29	37	26	131

¹ LOT A - Eggs Set During Week 13; LOT B - Eggs Set During Week 14; etc.

Appendix VI - Table 1
Eggshell Thickness (mm) per Pen by Week
from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)
(Control)

Pen	W e e k s										Mean	SD	[n]
	A	B	C	D	E	F	G	H	I	J			
265	-		-		-		0.211		0.220		0.216	0.006	2
266		0.212		0.214		0.242		0.212		0.246	0.225	0.017	5
267	0.206		0.193		0.211		0.214		0.212		0.207	0.009	5
268		-		0.256		0.257		0.255		0.258	0.257	0.001	4
Mean and standard deviation of pen means:											0.226	0.022	16
- No eggs available.													

Appendix VI - Table 2
 Eggshell Thickness (mm) per Pen by Week
 from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)
 (1000 PPM)

Pen	Weeks										Mean	SD	[n]
	A	B	C	D	E	F	G	H	I	J			
269	-		-		-		0.252		0.249		0.250	0.002	2
270		0.232		0.216		0.232		0.215		0.227	0.225	0.008	5
271	-		-		-		0.240		0.248		0.244	0.006	2
272		0.229		0.220		0.223		0.215		0.214	0.220	0.006	5
Mean and standard deviation of pen means:											0.235	0.015	14

- No eggs available.

Differences between the control and this treatment group were not significant ($p > 0.05$).

- 300 -

Appendix VI - Table 3
 Eggshell Thickness (mm) per Pen by Week
 from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)
 (5000 PPM)

Pen	Weeks										Mean	SD	[n]
	A	B	C	D	E	F	G	H	I	J			
273	-		0.249		0.252		0.250		0.254		0.251	0.003	4
274		0.231		0.237		0.228		0.200		-	0.224	0.016	4
275	0.212		0.230		0.240		0.214		0.216		0.222	0.013	5
276		0.241		0.241		0.255		0.247		0.249	0.247	0.006	5
Mean and standard deviation of pen means:											Mean	SD	
											0.236	0.015	18

- No eggs available.

Differences between the control and this treatment group were not significant ($p > 0.05$).

- 301 -

*Appendix VI - Table 4
Eggshell Thickness (mm) per Pen by Week
from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)
(10000 PPM)*

Pen	Weeks										Mean	SD	[n]
	A	B	C	D	E	F	G	H	I	J			
277	0.250		0.231		0.245		0.234		0.231		0.238	0.009	5
278		-		0.253		0.244		0.247		0.240	0.246	0.006	4
279	0.226		0.230		0.232		0.236		0.232		0.231	0.004	5
280		-		0.227		0.230		0.221		0.222	0.225	0.004	4
Mean and standard deviation of pen means:											0.235	0.009	18

- No eggs available.

Differences between the control and this treatment group were not significant ($p > 0.05$).

- 302 -

Appendix VII - Table 1
Mean Hatchling Body Weight (g) per Pen by Week
from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)
(Control)

Pen	Weeks [No. of Hatchlings]										Mean	SD	Total Hatch
	A [n]	B [n]	C [n]	D [n]	E [n]	F [n]	G [n]	H [n]	I [n]	J [n]			
265	[0]	[0]	[0]	[0]	[0]	5 [1]	6 [2]	6 [3]	6 [4]	6 [4]	6	0	14
266	5 [3]	5 [3]	6 [5]	6 [4]	6 [7]	6 [5]	6 [3]	6 [2]	6 [3]	6 [3]	6	0	38
267	[0]	6 [4]	6 [4]	6 [3]	6 [6]	6 [5]	7 [6]	7 [5]	7 [3]	7 [6]	6	0	42
268	[0]	[0]	6 [4]	7 [4]	6 [6]	7 [4]	6 [1]	7 [3]	7 [1]	7 [2]	6	0	25
											Mean	SD	
											6	0	119

The number of hatchlings weighed may differ from the total number of hatchlings since those hatchlings found dead were not weighed.
 SD = Standard deviation of mean body weight, by parental pen, by week.

- 303 -

Appendix VII - Table 2
 Mean Hatchling Body Weight (g) per Pen by Week
 from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)
 (1000 PPM)

Pen	Weeks [No. of Hatchlings]										Mean	SD	Total Hatch
	A [n]	B [n]	C [n]	D [n]	E [n]	F [n]	G [n]	H [n]	I [n]	J [n]			
269	[0]	[0]	[0]	[0]	[0]	5 [3]	6 [3]	6 [5]	5 [2]	6 [6]	6	1	19
270	5 [2]	6 [2]	6 [4]	6 [3]	6 [3]	6 [3]	7 [2]	7 [3]	7 [6]	7 [4]	6	1	32
271	[0]	[0]	[0]	[0]	[0]	5 [1]	6 [2]	6 [5]	6 [4]	6 [5]	6	0	17
272	5 [5]	6 [6]	6 [8]	6 [5]	6 [6]	6 [6]	6 [5]	6 [6]	6 [5]	6 [4]	6	0	56
											Mean	SD	
											6	0	124

The number of hatchlings weighed may differ from the total number of hatchlings since those hatchlings found dead were not weighed.
 Differences between the control and this treatment group were not significant ($p > 0.05$).
 SD = Standard deviation of mean body weight, by parental pen, by week.

Appendix VII - Table 3
Mean Hatchling Body Weight (g) per Pen by Week
from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)
(5000 PPM)

Pen	Weeks [No. of Hatchlings]										Mean	SD	Total Hatch
	A [n]	B [n]	C [n]	D [n]	E [n]	F [n]	G [n]	H [n]	I [n]	J [n]			
273	[0]	[0]	[0]	4 [1]	6 [5]	6 [6]	5 [5]	6 [7]	6 [3]	6 [6]	6	0	33
274	[0]	[0]	6 [4]	6 [3]	6 [4]	6 [2]	6 [3]	6 [4]	6 [1]	[0]	6	0	21
275	5 [5]	5 [6]	5 [6]	6 [5]	6 [4]	6 [5]	6 [5]	6 [7]	6 [6]	6 [6]	6	0	55
276	4 [1]	5 [2]	5 [5]	6 [5]	6 [2]	6 [6]	6 [3]	6 [4]	5 [5]	5 [3]	5	0	36
											Mean	SD	
											6	0	145

The number of hatchlings weighed may differ from the total number of hatchlings since those hatchlings found dead were not weighed.
Differences between the control and this treatment group were not significant ($p > 0.05$).
SD = Standard deviation of mean body weight, by parental pen, by week.

Appendix VII - Table 4
Mean Hatchling Body Weight (g) per Pen by Week
from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)
(10000 PPM)

Pen	Weeks [No. of Hatchlings]										Mean	SD	Total Hatch
	A [n]	B [n]	C [n]	D [n]	E [n]	F [n]	G [n]	H [n]	I [n]	J [n]			
277	[0]	5 [2]	5 [3]	5 [5]	5 [5]	6 [5]	5 [5]	6 [7]	5 [6]	6 [6]	5	0	44
278	[0]	[0]	5 [3]	5 [3]	6 [3]	6 [3]	6 [4]	6 [5]	6 [5]	6 [3]	6	0	29
279	[0]	[0]	5 [2]	5 [5]	6 [5]	6 [6]	6 [4]	6 [7]	6 [5]	6 [6]	6	0	40
280	[0]	[0]	[0]	6 [1]	6 [4]	6 [4]	6 [6]	6 [5]	6 [6]	6 [4]	6	0	30
											Mean	SD	
											6	0	143

The number of hatchlings weighed may differ from the total number of hatchlings since those hatchlings found dead were not weighed.
Differences between the control and this treatment group were not significant ($p > 0.05$).
SD = Standard deviation of mean body weight, by parental pen, by week.

- 306 -

Appendix VIII - Table 1

*Mean 14-Day Old Survivors Body Weight (g) per Pen by Week
from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)
(Control)*

Pen	Weeks [No. of 14-Day Old Survivors]										Mean	SD	14-Day Total
	A [n]	B [n]	C [n]	D [n]	E [n]	F [n]	G [n]	H [n]	I [n]	J [n]			
265	[0]	[0]	[0]	[0]	[0]	23[1]	23[2]	27[3]	23[4]	27[4]	25	2	14
266	26[3]	25[3]	28[5]	28[2]	28[7]	27[4]	27[3]	29[2]	28[3]	31[3]	28	1	35
267	[0]	24[4]	27[3]	26[3]	28[5]	23[5]	22[5]	31[5]	27[2]	32[6]	27	3	38
268	[0]	[0]	30[4]	30[4]	31[6]	33[4]	33[1]	33[3]	33[1]	32[2]	31	1	25
											Mean	SD	
											28	3	112

SD = Standard deviation of mean body weight, by parental pen, by week.

- 307 -

Appendix VIII - Table 2
 Mean 14-Day Old Survivors Body Weight (g) per Pen by Week
 from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)
 (1000 PPM)

Pen	Weeks [No. of 14-Day Old Survivors]										Mean	SD	14-Day Total
	A [n]	B [n]	C [n]	D [n]	E [n]	F [n]	G [n]	H [n]	I [n]	J [n]			
269	[0]	[0]	[0]	[0]	[0]	16 [3]	27 [3]	30 [4]	29 [2]	29 [5]	26	5	17
270	26 [2]	26 [2]	26 [4]	24 [3]	30 [2]	23 [3]	25 [1]	26 [3]	31 [6]	30 [3]	27	3	29
271	[0]	[0]	[0]	[0]	[0]	31 [1]	27 [2]	29 [5]	30 [4]	32 [5]	30	2	17
272	20 [5]	26 [6]	32 [8]	31 [5]	28 [6]	29 [6]	28 [5]	29 [6]	29 [5]	28 [3]	28	3	55
											Mean	SD	
											28	1	118

Differences between the control and this treatment group were not significant ($p > 0.05$).
 SD = Standard deviation of mean body weight, by parental pen, by week.

Appendix VIII - Table 3
 Mean 14-Day Old Survivors Body Weight (g) per Pen by Week
 from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)
 (5000 PPM)

Pen	Weeks [No. of 14-Day Old Survivors]										14-Day		
	A [n]	B [n]	C [n]	D [n]	E [n]	F [n]	G [n]	H [n]	I [n]	J [n]	Mean	SD	Total
273	[0]	[0]	[0]	[0]	23 [4]	21 [5]	24 [5]	26 [7]	29 [2]	22 [6]	23	2	29
274	[0]	[0]	28 [4]	29 [3]	24 [4]	22 [2]	27 [3]	26 [4]	33 [1]	[0]	27	3	21
275	25 [3]	22 [5]	24 [4]	28 [5]	28 [4]	23 [4]	27 [5]	30 [7]	29 [6]	31 [6]	27	3	49
276	[0]	19 [2]	28 [5]	33 [5]	26 [2]	23 [6]	29 [3]	33 [4]	26 [3]	29 [3]	28	4	33
											Mean	SD	
											26	2	132

Differences between the control and this treatment group were not significant ($p > 0.05$).

SD = Standard deviation of mean body weight, by parental pen, by week.

Appendix VIII - Table 4

*Mean 14-Day Old Survivors Body Weight (g) per Pen by Week
from a Northern Bobwhite Reproduction Study with C6 Acid (Blood Sample Groups)
(10000 PPM)*

Pen	Weeks [No. of 14-Day Old Survivors]										Mean	SD	14-Day Total
	A [n]	B [n]	C [n]	D [n]	E [n]	F [n]	G [n]	H [n]	I [n]	J [n]			
277	[0]	13 [1]	26 [2]	24 [5]	24 [4]	23 [4]	20 [5]	29 [7]	28 [6]	27 [5]	25	3	39
278	[0]	[0]	26 [3]	24 [3]	28 [3]	24 [3]	23 [4]	29 [5]	29 [5]	28 [3]	27	2	29
279	[0]	[0]	23 [1]	20 [4]	25 [5]	20 [5]	23 [4]	26 [7]	26 [5]	25 [6]	24	2	37
280	[0]	[0]	[0]	27 [1]	31 [2]	32 [3]	31 [6]	34 [5]	33 [5]	32 [4]	32	2	26
											Mean	SD	
											27	4	131

Differences between the control and this treatment group were not significant ($p > 0.05$).

SD = Standard deviation of mean body weight, by parental pen, by week.

- 310 -

Appendix IX - Table 1
 Individual Gross Pathological Observations
 from a Northern Bobwhite Reproduction Study with C6 Acid
 (Blood Sample Groups)
 Birds Euthanized at Test Termination

0 ppm - Control

Males	265	266	267	268
Reproductive - right testis small (~1.3 cm)	-	-	-	X
Not remarkable	X	X	X	-

Females	265	266	267	268
External - feather loss	-	X	-	X
External - foot lesions	-	-	X	-
Abdominal cavity - egg yolk peritonitis, slight	-	-	X	-
Not remarkable	X	-	-	-

1000 ppm

Males	269	270	271	272
Urinary - cyst on left kidney (~3mm with cloudy fluid)	-	X	-	-
Reproductive - right testis small (~1.4 cm)	X	-	X	-
Reproductive - right testis small (~1.2 cm)	-	-	-	X
Not remarkable	-	-	-	-

Females	269	270	271	272
External - feather loss	-	-	X	X
External - foot lesions	X	-	-	-
Liver - mottled	-	-	-	X
Not remarkable	-	X	-	-

- 311 -

Appendix IX - Table 2
 Individual Gross Pathological Observations
 from a Northern Bobwhite Reproduction Study with C6 Acid
 (Blood Sample Groups)
 Birds Euthanized at Test Termination

5000 ppm

Males	273	274	275	276
External - feather loss	-	-	X	-
Liver - pale, slight	X	-	-	-
Reproductive - right testis small (~1.3 cm)	X	-	-	-
Reproductive - right testis small (~1.2 cm)	-	-	-	X
Not remarkable	-	X	-	-

Females	273	274	275	276
External - feather loss	X	-	-	X
External - foot lesions	-	X	-	-
Reproductive - ovary regressed	-	X	-	-
Not remarkable	-	-	X	-

10,000 ppm

Males	277	278	279	280
Reproductive - right testis small (~1.4 cm)	-	-	-	X
Not remarkable	X	X	X	-

Females	277	278	279	280
External - feather loss	X	X	X	-
Not remarkable	-	-	-	X