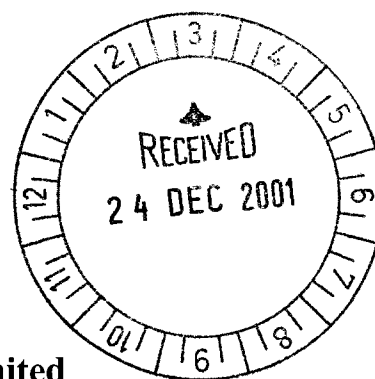


MONSANTO



APPLICANT:

Monsanto Australia Limited

A416

CP4 EPSPS gene in Roundup Ready® Corn Line NK603

SUBMISSION:

Application to Australia New Zealand Food Authority
for the inclusion of corn containing the CP4 EPSPS
gene by Monsanto in Standard A18 - Food Derived
From Gene Technology

VOLUME:

1 of 1

SUPPORTING INFORMATION

DATE:

19 December 2001

PREPARED BY:

Megan Shaw
Regulatory Product Manager

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Signatures of Approval

MSL Number: MSL-17458

Title: Amended Report for MSL-17107: Sponsor
Summary of Report for Study #2000-01-39-02
(Comparison of Broiler Performance When Fed
Diets Containing Event NK603, Parental Line, or
Commercial Corn)

Facilities *Product Safety Center, Monsanto Company
800 N. Lindbergh Blvd.
St. Louis, MO 63167

**Colorado Quality Research (CQR), Inc.
400 East County Road 72
Wellington, Colorado 80549

***Department of Math/Statistics
University of South Alabama
Mobile, AL 36688

Study Director: Beverly George**

Contributors: Mary L. Taylor*, Gary F. Hartnell*, Susan G.
Riordan*, Margaret A. Nemeth*, David M.
Carpenter (statistician for Trilogy Consulting
Corporation)***, and Wayne McWard (former
Director of Nutrition and Research, Continental
Grain Company, formulation of diets)

Amendments to Report:

This amendment modifies the final MSL report to reflect the following changes in the statistical report which do not affect the quality or integrity of the data:

Signature of Approval page (p.1) updated to reflect title change to "Amended Report for MSL-17107", Table of Contents (p.2), and Statistical Report, Appendix 2 cover (p. 97) updated to reflect amended pages. The header (all pages) updated to include added pages.

Statistical Report (Appendix 2): p.1, updated to reflect title change and clarified in text how diets were compared in the analysis, p.5, table footnote clarified as to how MON853 was used in statistical analyses, pp. 7 and 35, changed units from kg/pen to g/pen in titles, pp.64-66, added Amendments, and p. 67, updated QA statement page.

Signatures of Approval:

Author Mary L. Taylor

Product Safety Center Representative [Signature]

Date Nov. 15, 2001
Date Nov. 13, 01

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1.0 Purpose

Traits such as herbicide tolerance are being introduced into corn to provide efficacious, environmentally compatible methods of weed control. The Roundup Ready® corn line NK603 expresses the CP4 EPSP synthase protein, which confers commercial level tolerance to glyphosate, the active ingredient in Roundup® herbicide. The study 2000-01-39-02 was undertaken to compare the wholesomeness of NK603 Roundup Ready corn to other commercial corn varieties including the parental line when fed to rapidly growing Ross x Ross broilers. This document summarizes the events and conclusions from the complete final report for 2000-01-39-02 (Appendix 1) and additional background information.

2.0 Methods

Grain of the Roundup Ready corn event NK603 and the non-transgenic parental control line (B73HT x LH82) was produced in Kaunakakai, Hawaii under Production Plan #00-01-46-03. Grain from five reference lines produced in other locations during the 1999/2000 growing seasons were included in the study 2000-01-39-02 for purposes of comparison to the test event. The five non-transgenic, commercially available reference varieties were: RX826 (St. Joseph, IL, Champaign County), LH235 x LH185 (Production Plan #00-01-46-03 in Kaunakakai, Hawaii), RX770 (Production Plan #99-01-39-13 in Monmouth, IL), DK493 (Yuma County, CO) and MON 847 which is commercially known as RX670 (Production Plan #99-01-39-13 in Monmouth, IL). RX826 and DK493 were commercially produced and not grown under a production plan, and background information was documented in Monsanto study 00-01-50-04. An additional test event, unrelated to NK603, was initially included in the study 2000-01-39-02 but was subsequently excluded from the study by amendment due to a decision not to commercialize that event. All data generated for that particular test event was archived with the study file for 2000-01-39-02.

Mycotoxin and pesticide screens and nutrient analyses of the corn grain used for study 2000-01-39-02 were conducted prior to the study start. No unusual values were reported from these analyses. The pesticide levels were below the limits of detection and the mycotoxin levels were below or slightly above the limits of detection. The diets were formulated based on the individual nutrient analyses for the grain from each test, control, and reference substance tested. The only source of dietary protein used in the study 2000-01-39-02 was from the test lines of corn, supplemented with commercial soybean meal. Methionine and lysine were added as needed to conform to industry standards. All diets were formulated to meet nutritional recommendations (National Research Council (NRC), 1994). Diets were formulated such that the protein levels were as close as possible to NRC values to align them with traditional broiler industry uses. From days 1-20, chickens were fed a starter diet containing approximately 55% w/w corn (crude

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protein ranging from 20.7%-21.9%). From days 20-42, chickens were fed a grower/finisher diet containing approximately 60% w/w corn (crude protein ranging from 19.5%-20.5%). These dietary corn concentrations are within the range used by commercial poultry growers in the United States.

The formulated poultry diets were analyzed for crude protein, amino acids, moisture, fat, crude fiber, neutral detergent fiber, acid detergent fiber, carbohydrates, ash, calcium, phosphorus, potassium, sodium, chloride, magnesium, sulfur, zinc, iron, manganese, and copper. A coccidiostat, salinomycin, was mixed into test diets at a level of 60 g/ton. No growth promotants or other medications were added to test diets. Diets were prepared at the CQR feed mill. Feed was provided *ad libitum*; each pen had its own feeder. During the first six days, a chick feeder tray was added to each pen. Water was provided *ad libitum* by an automatic water drinker in each pen.

3.0 Test Animals

Rapidly growing broiler chickens were used to compare the broiler performance and processing parameters with diets containing Roundup Ready corn event NK603, the parental corn line, and five commercially available reference corn lines. As a consequence of genetic selection, commercial broilers reach a market weight of approximately 2 kg in approximately 42 days. In the study 2000-01-39-02, an approximately 50-fold increase in body weight was observed. The rapidly growing broiler is sensitive to changes in nutrient quality in diets, and therefore is a useful model to evaluate the wholesomeness of protein/amino acid sources.

A high yielding commercial strain of broiler chickens (Ross x Ross 508) were purchased from Hoover's Hatchery in Rudd, IA. The birds were one day of age at receipt and randomly assigned to treatments the same day. Chicks were separated by gender and only healthy birds were assigned. Birds were vaccinated for Marek's disease at the hatchery and for Newcastle and Infectious Bronchitis at CQR at 7 days of age. The birds were examined twice daily for general health, and any abnormal health symptoms were recorded. Any birds sacrificed were weighed, and any birds found dead were necropsied to determine the possible cause of death.

4.0 Experimental Design and Analysis

A randomized complete block design was used, and there were eight treatments corresponding to the eight corn lines evaluated. Treatments were assigned to pens using a randomized complete block design with 80 males and 80 females per each of five blocks. Only personnel involved in feed manufacturing were aware of treatment identification. As much as possible, the intent was to simulate commercial conditions for raising broilers. Birds were housed in concrete floor pens containing clean wood shavings.

The poultry room where the study 2000-01-39-02 was conducted was environmentally controlled for light and temperature. The environmental conditions (floor space, temperature, lighting, bird density, feeder and water space) were similar for all experimental treatments. All treatments were represented in each block consisting of 16 pens (8 male and 8 female) with 10 birds/pen for a total of 80 pens and 800 birds. For each treatment group, there were 100 birds in 10 pens, 5 pens of males (10 birds/pen) and 5 pens of females (10 birds/pen). At study start, there were an additional 2 birds added to each pen to compensate for possible losses due to mortality from starveouts (birds refusing feed) and dehydration which occurs normally during the first few days in a chicken feeding study. At study day 7, the group size was culled to a maximum of 10 birds/pen. The extra birds removed included unhealthy birds first, and any remaining birds still needed to be removed were selected randomly. Birds culled at day 7 were sacrificed and weighed.

Birds were weighed by pen at day 0 (study start) and day 42 (feed removed) and individually at study termination (day 43 for males and day 44 for females). The average body weight/pen and body weight/bird for each treatment group by sex was calculated. The average feed conversion per pen was calculated for the entire duration of the study by using the total feed consumption during the study divided by the total body weight of the surviving birds in the pen. This was averaged for each treatment group by sex. Adjusted feed conversion was calculated by using the total feed consumption/pen divided by the total body weight of the surviving birds and body weight of birds that died or were removed from the pen. At study termination, carcass measurements were taken including those for fat pads which were collected from each bird and weighed. Meat quality assays on breast and thigh meat samples were conducted after in-life study termination.

Statistical analyses were performed on starting and final live weights, feed consumption, feed efficiency, adjusted feed efficiency, chill weight, percent chill weight (chill weight/live weight), breast weight, percent breast weight (breast weight/chill weight), wing weight, percent wing weight (wing weight/chill weight), thigh weight, percent thigh weight (thigh weight/chill weight), drum weight, percent drum weight (drum weight/chill weight), fat pad weight, fat pad as a percentage of live weight, and moisture, protein, and fat for breast and thigh meat. Since the pens were set up as a randomized complete block design with the diet treatments in each of five replicated blocks of pens, the standard randomized block analysis of variance (ANOVA) statistical model was used to analyze the data. Means were compared to each other at the 5% level of significance. An additional analysis was done to compare the fit of Roundup Ready corn event NK603 to the population of responses from the reference varieties. The test was to determine if the responses obtained from animals in the Roundup Ready corn event NK603 treatment group consistent with the expected variation of responses of animals fed the other corn

varieties. This analysis was carried out using a linear mixed model procedure ($P < 0.05$) from SAS Institute, Cary, NC.

Colorado Quality Research (CQR) provided Quality Assurance oversight for the in-life phase of the study. Monsanto provided Quality Assurance oversight for the statistical analyses. Discussion on meeting the GLP requirements was in the CQR final report

5.0 Results

The nutrient assay results for the starter and finisher diets met industry standards. A few assay values were slightly above or below NRC values, but this was attributed to assay method variability and the different moisture level of the various diets and not to the corn lines specifically.

Expected chick mortality related to starveouts, dehydration, etc. was observed during the first 7 days of the study. This mortality was randomly distributed across all treatments without any relationship to treatment and occurs commonly in chicks in commercial feeding trials. During the remainder of the study, pen sizes were normalized to a maximum of 10 birds/pen. The distribution of the birds that died from day 7 to study termination was random across treatments (deaths per treatments averaged 1.14% and ranged from 0% to 3% across all treatments). Most of the apparent causes of death were identified at necropsy and occur commonly in chickens (sudden death syndrome and ascites). The birds in all treatments were in good health based on twice daily pen observations. The starting and final body weights of the chicks were normal and the average pen body weights were comparable between treatments (Table 1).

All performance parameters measured were similar across the broilers fed diets of NK603 corn, parental corn, and reference lines of corn in study 2000-01-39-02 and comparable to literature values for Ross broiler strains (Table 1). Live weight at day 0 (g/bird or kg/pen), live weight at day 42 (g/bird or kg/pen), total feed intake (kg/bird or kg/pen) and feed efficiency (kg/kg) were similar across all treatments. Broilers fed diets containing NK603 corn had similar adjusted feed efficiency with its parental (B73HT x LH82) and one of the five reference lines (LH235 x LH185). Diets containing the other four reference corn lines had slightly poorer adjusted feed efficiencies (2.3% poorer than NK603).

Carcass measurements of live weight (kg), chill weight (kg or % of live weight), breast meat (% of chill wt.), thighs (kg or % of chill wt.), drums (kg or % of chill wt.), and wings (kg or % of chill wt.) were similar across treatments ($P > 0.05$) and comparable to literature values for Ross broiler strains (Table 1). Expressed on a weight basis or percent chill weight, fat pad weights of the NK603 fed birds were not different from fat pad weights of birds fed the RX826 reference line. However, fat pad weight of the NK603

birds was slightly less than the parental line (34 vs. 37 g; 1.5 vs. 1.7% of chill weight for NK603 and the parental line, respectively) and four reference lines. These differences were within the range of literature values (24.2-63.2 g fat pad and 1.14-3.60% abdominal fat yield on a percent weight basis) reported in studies using Ross x Ross broiler strains (Smith, et al., 1998, Lei and Van Beek, 1997, Farran, et al., 2000, Esteve-Garcia and Llaurodo, 1997, Kidd and Kerr, 1997, and Peak, et al., 2000). Breast meat weight of the birds fed the NK603 corn was not different between the parental or the five reference lines. However, the amount of breast meat weight from the birds fed the parental line was significantly less than birds fed diets containing three of the reference lines. However, all values fell within the reported literature ranges reported for breast meat yield of 0.225-0.551 kg using Ross x Ross broiler strains (Smith, et al., 1998, Lei and Van Beek, 1997, Esteve-Garcia and Llaurodo, 1997, and Kidd and Kerr, 1997).

No differences were observed in the percentage of moisture, protein, and fat in breast meat or in the percentage of protein or fat in thigh meat across treatment diets. Percent moisture content of the thigh meat was similar between the diets of NK603, the parental line, and three of the reference lines. Birds fed two of the reference lines had thigh meat slightly higher (~1.0%) in moisture content compared to those fed the NK603 diet. There is no biological basis for the small differences observed.

No main treatment effect differences were observed for wing weight measurements between the diets of NK603, parental, or reference lines. Only when wing weight was expressed as percent of chill weight was a minor treatment by sex interaction significant. In this case, no differences were observed among the males fed the seven treatment diets. The percent wing weights of the females fed the NK603 corn (11.9%) was significantly different from diets of lines LH235 x LH185 (11.6%) and MON 847 (11.6%) but similar to diets of the other four reference lines.

6.0 Conclusion

The results of the broiler feeding study 2000-01-39-02 show that there were no biologically relevant differences in parameters tested between birds fed the Roundup Ready event NK603 and its parent, B73HT x LH82. In addition, when individual treatment comparisons were made, broilers in general performed and had similar carcass yield and meat composition with diets containing NK603, the parental control, or five commercially available reference lines. As a result, it was concluded that Roundup Ready corn line containing the NK603 event was as wholesome as its corresponding parental line and five commercially available reference lines regarding its ability to support the rapid growth of broiler chickens.

7.0 References

- Esteve-Garcia, E. and Llaurodo, L. 1997. Performance, breast meat yield, and abdominal fat deposition of male broiler chickens fed diets supplemented with DL-methionine or DL-methionine hydroxy analogue free acid. *Brit. Poult. Sci.* **38**: 397-404.
- Farran, M.T., Khalil, R.F., Uwayjan, M.G., and Ashkarian, V.M. 2000. Performance and carcass quality of commercial broiler strains. *J. Appl. Poultry Res.* **9**: 252-257.
- Grey, T.C., Robinson, D., Jones, J.M., Stock, S.W., and Thomas, N.L. 1983. Effect of age and sex on the composition of muscle and skin from a commercial broiler strain. *Brit. Poult. Sci.* **24**: 219-231.
- Kidd, M.T. and Kerr, B.J. 1997. Threonine responses in commercial broilers at 30 to 42 days. *J. Appl. Poult. Res.* **6**: 362-367.
- Lei, S. and Van Beek, G. 1997. Influence of activity and dietary energy on broiler performance, carcass yield and sensory quality. *Brit. Poult. Sci.* **38**: 183-189.
- Peak, S.D., Walsh, T.J., Benton, C.E., and Brake, J. 2000. Effects of two planes of nutrition on performance and uniformity of four strains of broiler chicks. *J. Appl. Poult. Res.* **9**: 185-194.
- Smith, E.R., Pesti, G.M., Bakalli, R.I., Ware, G.O., and Menten, J.F.M. 1998. Further studies on the influence of genotype and dietary protein on the performance of broilers. *Poult. Sci.* **77**:1678-1687.
- National Research Council (NRC). 1994. *Nutritional Requirements of Poultry*, 9th revision.

Table 1. Performance of broilers, carcass yield and protein and fat composition of breast and thighs (mean values of males and females)
Comparison of transgenic corn line NK603 with control and reference CQR Project No. MN-00-3 (Monsanto Study No. 2000-01-39-02)
lines.

CQR Treatment ID	8	6	1	4	3	5	2	Treatments	LSD ²	Historical	Literature Range ⁴
Monsanto Corn ID	NK603	B73HT x LH82	RX826	LH235 x LH185	DK493	MON847	RX770	(T) SSD ¹	5.0%	Range ³	
Performance											
Live weight (g/bird) day 0	38.183	38.417	38.500	38.100	38.383	38.333	38.250	NS	0.7970	NA	NA
Live weight (kg/pen) day 0	0.46	0.46	0.46	0.46	0.46	0.46	0.46	NS	0.009	NA	NA
Live weight (kg/bird) day 42	2.301	2.310	2.337	2.346	2.327	2.318	2.253	NS	0.0688	1.891-2.190	1.79-2.43 ^{af}
Live weight (kg/pen) day 42	22.770	22.850	23.370	22.720	22.760	22.480	22.530	NS	1.1087	14.73-21.90	NA
Feed intake (kg/bird)	3.547	3.586	3.694	3.706	3.689	3.667	3.543	NS	0.1318	NA	NA
Feed intake (kg/pen)	35.090	35.470	36.940	35.870	36.040	35.570	35.430	NS	1.4846	25.44-34.04	NA
Feed efficiency (kg/kg)	1.543	1.555	1.585	1.581	1.587	1.587	1.574	NS	0.0320	1.555-1.782	1.60-2.07 ^{a,b,c,d}
Adjusted Feed Efficiency (kg/kg)	1.528 ^c	1.546 ^{bc}	1.573 ^a	1.549 ^{bc}	1.556 ^{ab}	1.563 ^{ab}	1.563 ^{ab}	*	0.0240	1.545-1.724	NA
Carcass Yield											
Live weight (kg)	2.246	2.225	2.299	2.287	2.263	2.254	2.195	NS	0.0658	NA	NA
Chill weight (kg)	1.592	1.580	1.637	1.622	1.605	1.598	1.556	NS	0.0515	NA	NA
Chill weight (% of live weight)	70.90	71.00	71.20	70.90	70.90	70.90	70.80	NS	0.4600	NA	67.1-76.0 ^{a,c,d,e}
Fat pad weight (kg)	0.034 ^b	0.037 ^a	0.036 ^{ab}	0.039 ^a	0.039 ^a	0.037 ^a	0.037 ^a	*	0.0028	0.0337-0.0441	0.0242-0.0632 ^{af}
Fat pad weight (% of live weight)	1.5 ^c	1.7 ^{ab}	1.6 ^{bc}	1.7 ^a	1.7 ^a	1.7 ^{ab}	1.7 ^{ab}	**	0.1100	1.80-2.18	1.14-3.60 ^{af}
Breast meat weight (kg)	0.407 ^{abcd}	0.394 ^d	0.423 ^a	0.415 ^{ab}	0.413 ^{abc}	0.404 ^{bcd}	0.394 ^{cd}	*	0.0183	NA	0.225-0.551 ^{a,b,d,e}
Breast meat weight (% of chill wt.)	25.50	24.90	25.80	25.60	25.70	25.30	25.30	NS	0.5400	NA	11.19-32.62 ^{a,d,e}
Thighs weight (kg)	0.279	0.275	0.282	0.277	0.274	0.276	0.268	NS	0.0101	NA	0.258-0.318 ^{ef}
Thighs weight (% of chill wt.)	17.50	17.40	17.20	17.10	17.10	17.30	17.20	NS	0.2900	NA	12.80-20.65 ^{ef}
Drums weight (kg)	0.227	0.224	0.231	0.227	0.225	0.227	0.223	NS	0.0074	NA	0.213 ^f
Drums weight (% of chill wt.)	14.30	14.20	14.10	14.00	14.00	14.20	14.30	NS	0.2500	NA	10.50 ^f
Wings weight (kg)	0.186	0.185	0.191	0.188	0.187	0.185	0.182	NS	0.0055	NA	0.170 ^f
Wing weight (% of chill wt.)	11.70	11.80	11.70	11.60	11.70	11.60	11.70	NS	0.1400	NA	8.40 ^f

(continued)

Table 1. (con't.) Performance of broilers, carcass yield and protein and fat composition of breast and thighs (mean values of males and females). Comparison of transgenic corn line NK603 with control and reference CQR Project No. MN-00-3 (Monsanto Study No. 2000-01-39-02) lines.

CQR Treatment ID	8	6	1	4	3	5	2				
Monsanto Corn ID	NK603	B73HT x LH82	RX826	LH235 x LH185	DK493	MON847	RX770	Treatments (T) SSD ¹	LSD ² 5.0%	Historical Range ³	Literature Range ⁴
Breast Meat Analysis											
Moisture (%)	74.741	74.879	74.716	74.726	74.774	74.993	74.439	NS	0.4669	NA	72.7-74.3 ^g
Protein (%; as is basis)	24.111	23.712	24.235	24.346	24.157	24.008	24.019	NS	0.5355	NA	22.9-24.3 ^g
Fat (%; as is basis)	0.867	0.931	0.810	1.035	0.809	1.036	0.798	NS	0.1987	NA	0.770-1.80 ^g
Thigh Meat Analysis											
Moisture (%)	75.894 ^{bc}	75.752 ^c	76.360 ^{ab}	76.606 ^a	76.293 ^{ab}	76.804 ^a	76.039 ^{bc}	**	0.5203	NA	70.0-72.4 ^g
Protein (%; as is basis)	21.061	20.502	21.161	21.133	21.025	20.659	21.339	NS	0.5538	NA	17.7-19.2 ^g
Fat (%; as is basis)	2.455	2.311	1.966	1.847	2.139	1.833	2.153	NS	0.5661	NA	7.50-11.6 ^g

¹ SSD, statistical significance of differences: NS, not significant; *, P<0.05; **, P<0.01; Individual treatment means with the same superscript letter in the same row are not statistically different (P>0.05). ² LSD, least significant difference between two means (P<0.05). ³ 38-42 day Monsanto studies numbered XX-97-252 (Ross x Arbor Acres) and XX-98-081 (Ross x Ross). ⁴ a) Smith, et al., 1998 (Ross x Ross); b) Lei and Van Beek, 1997 (Ross x Ross); c) Farran, et al., 2000 (Ross); d) Esteve-Garcia and Llaurado, 1997 (Ross); e) Kidd and Kerr, 1997 (Ross x Ross); f) Peak, et al., 2000 (Ross x Ross, Cobb x Cobb, and Ross x Cobb); and g) Grey, et al., 1983 (Ross).

Appendix 1

Colorado Quality Research Final Report, QA Statement, and Report Amendment

pp. 11-96

CQR FINAL REPORT

***Comparison of Broiler Performance When Fed Diets Containing
Event NK 603, Parental Line or Commercial Corn***

**Project No. MN-00-3
(Monsanto Study No. 2000-01-39-02)**

SPONSOR

**MONSANTO COMPANY
700 Chesterfield Parkway North
St. Louis, Missouri 63198**

STUDY DIRECTOR

**COLORADO QUALITY RESEARCH, INC.
400 East County Road 72
Wellington, Colorado 80549**

January 2001

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Event NK 603, Parental Line or Commercial Corn**Project No. MN-00-3
(Monsanto Study No. 2000-01-39-02)

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CQR FINAL REPORT

Project No. MN-00-3
(Monsanto Study No. 2000-01-39-02)

I. TITLE

Comparison of Broiler Performance When Fed Diets Containing Event NK 603, Parental Line or Commercial Corn

SPONSOR:

Monsanto Company
700 Chesterfield Parkway North
St. Louis, Missouri 63198
636-737-5915 phone
636-737-6189 fax

SPONSOR MONITOR:

Mary Taylor
636-737-6229 phone
636-737-6189 fax
e-mail: mary.l.taylor@monsanto.com

SPONSOR MANAGEMENT PERSONNEL:

Dr. Gary F. Hartnell
Sponsor Representative

Dr. James D. Astwood
Director, Product Safety Center

Patrick Weston
Test Facility Management

STUDY DIRECTOR:

Beverly George, Ph.D.
Colorado Quality Research, Inc.
400 East County Road 72
Wellington, Colorado 80549
970-568-7738 phone
970-568-7719 fax
e-mail: cqbamg@frii.com

STUDY DATES:

Starting Date:	July 12, 2000 (chicks placed – Day 0)
In-life Completion:	August 23, 2000 (day 42 - weights)
	August 24 & 25, 2000 (days 43 and 44 – processing)

II. OBJECTIVE

This study was conducted to evaluate the nutritional value of diets containing Event NK 603 corn, parental and commercial lines of corn on broiler performance and carcass yield. This study was conducted according to FDA Good Laboratory Practice (GLP) Regulations (21CFR Part 58). The data for MON 853 was not reported here (see Protocol Amendment No. 2). The Sponsor decided not to pursue MON 853 as a commercial candidate at this time.

III. MATERIALS AND METHODS

A. TESTING/SUPPORT FACILITIES

<i>Facility</i>	<i>Purpose</i>
Colorado Quality Research, Inc. 400 E. County Road 72 Wellington, CO 80549	Office, Test & Control Article Storage, Feed preparation, Archives Test Animal Housing
Agland, Inc. 260 Factory Road Eaton, CO 80615	Supplier of feed ingredients (except corn)
Monsanto Company 700 Chesterfield Parkway North St. Louis, Missouri 63198	Supplier of varieties of corn Identification of test and control articles
Covance 3301 Kinsman Blvd Madison, WI 53704 (608) 242-2615	Nutrient analysis of corn Amino acid, crude protein & moisture analysis of diets, Pesticide analysis of corn (FDA PAM 304 modified screen)
Dairy One Laboratory DHI Forage Analytical Lab 730 Warren Road Ithaca, NY 14850	Treatment Diets – nutrient assays (except amino acids)
Joelyn Knoll-Brown 3282 West County Road 72 Ft. Collins, CO 80524	Quality Assurance
Dr. Wayne McWard Global Poultry Consulting, Inc. 2602 Lindsey Grace Lane Buford, GA 30518	Nutrition consultant
Experiment Station Chemical Laboratories University of Missouri Room 4, Agriculture Building Columbia, MO 65211-7170 Dr. Thomas P. Mawhinney	Meat analysis (protein, fat, moisture)
Kevin Glenn Monsanto Company Mail Stop BB5B 700 Chesterfield Parkway North St. Louis, MO 63198	DNA analysis of meat
Romer Labs, Inc. 1301 Stylemaster Drive Union, Missouri 63084	Mycotoxin assays - corn

B. TEST & CONTROL ARTICLE

Test Articles	NK 603
Control Article	B73Ht x LH82 (parental control for NK 603)
Commercial controls	Non-genetically modified corn (commercial varieties) <ol style="list-style-type: none">1. RX 7702. LH235 x LH1853. RX 8264. DK 4935. MON 847 (commercially known as RX 670)

Information on growing conditions, herbicide application, harvest, storage and processing is available from Monsanto and is archived at Monsanto with the study file.

Classification:	Feed ingredient
Chain of Custody:	Monsanto provided the chain-of-custody records for each variety delivered.
Shipping:	Monsanto was responsible for shipping of the test and control articles. All products were shipped in compliance with existing regulations.
Storage Requirements:	Ambient temperature during shipment and upon storage at CQR, in a secure area
Method of Administration:	Orally via complete feed
Frequency of Administration:	<i>Ad libitum</i> for 42 days starting at receipt of chicks (approximately 1 day of age)
Justification:	Feed was the standard route of administration
Preparation Before Use:	The total quantity of the corn added to the feed was thoroughly mixed in the feed to assure uniform dispersion. Starter diets were crumbled and grower/finisher diets were pelleted.
Analyses:	Test and control articles were characterized by Monsanto under Monsanto Study Nos. 00-01-50-04 and 00-01-39-07.
Accounting:	All quantities of test & control article (corn) received, used and disposed of, were documented. Excess test and control products were disposed of according to the Sponsor's directions.

C. TEST SYSTEM

1. Justification:

Commercial broiler chickens were the target animals and feed is the standard route of administration.

2 Specifications:

Normal, healthy day-old chicks were obtained from Hoover's Hatchery for use in this test. All birds were received from the same hatchery at the same time. Birds were transported from the hatchery location to the test facility via commercial airlines and ground transportation.

Species	Chicken (<i>Gallus domesticus</i>)
Breed	Commercial broiler
Strain	Ross x Ross (high yield bird)
Sex	Male & Female (sexed)
Supplier	Hoover's Hatchery, Rudd, Iowa
Age	~1 day of age upon receipt (study day 0) 42 days of age at study end
Body weight range:	See Appendix Tables 1 & 2 for initial & final weights, respectively
Identification	Pen cards Birds were individually identified with wingbands prior to obtaining individual weights for yield data
Number of birds:	350 Males, 350 Females
Number of treatments:	7
Number of pens/treatment:	10 (5 pens of males and 5 pens of females)
Number of birds/pen:	10 (12 started and reduced to 10/pen at 7 days of age)
Number of birds/treatment:	100 (50 males, 50 females)
Total number of pens	70

Day 7:

On day 7, all birds within a pen were counted. If greater than 10 males or 10 females were present then extras were removed. If extras were present, any unthrifty birds were removed first to bring the count to 10/pen. If additional birds still needed to be removed, they were selected arbitrarily (i.e. the first bird within reach, etc.). Removed birds were killed by cervical dislocation. All removed birds were weighed and recorded. If a pen had less than

the required number of birds on Day 7, then birds from another pen (having greater than 10 birds) in the same gender group and same treatment were relocated to provided sufficient numbers. There were 25 mortalities during days 0 – 7. Additionally, 115 birds were removed on day 7. In addition, on day 7, one pen (Pen 22) had fewer than 10 birds and therefore, an extra bird from the respective sex and treatment group was placed in this pen to bring the count to 10 birds/pen.

IV. EXPERIMENTAL DESIGN

Treatments were assigned to pens using a randomized complete block design. Birds were assigned to the pens randomly according to CQR SOP B-10. Specific treatments were designated as follows. There were 8 treatments randomized to the test facility, however only 7 treatments are related to this study (Treatment 7 is not applicable to this report).

Treatment	Corn ID*	No. of Male Pens	No. of Female Pens	**No. of Males /Pen	**No. of Females /Pen	Total No. of Males	Total No. of Females	Total No. Birds/ Treatment
1	RX 826	5	5	10	10	50	50	100
2	RX 770	5	5	10	10	50	50	100
3	DK 493	5	5	10	10	50	50	100
4	LH235 x LH185	5	5	10	10	50	50	100
5	MON 847	5	5	10	10	50	50	100
6	B73Ht x LH82	5	5	10	10	50	50	100
8	NK 603	5	5	10	10	50	50	100
TOTAL		35	35			350	350	700

MON 847 is commercially known as RX 670.

*The test and control articles were assigned to a specific treatment group by the Study Director. The assignment was placed in the study file. Only the Study Director and Feed Mill Manager knew the treatment identification during the in-life phase of the study. Personnel conducting day-to-day management of birds were blinded to the treatment identification.

**Extra birds were started in each pen to compensate for losses incurred due to mortality, starve-outs, etc. during days 0-7. Any extra birds remaining were removed on Day 7. This is a standard practice for research trials when feed conversion and body weights are the primary study data. Mortality due to starve-outs and cull chicks commonly occur in chicken feeding trials.

V. FEED AND WATER

A. Corn - preparation and samples

The corn used in this study was subjected to analysis as directed in Monsanto's Study Nos. 00-01-50-04 and 00-01-39-07. Copies of the analysis results, received from Monsanto, are appended to this report. Assays for pesticides, nutrient composition, including amino acid analysis, were conducted by Covance Laboratory. Mycotoxin assays were conducted by Romer Labs. A copy of their results is appended to this report. The corn samples for analysis were submitted from the bulk grain lot and submitted to the Sponsor from the corn's point of origin. Subsequent sample submission to the labs for analysis was conducted by the Sponsor.

Corn was shipped to Colorado Quality Research, Inc. (CQR) in feed sacks, or other appropriate containers, contained on a pallet. Upon receipt CQR maintained the identity of the different varieties of corn and conducted procedures (SOP FM-2) to assure there was no crossover or cross-contamination among the different varieties. When grinding the corn, the corn was sampled (subsamples from several different sacks, or areas within a container, of each corn variety were collected and composited). The corn was sampled prior to and after grinding. Sample size was approximately 500 g. Samples were stored at CQR until the in-life phase of the study was completed, at which time the samples (before and after grinding samples) were sent to the Sponsor for long term storage.

The corn was ground at the CQR research feed mill using a Skyline Grinder. When possible, the commercial controls were ground first, followed by the control article and the test article last. Corn was ground through an $\sim\frac{3}{4}$ inch screen. The grinder was flushed (either by running commercial corn through the grinder and/or by blowing the grinder out with an air compressor) between each batch of corn that was being ground for this study (SOP FM-7). Each test and control article was labeled and packaged to preserve identity throughout the study. Labeling included Project No. and corn identification.

B. Treatment diets - formulation and preparation and samples

After the nutrient analyses of the corn varieties were completed, Dr. Wayne McWard of Global Poultry Consulting, Inc. formulated the diets based on the assay results of each corn line. The diets were formulated as shown below. Refer to the Experimental Design for the test or control corn assigned to each treatment. The complete printout of the diet formulations can be found in the appendix to this report.

Starter Diet Formulation

[illegible]

Grower/Finisher Diet Formulation

[illegible]

The formulated compositions of the starter and grower/finisher diets were as follows.

Starter Diets (see "Experimental Design" for corn ID associated with each Treatment No.)

Item ^a	Treatment Number						
	1	2	3	4	5	6	8
ME (Mcal/lb)	1399.73	1400.65	1399.86	1400.46	1399.91	1400.19	1400.40
Dig. Arginine %	1.4322	1.4096	1.4382	1.4298	1.3963	1.3979	1.4201
Dig. Lysine %	1.1718	1.1504	1.1906	1.1839	1.1427	1.1461	1.1677
Dig. Methionine %	0.5600	0.5558	0.5632	0.5632	0.5558	0.5546	0.5562
Dig. Met+cystine %	0.8613	0.8618	0.8593	0.8634	0.8602	0.8590	0.8615
Dig. Tryptophan %	0.2387	0.2374	0.2435	0.2419	0.2315	0.2327	0.2390
Dig. Threonine %	0.8018	0.8008	0.8058	0.8068	0.8076	0.7981	0.8005
Crude Protein %	21.98	21.99	21.98	21.98	21.98	21.99	21.99
Moisture %	12.33	12.36	12.28	12.28	12.41	12.39	12.35
Arginine %	1.5106	1.4863	1.5164	1.5075	1.4718	1.4741	1.4977
Lysine %	1.2386	1.2157	1.2579	1.2509	1.2083	1.2117	1.2344
Methionine %	0.5765	0.5732	0.5788	0.5792	0.5719	0.5708	0.5731
Met + Cystine %	0.9355	0.9387	0.9309	0.9365	0.9347	0.9334	0.9372
Tryptophan %	0.2525	0.2516	0.3444	0.2558	0.2449	0.2462	0.2531
Glycine %	0.9345	0.9235	0.9354	0.9309	0.9253	0.9213	0.9332
Threonine %	0.8504	0.8515	0.8494	0.8507	0.8527	0.8419	0.8445
Proline %	1.3192	1.3593	1.2704	1.3021	1.4020	1.3588	1.3410
Crude Fat %	4.9505	5.1125	5.2108	5.2077	5.3105	5.3393	5.4727
Crude Fiber %	2.2296	2.1772	2.2203	2.4456	2.4154	2.2230	2.2658
Ash %	3.9856	4.0484	4.0125	3.9693	3.8722	3.8260	4.1652
Calcium %	0.9515	0.9425	0.9634	0.9508	0.9522	0.9429	0.9524
Phosphorus – Total %	0.7267	0.7326	0.7368	0.6908	0.7339	0.7043	0.7304
Phosphorus – Avail. %	0.4510	0.4466	0.4541	0.4469	0.4534	0.4506	0.4459
Salt %	0.3850	0.3894	0.3864	0.3750	0.3890	0.3802	0.3889
Sodium %	0.2202	0.2191	0.2212	0.2192	0.2209	0.2202	0.2189
Potassium %	0.9595	0.9338	1.0060	0.9678	0.9163	0.9143	0.9627
Manganese ppm	135.68	136.07	136.65	136.77	134.99	135.86	136.24
Zinc ppm	126.52	127.92	129.05	125.37	127.84	126.62	128.11
Copper ppm	16.07	16.34	16.30	16.74	16.20	16.10	16.31
Selenium ppm	0.4664	0.4663	0.4667	0.4667	0.4657	0.4659	0.4661

^a ME = metabolizable energy, cal = calories, Dig. = digestible, Met = methionine

Grower/Finisher Diets (see "Experimental Design" for corn ID associated with each Treatment No.)

Item ^a	Treatment Number						
	1	2	3	4	5	6	8
ME (Mcal/lb)	1424.92	1425.12	1425.45	1425.50	1425.19	1424.09	1424.87
Dig. Arginine %	1.2796	1.2535	1.2867	1.2760	1.2399	1.2411	1.2654
Dig. Lysine %	1.0384	1.0138	1.0594	1.0509	1.0140	1.0135	1.0330
Dig. Methionine %	0.5489	0.5412	0.5561	0.5518	0.5444	0.5433	0.5457
Dig. Met+cystine %	0.8271	0.8243	0.8287	0.8286	0.8260	0.8247	0.8280
Dig. Tryptophan %	0.2112	0.2096	0.2166	0.2145	0.2033	0.2045	0.2114
Dig. Threonine %	0.7225	0.7207	0.7271	0.7275	0.7287	0.7179	0.7205
Crude Protein %	19.95	19.95	19.96	19.94	19.63	19.95	19.95
Moisture %	12.47	12.51	12.43	12.43	12.58	12.53	12.51
Arginine %	1.3499	1.3218	1.3567	1.3455	1.3070	1.3089	1.3347
Lysine %	1.0986	1.0724	1.1202	1.1112	1.0729	1.0723	1.0932
Methionine %	0.5645	0.5577	0.5706	0.5667	0.5595	0.5585	0.5615
Met + Cystine %	0.8962	0.8964	0.8950	0.8966	0.8957	0.8941	0.8988
Tryptophan %	0.2238	0.2225	0.3247	0.2271	0.2153	0.2166	0.2243
Glycine %	0.8453	0.8325	0.8467	0.8408	0.8352	0.8303	0.8433
Threonine %	0.7679	0.7685	0.7671	0.7677	0.7704	0.7581	0.7609
Proline %	1.2324	1.2759	1.1794	1.2132	1.3241	1.2752	1.2559
Crude Fat %	4.9519	5.0926	5.2203	5.2166	5.2888	5.3529	5.4880
Crude Fiber %	2.1452	2.0875	2.1364	2.3823	2.3517	2.1370	2.1850
Ash %	3.6409	3.7075	3.6715	3.6263	3.5162	3.5178	3.8316
Calcium %	0.8698	0.8612	0.8678	0.8693	0.8555	0.8797	0.8702
Phosphorus - Total %	0.6902	0.6975	0.6926	0.6498	0.6895	0.6646	0.6951
Phosphorus - Avail. %	0.4274	0.4235	0.4219	0.4220	0.4211	0.4261	0.4227
Salt %	0.4044	0.4088	0.4058	0.3933	0.4086	0.3991	0.4083
Sodium %	0.2206	0.2195	0.2192	0.2192	0.2188	0.2204	0.2193
Potassium %	0.8695	0.8405	0.9208	0.8780	0.8220	0.8193	0.8724
Manganese ppm	134.12	134.54	135.20	135.31	133.37	134.31	134.73
Zinc ppm	124.97	126.49	127.75	123.70	126.44	125.06	126.70
Copper ppm	15.37	15.66	15.62	16.10	15.51	15.40	15.63
Selenium ppm	0.4633	0.4632	0.4638	0.4637	0.4628	0.4627	0.4631

^a ME = metabolizable energy, cal = calories, Dig. = digestible, Met = methionine

Each treatment diet was assigned a code of 1, 2, 3, 4, 5, 6 or 8. Personnel involved in the day-to-day management of the birds were blinded to the treatment descriptions.

The only sources of dietary protein used in this study were corn and soybean meal and supplemental methionine and lysine. All test diets were formulated to contain approximately equal amounts of the first six dietary essential amino acids (methionine, cystine, lysine, arginine, tryptophan, threonine), calcium, available phosphorus (estimated from NRC values), sodium and chloride. All diets conformed with the industry standards and/or met or exceeded the nutritional recommendations set forth in the publication "Nutritional Requirements of Poultry, 9th revision" by the National Research Council, 1994. Salinomycin was used as a coccidiostat (Sacox-60 premix) at 60 g/ton in the feed to control coccidiosis. The diets did not contain any growth promotants or known contaminants that would interfere with the study objectives.

Treatment diets were mixed at the CQR feed mill according to the formulations provided by Dr. Wayne McWard. A 500 lb and 4000 lb capacity vertical mixer and a California Pellet Mill system were used to prepare the diets. Feed was pelleted through a 5 mm die with live steam addition. For each treatment, 500 lbs of starter and 1000 lbs of grower/finisher feed were mixed (except for T5, only 475 lbs starter and 950 lbs grower/finisher were mixed due to the amount of corn available). The starter was prepared and fed as crumbles and the grower/finisher was prepared and fed as pellets.

After the diets were pelleted, subsamples were collected from the cooler prior to final bagging of the feed (or concurrent with bagging the feed). Subsamples were composited, mixed and samples taken of about 300 g (3 samples) and 50 g (1 sample). The ~50 g sample was sent to Monsanto for line identification. A 300 g sample was sent to Covance for crude protein, moisture and amino acid analysis; one 300 g sample was sent to Dairy One Laboratory for nutrient analysis. The remaining 300 g sample was retained at CQR until the in-life phase of the study was completed, the sample was then sent to Monsanto for long-term storage.

C. Assays

The following is a summary of the assays conducted by specific labs. However, the assay labs may have conducted and reported additional assays if they were included as part of an "assay package". The treatment diets were not assayed for salinomycin.

The treatment diets (after pelleting or crumbling) were assayed as follows. Both the starter and grower/finisher diets were assayed (a total of 16 samples).

- Covance – amino acid profile (including tryptophan), moisture, crude protein
- Dairy One Laboratory – nutrient analysis as follows:

<ul style="list-style-type: none"> • crude protein by kjeldahl • moisture • fat • crude fiber • acid detergent fiber • neutral detergent fiber • ash • calcium • carbohydrates 	<ul style="list-style-type: none"> • phosphorus • potassium • sodium • chloride • magnesium • sulfur • zinc • iron • manganese • copper
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- Treatment diets were assayed by Monsanto for line identification.

All assays of the starter and grower/finisher treatment diets were conducted under CQR Project No. MN-00-3 (Monsanto Study No. 2000-01-39-02).

D. Water

A copy of Colorado Quality Research, Inc. research facility semi-annual water analyses is appended to this final report. The water source was from the Northern Colorado Water Association. A copy of the Northern Colorado Water Association yearly water analysis report is also appended to this report. The water analysis results show that the water was potable and suitable for human consumption.

VI. HOUSING AND MANAGEMENT

A. Housing

Assignment of treatments to pens was conducted using a computer (Excel) random numbers generator. The computer-generated assignment was as follows. See facility diagram in the appendix to this report.

Treatment	Pen Numbers	
	Female	Male
1	5, 24, 41, 51, 76	1, 26, 47, 56, 70
2	14, 25, 38, 63, 73	4, 30, 34, 54, 79
3	13, 23, 35, 60, 80	16, 19, 40, 62, 77
4	15, 18, 43, 53, 72	9, 17, 39, 64, 69
5	3, 22, 46, 52, 65	12, 32, 45, 49, 78
6	6, 20, 44, 57, 74	8, 27, 48, 58, 75
8	10, 29, 33, 59, 66	2, 31, 42, 50, 67

Birds were housed within an environmentally controlled facility in concrete floor pens (~5' x 3') providing ~0.9 ft² per bird. All birds were placed in clean pens containing approximately 4-5" of clean wood shavings. Lighting was via incandescent lights and a commercial lighting program was used as follows.

Bird ~ Age	Hours of Light
0 - 6 days	23
6 - 11 days	10
11 - 19 days	12
19 - 42 days	16

Environmental conditions for the birds (i.e. floor space, temperature, lighting, bird density, feeder and water space) were similar for all experimental groups.

In order to prevent bird migration, each pen was checked to assure no openings greater than 1 inch existed for approximately 14 inches in height between pens. To achieve this a double-mesh poultry wire and/or solid partition was in place for approximately the first ~14 inches from the floor between each pen.

B. Management

Vaccinations:

Birds were vaccinated for Mareks disease at the hatchery. Birds were vaccinated for Newcastle and Infectious Bronchitis, orally via the drinking water, at 7 days of age at the research facility. A record of the vaccination (vaccine type, lot no., expiration date) was maintained with the study records. No other vaccinations or treatments were administered during the study.

Water:

Water was provided *ad libitum* throughout the study via one hanging, ~14-inch diameter automatic bell drinker per pen. Drinkers were checked twice daily and cleaned as needed to assure a clean water supply to birds at all times.

Feed:

Feed was provided *ad libitum* throughout the study via one hanging, ~17-inch diameter tube feeder per pen. A chick feeder tray was also placed in each pen for the first 6 days. All birds were placed on their respective treatment diets upon receipt and diets were fed continuously for 42 days.

All feed added and removed from pens was weighed and recorded. The change from starter to grower/finisher diet was conducted at the same time for all pens. The starter diet was fed from days 1 - 20 and the grower/finisher diet was fed from day 20 to study end (day 42).

Daily observations:

The test facility, pens and birds were observed at least twice daily for general flock condition, lighting, water, feed, ventilation and unanticipated events. There were no abnormal conditions or abnormal behavior observed throughout the study period. The minimum-maximum temperature of the test facility was recorded once daily. Observations and temperatures were recorded on the House Observation Record.

Mortality:

Starting on day 0, any bird that was removed, found dead or was sacrificed was weighed and recorded on the pen mortality record. All mortalities were necropsied to determine the probable cause of death. Probable cause of death and necropsy findings were recorded on the pen mortality record. Over all treatments, the mortality averaged 1.4% for days 7 - 42. The majority of the mortality occurred with the male birds.

Body Weights:

Birds were weighed, by pen, on study day 0 (receipt of chicks) and at study end (day 42). Pens were selected and weighed in successive order within a block.

Weight Gains and Feed Conversion:

Performance data was summarized by average weight per bird on day 0 and 42. The average feed conversion was calculated for days 0 - 42 using the total feed consumption in a pen divided by the total weight of surviving birds. Adjusted feed conversion was calculated using the total feed consumption in a pen divided by the total weight of surviving birds and weight of birds that died or were removed from that pen.

Scales:

All scales used in preparation of feed and weighing of feed, birds and test and control articles were licensed by the State of Colorado. At each use, the scales were checked using standard weights according to CQR Standard Operating Procedures. A copy of the State scale inspection and license is provided in the appendix.

VII. PROCESSING - YIELD DATA AND SAMPLES FOR ANALYSIS

After the final weights were obtained, and after an approximately 12 hour feed withdrawal period, all birds from each pen were processed. The males were processed one day and the females the next day. Refer to SOP B-71 for detailed processing procedures.

1. Processing - yield data included the following (*=bone in, skin on).
 - Live weight (individual)

- Fat pad weight (individual)
- Chill weight (individual)
- Breast meat weight –skinless, boneless (individual)
- Wings* (individual)
- Thighs* (individual)
- Drums* (individual)

2. Processing - samples for analysis.

After the birds were cut up and parts were weighed, two birds from each pen were selected for collection of meat samples. The two birds were selected arbitrarily, i.e., for each pen the birds were sent through the processing line in no particular order and the meat was collected from birds in whatever order was convenient for the procedure.

Samples for analysis and retention were obtained from 2 different birds from each pen. One bird was used for analysis samples and the second bird was used for retention samples. From each bird used for analysis the breast (boneless, skinless) and both thighs (bone in, skinless) were collected. The breast was divided in half and each half placed in separate bags. The thighs were placed in separate bags. Only one thigh and one-half breast were collected if the bird was from the treatment fed the commercial corn. From the bird used for retention samples, the entire breast was placed in one bag and both thighs were placed in another bag. The samples were labeled with the CQR Project No., treatment number, pen number, bird number, sex, date of collection and either thigh or breast meat. The retention samples were kept frozen ($\sim 20^{\circ}\text{C}$) at CQR until the initial samples were received, at which time the retention samples were sent to the Sponsor (Monsanto) for storage.

One-half breast and one thigh (nonfrozen, with wet ice) was sent to the University of Missouri for protein, fat and moisture analysis. One half breast and one thigh (frozen, with ice) was sent to Monsanto Company for DNA analysis. Only the samples from Treatment 5, 6 and 8 birds were collected for Monsanto for DNA analysis (see Protocol Deviation). A total of 70 breast samples and 70 thigh samples were sent to the University of Missouri for protein, fat and moisture analysis. A total of 30 breast and 30 thigh samples were sent to Monsanto Company for DNA analysis. The breast and thigh meat samples submitted to Monsanto for DNA analyses were for a different study. The samples were to be analyzed for plant DNA and protein under the direction of James Jennings, Product Characterization Center, Monsanto, as part of non-GLP studies. The results of the DNA analysis of the meat samples are not part of this study.

VIII. STATISTICAL ANALYSIS

The Sponsor conducted the statistical analyses of the data and their detailed procedures and results are provided in their report, which is included in the appendix to this report. The Sponsor provided the Study Director with the statistical analysis for incorporation into the final report.

Statistical analyses were performed on starting and final live weights, fat pad weight, chill weight, breast weight, wing weight, thigh weight, drum weight, fat pad as a percentage of live weight, percent chill weight (chill weight/live weight), percent breast weight (breast

weight/chill weight), percent wing weight (wing weight/chill weight), percent thigh weight (thigh weight/chill weight), percent drum weight (drum weight/chill weight), feed consumption, feed efficiency, adjusted feed efficiency. Statistical analyses were also performed on moisture, protein, and fat for breast and thigh meat samples. Since the pens were set up as a randomized complete block experimental design with the diet treatments in each of 5 replicated blocks of pens, the standard randomized block analysis of variance (ANOVA) statistical model was used to analyze the data. Means were compared to each other at the 5% level of significance. An additional analysis was done to compare the fit of Roundup Ready® corn to the population of responses from the reference varieties. That is, were the responses obtained from animals in the Roundup Ready® group consistent with the expected variation of responses of animals fed the other corn varieties. This analysis was carried out using a linear mixed model procedure in SAS; comparisons were made at the 5% level of significance.

IX. DISPOSITIONS

Excess Test and Control Article, Duplicate meat samples

An accounting of all corn received and used was documented. Any corn not used to mix the complete feed was disposed of by burial at a local commercial landfill, or was used or discarded as directed by the Sponsor. Retention corn samples were sent to the Sponsor for archival at study end. The retention duplicate meat samples were sent to the Sponsor at study end.

Feed

An accounting was maintained of all treatment diets. The amount mixed, used and discarded was documented. Unused feed was disposed of by placing into a dumpster for commercial transport to a local landfill for burial. Retention feed samples were sent to the Sponsor for archival at study end.

Test Animals

An accounting was maintained of all birds received for the study. All surviving birds were sacrificed at study end for processing data. All mortalities and removed birds and the carcasses and meat from birds processed at study end were disposed of by placing into a dumpster for commercial pick up and transport to a local landfill for burial.

Records and Report

Audited data was sent to the Sponsor for statistical analyses. After the statistician's signed report was received from the Sponsor, a signed final report, including all information required by FDA GLP regulations was prepared by the Study Director and sent to the Sponsor. Any further revision to the report will be documented as Report Amendment(s).

All records on the study are being kept for 5 years at the CQR archives. An exact copy of all records and the report are stored in the CQR archives at 400 East County Road 72, Wellington, Colorado. The original records and report have been sent to the Sponsor. The Sponsor has been provided with an electronic copy of the data.

X. CONDUCT OF STUDY AND TEST MONITORING

This study was conducted in accordance with this protocol, protocol amendments and protocol deviation and CQR Standard Operating Procedures. This study was conducted in compliance with the Food and Drug Administration's "Good Laboratory Practice Regulations for Nonclinical Laboratory Studies" (21CFR, Part 58), and monitored for such compliance by Joelyn Knoll-Brown, Quality Assurance Officer. Specific items that were not conducted under GLP were: nutrient assays at Dairy One Laboratory; Covance assays of treatment diets (amino acids, moisture and protein), semi-annual water analysis; Agland ingredient preparation, Global Poultry Consulting, Inc. diet formulations and yearly scale licensing by the State of Colorado. If this study is reviewed by the FDA, the Study Director will immediately notify the Study Monitor.

XI. PERSONNEL

Key personnel involved in this study were as follows:

Sponsor Monitor	Mary L. Taylor
Test Facility Management	Patrick Weston
Sponsor Representative	Dr. Gary F. Hartnell
CQR Management	Carey L. Quarles, Ph.D.
Study Director	Beverly George, Ph.D.
Research Farm Director	David C. Doerr, M.S.
Research Technician	Becky Alps, B.S.
Research Technician	Charles Ashlock, B.S.
Research Technician	Douglas Rice
Research Technician	Gabriel Yanez
Processing Supervisor	William Adrian, Ph.D.
Quality Assurance Officer	Joelyn Knoll-Brown
Nutritionist	Wayne McWard, Ph.D.
Processing	Brenda Moody
Processing	Joan Ritchie
Processing	Stephen Kerr, DVM
Processing	Dennis Madden, B.S.
Processing	Danny Walker, Ph.D.
Processing	Terry Spraker, DVM
Processing	Gene Schoonveld, M.S.
Processing	Elsa Adrian

XII. RESULTS AND CONCLUSION

Results

Ground corn assay results are presented in Table 1 and 2. No unusual values were reported. The levels of fumonisin reported for the corn in Table 2 were very low (<1 ppm) and considered insignificant. The assay results of the starter and grower/finisher treatment diets are presented in Tables 3 and 4 respectively. The line identifications of the corn grain and treatment diets were confirmed as expected at Monsanto and are archived under study numbers 00-01-50-04, 00-01-39-07 and 2000-01-39-02. The nutrient assay results for the starter and grower/finisher diets met industry standards based on a review conducted by a consultant nutritionist Dr. McWard of Global Poultry Consulting, Inc. (former Director of Nutrition and Research, Continental Grain Company). A few assay values were slightly above or below NRC values, but this was attributed to assay method variability and the different moisture level of the various diets and not to the corn lines specifically.

Individual pen and/or individual bird data for the study are presented in the Appendix Tables. A summary of the statistical analysis of the data is presented in Table 5 of this report.

Expected chick mortality related to starve-outs, dehydration, or generally being unthrifty was observed during the first 7 days of the study. This mortality was randomly distributed among all groups without any relationship to treatment and occurs commonly in chicks in commercial feeding trials. During the remainder of the study, pen sizes were normalized to a maximum of 10 birds/pen. The birds that died from day 7 to study termination were randomly distributed among different groups without any specific relationship to treatment (deaths per treatment group averaged 1.14% and ranged from 0% to 3% across all treatment groups). Most of the apparent causes of death were identified at necropsy and occur commonly in chickens (sudden death syndrome and ascites). The birds in all groups were in good health based on twice daily pen observations. The starting and final body weights of the chicks were normal and the average pen body weights were comparable between groups.

All performance parameters measured were similar ($P>0.05$) among the broilers fed diets NK 603 corn, parental and reference lines of corn. Live weights at day 0 (g/bird or kg/pen), live weights at day 42 (g/bird or kg/pen), total feed intake (kg/bird or kg/pen) and feed efficiency (kg/kg) were similar among all treatment groups. Broilers fed diets containing NK 603 corn had similar adjusted feed efficiency with its parental (B73HT x LH82) and one of the five commercial lines (LH235 x LH185). The other four commercial corn lines had significantly poorer adjusted feed efficiencies (2.3% higher than NK 603) ($P<0.05$).

Carcass measurements of live weight (kg), chill weight (kg or % of live weight), breast meat (% of chill wt.), thighs (kg or % of chill wt.), drums (kg or % of chill wt.), and wings (kg or % of chill wt.) were similar across treatment ($P>0.05$). Expressed on a weight basis or percent chill weight, fat pad weight of the NK 603 fed birds was not different from the RX 826 reference line. However fat pad weight of the NK 603 birds was slightly less ($P<0.05$) than the parental line (34 vs. 37 g; 1.5 vs. 1.7% of chill weight for NK 603 and the parental line, respectively) and four reference lines. Breast meat weight of the birds fed the NK 603 corn was not different between the parental or the five commercial lines. However,

the amount of breast meat from the birds fed the parental line (B73HT x LH82) was significantly less than birds fed diets containing three of the commercial lines.

No differences were observed in the percentage of moisture, protein, and fat in breast meat or in the percentage of protein or fat in thigh meat from birds across treatment diets. Percent moisture content of the thigh meat was similar between the NK 603, the parental line, and three of the reference lines. Birds fed two of the reference lines had breast meat slightly higher (~1.0%) in moisture content (7%) compared to the NK 603 diet ($P < 0.05$). There is no biological basis for the small differences observed.

No main treatment effect differences were observed for wing weight measurements between the diets of NK 603, parental, or reference lines. Only when wing weight was expressed as percent of chill weight was a minor treatment by sex interaction significant. In this case, no differences were observed among the males fed the seven treatment diets. The percent wing weight of the females fed the NK 603 corn (11.9%) was significantly different from diets of lines LH235 x LH185 (11.6%) and MON 847 (11.6%) but similar to diets of the other four reference lines.

Conclusion

All performance parameters measured were similar ($p > 0.05$) across the broilers fed diets of NK 603 corn, parental corn, and reference lines of corn. In addition, broilers fed diets containing NK 603 corn had similar adjusted feed efficiency to the parental (B73HT x LH82) and one of the five commercial lines (LH235 x LH185). The other four commercial corn line diets had slightly poorer adjusted feed efficiencies.


In addition, carcass measurements of live weight, chill weight, breast meat (when expressed as percent of chill weight), thighs, drums, and wings were similar across treatments ($p > 0.05$). Expressed on a weight basis or percent of chill weight, fat pad weights of the NK 603 fed birds were not different from the fat pad weights of birds fed the RX 826 reference line. However, fat pad weights of the birds fed NK 603 diets were slightly less (significance of $p < 0.05$) than the parental line and four reference lines. Breast meat measurements of birds fed the NK 603 corn were not different from the parental or the five commercial lines. However, the amount of breast meat from the birds fed the parental line was significantly less than for birds fed three of the commercial lines.

The results of this study show that there were no biologically relevant differences in parameters tested between birds fed the Roundup Ready® event NK 603 and its parent, B73HT x LH82. In addition, when individual treatment comparisons were made, broilers in general performed and had similar carcass yield and meat composition with diets containing NK 603, the parental control, or five commercial reference lines. Therefore, it was concluded that Roundup Ready® corn line containing the NK 603 event was as wholesome as its corresponding parental line and five commercial lines regarding its ability to support the rapid growth of broiler chickens.

XIII. STUDY DIRECTOR'S COMMENTS/CERTIFICATION STATEMENT

No adverse effects were observed. There were no known circumstances that may have affected the data quality or integrity. There were no unanticipated events observed during the study. The birds in this study performed as expected. All body weight, feed conversion, and yield data were within normal ranges for broilers of this age.

I, Dr. Beverly George, Study Director, attest that Study No. MN-00-3 (Monsanto No. 2000-01-39-02) was conducted according to the Protocol, Protocol Amendments and Protocol Deviation and that the data were collected and recorded in accordance with the applicable Food and Drug Administration, Center for Veterinary Medicine (CVM) Guidelines.


Beverly George, Ph.D.
Study Director

2-1-01
Date

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Graph G5. Summary analysis of breast meat samples – Male & Female combined

Quality Assurance Statement – CQR

Supporting Reports

Test and Control Articles (Corn)

- Receipt & accounting
- Grinding
- Assay reports and sample submission records

Personnel, facility, protocol

- Protocol, Protocol Amendments, SOP Deviation
w/ facility diagram with treatment assignment to pens
- Personnel signature list
w/ documentation of involved personnel
- Applicable SOPs
- Misc. – Notes to File, Correspondence, NRC table, Weather reports

Diets

- Diet code and formulations
- Mixing records, feed accounting summary and disposition
- Assay reports and sample submission records
- Global Poultry Consulting – diet formula printouts

Test Birds

- Receipt, accounting, disposition

Scale Check Records, State Scale License, Water Assay Report

Data

- Body Weights
- Feed Added and Weighed Back
- Mortality/Necropsy
- Daily logs, house observation/temperature
- Processing – yield data
- Processing – assay results of breast & thigh meat samples

Table 1. Pesticide, nutrient and amino acid assays of corn (as-is basis). CQR Project No. MN-00-3 (Monsanto 2000-01-39-02)

CQR Treatment ID	1	2	3	4	5	6	8
Monsanto Corn ID	RX826	RX770	DK 493	LH235 x LH185	MON847	B73HT x LH82	NK603
Covance Lab ID	00105823	00401502	00105818	00600599	00401499	00600602	00600597
Pesticides (ppm)							
Organophosphates	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Organonitrogens	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
Organochlorinated	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200
N-Methylcarbamates	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Nutrients (%)							
Crude protein	7.85	8.45	7.22	7.50	9.11	8.84	8.53
Moisture	12.3	10.30	11.6	9.26	11.5	11.4	10.1
Total fat	2.37	2.80	2.53	2.52	3.50	3.41	3.43
Ash	1.10	1.25	1.06	1.10	1.05	1.03	1.38
Carbohydrates	76.4	77.20	77.6	79.6	74.8	75.3	76.6
Neutral Detergent Fiber (%)	7.94	8.82	9.21	13.00	14.60	10.70	8.97
Acid Detergent Fiber (%)	2.48	3.11	2.34	2.99	4.53	3.00	3.07
Crude Fiber (%)	1.71	1.63	1.67	2.08	2.07	1.73	1.79
Minerals							
Calcium, %	0.0310	0.0441	0.0482	0.0332	0.0403	0.0288	0.0285
Magnesium, %	0.957	1.110	1.080	0.715	1.120	0.851	1.050
Phosphorus, %	2.75	3.04	2.88	1.89	2.97	2.28	3.01
Potassium, %	3.33	3.30	3.88	3.22	3.10	2.93	3.58
Sodium, %	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Sulfur (%)	0.076	0.097	0.069	0.058	0.088	0.073	0.071
Chloride (%)	0.060	0.047	0.056	0.075	0.054	0.058	0.055
Copper, ppm	1.14	1.73	1.31	2.13	1.75	1.49	1.71
Iron, ppm	16.0	31.6	13.8	16.1	51.8	18.9	19.7
Manganese, ppm	4.83	5.80	6.09	6.35	4.54	5.81	6.15
Zinc, ppm	16.2	18.9	20.3	13.7	19.3	17.0	19.3

Table 1. Pesticide, nutrient and amino acid assays of corn (as-is basis). CQR Project No. MN-00-3 (Monsanto 2000-01-39-02)

CQR Treatment ID	1	2	3	4	5	6	8
Monsanto Corn ID	RX826	RX770	DK 493	LH235 x LH185	MON847	B73HT x LH82	NK603
Covance Lab ID	00105823	00401502	00105818	00600599	00401499	00600602	00600597
Amino Acids (mg/g)							
Aspartic Acid	5.30	5.41	5.08	5.20	6.67	5.97	5.86
Threonine	2.72	3.05	2.54	2.66	3.36	3.05	2.96
Serine	3.67	4.15	3.43	3.49	4.53	4.25	4.07
Glutamic Acid	14.5	16.30	13.00	13.80	19.1	17.00	16.20
Proline	7.50	8.56	6.38	7.18	9.52	8.65	8.28
Glycine	3.20	3.24	2.95	2.97	3.59	3.39	3.46
Alanine	5.92	6.51	5.27	5.61	7.43	6.99	6.63
Cystine	1.77	1.98	1.51	1.72	2.01	1.97	1.97
Valine	4.09	4.32	3.63	3.91	4.83	4.44	4.34
Methionine	1.61	2.00	1.30	1.54	1.70	1.73	1.83
Isoleucine	2.82	3.11	2.53	2.77	3.56	3.28	3.22
Leucine	9.72	11.40	8.49	9.11	12.90	11.20	10.80
Tyrosine	2.59	3.09	2.48	2.58	3.46	3.04	2.88
Phenylalanine	3.74	4.25	3.42	3.70	4.93	4.47	4.32
Histidine	2.56	2.73	2.13	2.35	2.94	2.52	2.52
Lysine	2.58	2.49	2.49	2.47	2.90	2.75	2.89
Arginine	3.91	3.86	3.51	3.49	4.21	4.01	4.14
Tryptophan	0.506	0.559	0.509	0.498	0.554	0.529	0.597

mg/g = mg per g of corn

Table 2. Mycotoxin assays of corn (as-is basis). CQR Project No. MN-00-3 (Monsanto 2000-01-39-02)

CQR Treatment ID Monsanto Corn ID		1 RX826	2 RX770	3 DK 493	4 LH235 x LH185	5 MON847	6 B73HT x LH82	8 NK603
Assayed by Romer Labs	Detection Limit & Units							
Aflatoxin B1	1.0 ppb	ND	ND	ND	ND	ND	ND	ND
Aflatoxin B2	1.0 ppb	ND	ND	ND	ND	ND	ND	ND
Aflatoxin G1	1.0 ppb	ND	ND	ND	ND	ND	ND	ND
Aflatoxin G2	1.0 ppb	ND	ND	ND	ND	ND	ND	ND
Ochratoxin A	5 ppb	ND	ND	ND	ND	ND	ND	ND
Citrinin	0.2 ppm	ND	ND	ND	ND	ND	ND	ND
T-2 Toxin	0.1 ppm	ND	ND	ND	ND	ND	ND	ND
HT-2 Toxin	0.1 ppm	ND	ND	ND	ND	ND	ND	ND
Diacetoxyscirpenol	0.3 ppm	ND	ND	ND	ND	ND	ND	ND
Neosolaniol	0.5 ppm	ND	ND	ND	ND	ND	ND	ND
Fusarenon X	0.5 ppm	ND	ND	ND	ND	ND	ND	ND
Deoxynivaenol	0.1 ppm	ND	ND	ND	ND	ND	ND	ND
15 Acetyl-DON	0.1 ppm	ND	ND	ND	ND	ND	ND	ND
3 Acetyl-DON	0.1 ppm	ND	ND	ND	ND	ND	ND	ND
Nivalenol	0.5 ppm	ND	ND	ND	ND	ND	ND	ND
Zearalenone	100 ppb	ND	ND	ND	ND	ND	ND	ND
Fumonisin B1	0.1 ppm	0.30	0.60	0.20	ND	1.50	0.10	0.10
Fumonisin B2	0.1 ppm	ND	0.20	ND	ND	0.50	ND	ND
Fumonisin B3	0.1 ppm	ND	ND	ND	ND	ND	ND	ND

ND = none detected

Table 3. Nutrient composition of the starter diets (as-is basis). CQR Project No. MN-00-3 (Monsanto 2000-01-39-02)

CQR Treatment ID Monsanto Corn ID	1 RX826	2 RX770	3 DK 493	4 LH235 x LH185	5 MON847	6 B73HT x LH82	8 NK603
Moisture, %	10.0	10.4	10.2	9.5	10.1	9.8	9.8
Crude protein, %	21.7	21.1	21.9	20.8	20.7	21.5	21.4
Crude fat, %	5.7	6.0	5.8	6.2	5.8	6.4	6.3
Ash, %	5.90	5.76	5.73	5.56	6.10	5.90	5.66
Acid detergent fiber, %	3.9	3.7	3.2	6.6	3.3	2.9	3.1
Neutral detergent fiber, %	9.1	10.6	9.6	10.1	8.2	7.9	9.0
Crude fiber, %	2.3	2.3	2.1	2.3	2.4	2.4	2.2
Carbohydrates (starch), %	37.6	39.2	36.2	39.7	37.7	38.9	38.4
Calculated TDN, %	75	75	75	76	76	77	77
Calculated ME, (Mcal/lb)	1399.73	1400.65	1399.86	1400.46	1399.91	1400.19	1400.40
Calcium, %	0.85	0.85	0.90	0.98	1.02	0.98	0.90
Phosphorus, %	0.79	0.75	0.79	0.82	0.86	0.84	0.78
Magnesium, %	0.19	0.19	0.20	0.19	0.19	0.19	0.18
Potassium, %	1.20	1.17	1.14	1.26	1.21	1.24	1.15
Sodium, %	0.244	0.254	0.249	0.271	0.271	0.276	0.261
Sulfur, %	0.24	0.26	0.25	0.24	0.25	0.25	0.25
Chloride, %	0.22	0.22	0.24	0.24	0.27	0.24	0.24
Iron, ppm	304	305	317	328	371	347	291
Zinc, ppm	110	116	122	113	111	114	108
Copper, ppm	17	16	21	16	19	18	16
Manganese, ppm	129	134	139	142	135	140	132
Aspartic Acid, %	2.300	2.040	2.170	2.100	2.170	2.190	2.320
Threonine, %	0.771	0.700	0.727	0.707	0.737	0.744	0.786
Serine, %	1.010	0.892	0.935	0.906	0.951	0.959	0.998
Glutamic Acid, %	3.970	3.620	3.710	3.670	3.930	3.970	4.070
Proline, %	1.340	1.220	1.230	1.240	1.330	1.370	1.360
Glycine, %	0.925	0.827	0.862	0.837	0.859	0.870	0.951
Alanine, %	1.090	1.010	1.020	1.030	1.110	1.120	1.140
Cystine, %	0.324	0.327	0.360	0.301	0.379	0.351	0.360
Valine, %	1.140	1.030	1.060	1.050	1.090	1.090	1.160
Methionine, %	0.524	0.541	0.622	0.482	0.580	0.569	0.578
Isoleucine, %	1.000	0.903	0.933	0.918	0.956	0.975	1.010
Leucine, %	1.880	1.770	1.750	1.760	1.940	1.970	1.940
Tyrosine, %	0.514	0.452	0.542	0.651	0.674	0.485	0.518
Phenylalanine, %	1.070	0.981	1.000	0.998	1.050	1.070	1.090
Histidine, %	0.606	0.560	0.551	0.557	0.592	0.578	0.595
Lysine, %	1.380	1.220	1.220	1.220	1.240	1.190	1.340
Arginine, %	1.320	1.190	1.250	1.280	1.330	1.270	1.350
Tryptophan, %	0.211	0.201	0.211	0.198	0.190	0.204	0.212

Table 4. Nutrient composition of the grower/finisher treatment diets (as-is basis). CQR Project No. MN-00-3

(Monsanto No. 2000-01-39-02)

CQR Treatment ID Monsanto Corn ID	1 RX826	2 RX770	3 DK 493	4 LH235 x LH185	5 MON847	6 B73HT x LH82	8 NK603
Moisture, %	11.0	10.5	11.1	9.8	10.3	10.0	10.7
Crude protein, %	19.6	19.6	19.9	19.5	19.7	20.0	20.5
Crude fat, %	5.9	5.9	6.5	5.8	5.5	5.5	6.0
Ash, %	5.53	5.35	5.21	5.14	5.14	5.20	5.53
Acid detergent fiber, %	4.4	4.0	4.7	3.6	4.7	4.5	3.0
Neutral detergent fiber, %	8.5	8.8	7.4	8.8	9.5	7.6	8.3
Crude fiber, %	2.1	2.1	2.2	2.3	2.0	1.9	2.1
Carbohydrates (starch), %	40.7	41.6	39.9	41.6	41.2	41.4	39.0
Calculated TDN, %	75	76	77	77	75	76	76
Calculated ME, (Mcal/lb)	1424.92	1425.12	1425.45	1425.50	1425.19	1424.09	1424.87
Calcium, %	0.79	0.80	0.76	0.76	0.77	0.76	0.82
Phosphorus, %	0.74	0.77	0.72	0.70	0.75	0.71	0.74
Magnesium, %	0.19	0.19	0.20	0.18	0.20	0.18	0.18
Potassium, %	1.10	1.07	1.11	1.02	1.02	1.05	1.11
Sodium, %	0.242	0.259	0.256	0.257	0.246	0.243	0.274
Sulfur, %	0.23	0.24	0.23	0.22	0.23	0.23	0.23
Chloride, %	0.25	0.24	0.23	0.26	0.19	0.25	0.28
Iron, ppm	297	298	284	306	341	296	295
Zinc, ppm	115	111	109	112	108	103	109
Copper, ppm	16	18	15	19	16	17	16
Manganese, ppm	127	132	130	127	126	126	132
Aspartic Acid, %	2.000	1.920	1.980	1.990	1.850	1.910	2.070
Threonine, %	0.687	0.673	0.671	0.682	0.657	0.658	0.697
Serine, %	0.886	0.882	0.867	0.874	0.855	0.865	0.911
Glutamic Acid, %	3.520	3.480	3.400	3.520	3.500	3.500	3.680
Proline, %	1.180	1.240	1.140	1.200	1.260	1.210	1.260
Glycine, %	0.819	0.793	0.811	0.836	0.763	0.793	0.841
Alanine, %	1.010	1.010	0.960	1.000	1.020	1.020	1.040
Cystine, %	0.344	0.343	0.337	0.345	0.338	0.324	0.349
Valine, %	1.010	0.986	0.977	1.010	0.965	0.977	1.020
Methionine, %	0.540	0.541	0.599	0.600	0.514	0.526	0.534
Isoleucine, %	0.865	0.842	0.845	0.880	0.835	0.842	0.894
Leucine, %	1.710	1.720	1.620	1.710	1.800	1.750	1.790
Tyrosine, %	0.478	0.581	0.601	0.489	0.425	0.613	0.628
Phenylalanine, %	0.944	0.920	0.926	0.953	0.927	0.930	0.978
Histidine, %	0.538	0.530	0.513	0.531	0.515	0.510	0.527
Lysine, %	1.150	1.090	1.160	1.160	1.000	1.030	1.170
Arginine, %	1.170	1.150	1.160	1.120	0.997	1.140	1.170
Tryptophan, %	0.195	0.193	0.181	0.199	0.180	0.174	0.186

Table 5. Performance of broilers, carcass yield and protein and fat composition of breast and thighs (mean values of males and females).
Comparison of transgenic corn line NK603 with six reference lines.

Project No. MN-00-3 (Monsanto Study No. 2000-01-39-02)

CQR Treatment ID	8	6	1	4	3	5	2	reatment	Sex	Block	T x S	LSD ²
Monsanto Corn ID	NK603	B73HT x LH82	RX826	LH235 x LH185	DK493	MON847	RX770	(T) SSD ¹	(S) SSD	SSD	SSD	5.0%
Performance												
Live weight (g/bird) day 0	38.183	38.417	38.500	38.100	38.383	38.333	38.250	NS	NS	*	NS	0.7970
Live weight (kg/pen) day 0	0.46	0.46	0.46	0.46	0.46	0.46	0.46	NS	NS	*	NS	0.009
Live weight (kg/bird) day 42	2.301	2.310	2.337	2.346	2.327	2.318	2.253	NS	**	*	NS	0.0688
Live weight (kg/pen) day 42	22.770	22.850	23.370	22.720	22.760	22.480	22.530	NS	**	NS	NS	1.1087
Feed intake (kg/bird)	3.547	3.586	3.694	3.706	3.689	3.667	3.543	NS	**	*	NS	0.1318
Feed intake (kg/pen)	35.090	35.470	36.940	35.870	36.040	35.570	35.430	NS	**	**	NS	1.4846
Feed efficiency (kg/kg)	1.543	1.555	1.585	1.581	1.587	1.587	1.574	NS	**	NS	NS	0.0320
Adjusted Feed Efficiency (kg/kg)	1.528 ^c	1.546 ^{bc}	1.573 ^a	1.549 ^{bc}	1.556 ^{ab}	1.563 ^{ab}	1.563 ^{ab}	*	**	*	NS	0.0240
Carcass Yield												
Live weight (kg)	2.246	2.225	2.299	2.287	2.263	2.254	2.195	NS	**	*	NS	0.0658
Chill weight (kg)	1.592	1.580	1.637	1.622	1.605	1.598	1.556	NS	**	*	NS	0.0515
Chill weight (% of live weight)	70.90	71.00	71.20	70.90	70.90	70.90	70.80	NS	*	*	NS	0.4600
Fat pad weight (kg)	0.034 ^b	0.037 ^a	0.036 ^{ab}	0.039 ^a	0.039 ^a	0.037 ^a	0.037 ^a	*	**	NS	NS	0.0028
Fat pad weight (% of live weight)	1.5 ^c	1.7 ^{ab}	1.6 ^{bc}	1.7 ^a	1.7 ^a	1.7 ^{ab}	1.7 ^{ab}	**	**	NS	NS	0.1100
Breast meat weight (kg)	0.407 ^{abcd}	0.394 ^d	0.423 ^a	0.415 ^{ab}	0.413 ^{abc}	0.404 ^{bcd}	0.394 ^{cd}	*	**	NS	NS	0.0183
Breast meat weight (% of chill wt.)	25.50	24.90	25.80	25.60	25.70	25.30	25.30	NS	**	NS	NS	0.5400
Thighs weight (kg)	0.279	0.275	0.282	0.277	0.274	0.276	0.268	NS	**	*	NS	0.0101
Thighs weight (% of chill wt.)	17.50	17.40	17.20	17.10	17.10	17.30	17.20	NS	**	NS	NS	0.2900
Drums weight (kg)	0.227	0.224	0.231	0.227	0.225	0.227	0.223	NS	**	**	NS	0.0074
Drums weight (% of chill wt.)	14.30	14.20	14.10	14.00	14.00	14.20	14.30	NS	**	**	NS	0.2500
Wings weight (kg)	0.186	0.185	0.191	0.188	0.187	0.185	0.182	NS	**	*	NS	0.0055
Wing weight (% of chill wt.)	11.70	11.80	11.70	11.60	11.70	11.60	11.70	NS	**	*	*	0.1400
Breast Meat Analysis												
Moisture (%)	74.741	74.879	74.716	74.726	74.774	74.993	74.439	NS	**	NS	NS	0.4669
Protein (% as is basis)	24.111	23.712	24.235	24.346	24.157	24.008	24.019	NS	*	NS	NS	0.5355
Fat (% as is basis)	0.867	0.931	0.810	1.035	0.809	1.036	0.798	NS	NS	NS	NS	0.1987
Thigh Meat Analysis												
Moisture (%)	75.894 ^{bc}	75.752 ^c	76.360 ^{ab}	76.606 ^a	76.293 ^{ab}	76.804 ^a	76.039 ^{bc}	**	NS	NS	NS	0.5203
Protein (% as is basis)	21.061	20.502	21.161	21.133	21.025	20.659	21.339	NS	NS	NS	NS	0.5538
Fat (% as is basis)	2.455	2.311	1.966	1.847	2.139	1.833	2.153	NS	NS	NS	NS	0.5661

¹ SSD, statistical significance of differences: NS, not significant; *, P<0.05; **, P<0.01; Individual treatment means with the same superscript letter in the same row are not statistically different (P>0.05).

² LSD, least significant difference between two means (P<0.05)

Appendix Table 1. Day 0 body weights (7/12/00) Project No. MN-00-3 (Monsanto #2000-01-39-02)

Treatment	Sex	Pen	No. Birds Weighed	Total Weight (g)	Average Weight (g)	Treatment	Sex	Pen	No. Birds Weighed	Total Weight (g)	Average Weight (g)
1	F	5	12	474	40	5	F	3	12	460	38
1	F	24	12	458	38	5	F	22	12	478	40
1	F	41	12	452	38	5	F	46	12	464	39
1	F	51	12	472	39	5	F	52	12	454	38
1	F	76	12	454	38	5	F	65	12	454	38
1	M	1	12	474	40	5	M	12	12	450	38
1	M	26	12	458	38	5	M	32	12	468	39
1	M	47	12	474	40	5	M	45	12	456	38
1	M	56	12	458	38	5	M	49	12	460	38
1	M	70	12	446	37	5	M	78	12	456	38
Total & Average			120	462	39	Total & Average			120	460	38
2	F	14	12	466	39	6	F	6	12	484	40
2	F	25	12	450	38	6	F	20	12	450	38
2	F	38	12	454	38	6	F	44	12	442	37
2	F	63	12	466	39	6	F	57	12	448	37
2	F	73	12	468	39	6	F	74	12	460	38
2	M	4	12	460	38	6	M	8	12	474	40
2	M	30	12	470	39	6	M	27	12	482	40
2	M	34	12	442	37	6	M	48	12	456	38
2	M	54	12	454	38	6	M	58	12	456	38
2	M	79	12	460	38	6	M	75	12	458	38
Total & Average			120	459	38	Total & Average			120	461	38
3	F	13	12	456	38	8	F	10	12	454	38
3	F	23	12	486	41	8	F	29	12	440	37
3	F	35	12	452	38	8	F	33	12	472	39
3	F	60	12	450	38	8	F	59	12	470	39
3	F	80	12	442	37	8	F	66	12	450	38
3	M	16	12	472	39	8	M	2	12	464	39
3	M	19	12	474	40	8	M	31	12	462	39
3	M	40	12	454	38	8	M	42	12	464	39
3	M	62	12	464	39	8	M	50	12	468	39
3	M	77	12	456	38	8	M	67	12	438	37
Total & Average			120	461	38	Total & Average			120	458	38
4	F	15	12	462	39						
4	F	18	12	456	38						
4	F	43	12	460	38						
4	F	53	12	452	38						
4	F	72	12	440	37						
4	M	9	12	444	37						
4	M	17	12	480	40						
4	M	39	12	456	38						
4	M	64	12	460	38						
4	M	69	12	462	39						
Total & Average			120	457	38						

Appendix Table 2. Performance data at 42 days of age (8/23/00) Project No. MN-00-3 (Monsanto #2000-01-39-02)

Treatment	Sex	Pen	Number of Birds				Pen Net Wt. (kg)	Ave. Wt. (kg)	R/M Wt. (kg) ^b	Total Wt. (kg)	Kg Feed Consumption	Feed Conversion ^c	Adjusted Feed Conversion ^c
			Started	Mortality	Removed ^a	Weighed							
1	F	5	12	0	2	10	21.6	2.160	0.130	21.730	35.5	1.644	1.634
1	F	24	12	0	2	10	22.2	2.220	0.150	22.350	35.5	1.599	1.588
1	F	41	12	0	2	10	20.4	2.040	0.114	20.514	33.0	1.618	1.609
1	F	51	12	0	2	10	20.7	2.070	0.130	20.830	33.8	1.633	1.623
1	F	76	12	0	2	10	21.9	2.190	0.200	22.100	36.0	1.644	1.629
Female Total & Average			60	0	10	50		2.136				1.627	1.616
1	M	1	12	0	2	10	26.0	2.600	0.190	26.190	40.1	1.542	1.531
1	M	26	12	0	2	10	25.3	2.530	0.180	25.480	38.7	1.530	1.519
1	M	47	12	0	2	10	24.4	2.440	0.210	24.610	38.2	1.566	1.552
1	M	56	12	0	2	10	25.0	2.500	0.210	25.210	38.6	1.544	1.531
1	M	70	12	0	2	10	26.2	2.620	0.190	26.390	40.0	1.527	1.516
Male Total & Average			60	0	10	50		2.538				1.542	1.530
Treatment Total & Average			120	0	20	100		2.337				1.585	1.573

2	F	14	12	0	2	10	20.2	2.020	0.102	20.302	32.0	1.584	1.576
2	F	25	12	0	2	10	20.1	2.010	0.104	20.204	32.0	1.592	1.584
2	F	38	12	0	2	10	19.7	1.970	0.072	19.772	30.4	1.543	1.538
2	F	63	12	0	2	10	21.8	2.180	0.190	21.990	36.3	1.665	1.651
2	F	73	12	0	2	10	22.1	2.210	0.190	22.290	35.4	1.602	1.588
Female Total & Average			60	0	10	50		2.078				1.597	1.587
2	M	4	12	0	2	10	23.0	2.300	0.240	23.240	36.9	1.604	1.588
2	M	30	12	0	2	10	23.4	2.340	0.058	23.458	35.6	1.521	1.518
2	M	34	12	0	2	10	25.6	2.560	0.170	25.770	39.4	1.539	1.529
2	M	54	12	0	2	10	24.8	2.480	0.200	25.000	38.2	1.540	1.528
2	M	79	12	0	2	10	24.6	2.460	0.230	24.830	38.1	1.549	1.534
Male Total & Average			60	0	10	50		2.428				1.551	1.539
Treatment Total & Average			120	0	20	100		2.253				1.574	1.563

Appendix Table 2. Performance data at 42 days of age (8/23/00) Project No. MN-00-3 (Monsanto #2000-01-39-02)

Treatment	Sex	Pen	Number of Birds				Pen Net Wt. (kg)	Ave. Wt. (kg)	R/M Wt. (kg) ^b	Total Wt. (kg)	Kg Feed Consumption	Feed Conversion ^c	Adjusted Feed Conversion ^c
			Started	Mortality	Removed ^a	Weighed							
3	F	13	12	0	2	10	22.2	2.220	0.190	22.390	36.1	1.626	1.612
3	F	23	12	0	2	10	20.6	2.060	0.080	20.680	33.3	1.617	1.610
3	F	35	12	0	2	10	22.4	2.240	0.120	22.520	35.5	1.585	1.576
3	F	60	12	0	2	10	20.7	2.070	0.190	20.890	33.1	1.599	1.584
3	F	80	12	0	2	10	22.4	2.240	0.082	22.482	36.3	1.621	1.615
Female Total & Average			60	0	10	50		2.166				1.609	1.600
3	M	16	12	0	2	10	24.5	2.450	0.150	24.650	37.5	1.531	1.521
3	M	19	12	0	2	10	25.5	2.550	0.180	25.680	39.5	1.549	1.538
3	M	40	12	2	2	8	20.2	2.525	2.890	23.090	33.9	1.678	1.468
3	M	62	12	0	2	10	24.7	2.470	0.220	24.920	36.9	1.494	1.481
3	M	77	12	0	2	10	24.4	2.440	0.190	24.590	38.3	1.570	1.558
Male Total & Average			60	2	10	48		2.487				1.564	1.513
Treatment Total & Average			120	2	20	98		2.327				1.587	1.556

4	F	15	12	0	2	10	22.3	2.230	0.130	22.430	35.9	1.610	1.601
4	F	18	12	0	2	10	20.9	2.090	0.104	21.004	33.3	1.593	1.585
4	F	43	12	0	2	10	21.8	2.180	0.192	21.992	34.7	1.592	1.578
4	F	53	12	0	2	10	21.8	2.180	0.118	21.918	34.9	1.601	1.592
4	F	72	12	0	2	10	21.4	2.140	0.120	21.520	34.1	1.593	1.585
Female Total & Average			60	0	10	50		2.164				1.598	1.588
4	M	9	12	1	2	9	23.7	2.633	1.430	25.130	38.9	1.641	1.548
4	M	17	12	1	2	9	21.0	2.333	0.500	21.500	32.4	1.543	1.507
4	M	39	12	0	2	10	25.5	2.550	0.170	25.670	38.6	1.514	1.504
4	M	64	12	1	2	9	22.3	2.478	1.910	24.210	36.2	1.623	1.495
4	M	69	12	0	2	10	26.5	2.650	0.062	26.562	39.7	1.498	1.495
Male Total & Average			60	3	10	47		2.529				1.564	1.510
Treatment Total & Average			120	3	20	97		2.346				1.581	1.549

Appendix Table 2. Performance data at 42 days of age (8/23/00) Project No. MN-00-3 (Monsanto #2000-01-39-02)

Treatment	Sex	Pen	Number of Birds				Pen Net Wt. (kg)	Ave. Wt. (kg)	R/M Wt. (kg) ^b	Total Wt. (kg)	Kg Feed Consumption	Feed Conversion ^c	Adjusted Feed Conversion ^c
			Started	Mortality	Removed ^a	Weighed							
5	F	3	12	0	2	10	21.0	2.100	0.180	21.180	34.2	1.629	1.615
5	F	22	12	0	2	10	21.5	2.150	0.100	21.600	34.3	1.595	1.588
5	F	46	12	0	2	10	21.4	2.140	0.120	21.520	35.1	1.640	1.631
5	F	52	12	1	2	9	18.2	2.022	1.500	19.700	30.6	1.681	1.553
5	F	65	12	0	2	10	21.9	2.190	0.230	22.130	36.2	1.653	1.636
Female Total & Average			60	1	10	49		2.120				1.640	1.605
5	M	12	12	0	2	10	25.5	2.550	0.190	25.690	38.8	1.522	1.510
5	M	32	12	0	3	9	22.3	2.478	0.270	22.570	34.4	1.543	1.524
5	M	45	12	0	2	10	25.7	2.570	0.130	25.830	38.8	1.510	1.502
5	M	49	12	0	2	10	25.2	2.520	0.130	25.330	38.9	1.544	1.536
5	M	78	12	1	2	9	22.1	2.456	0.250	22.350	34.4	1.557	1.539
Male Total & Average			60	1	11	48		2.515				1.535	1.522
Treatment Total & Average			120	2	21	97		2.318				1.587	1.563

6	F	6	12	0	2	10	20.2	2.020	0.072	20.272	32.8	1.624	1.618
6	F	20	12	0	2	10	21.8	2.180	0.170	21.970	33.2	1.523	1.511
6	F	44	12	0	2	10	21.0	2.100	0.146	21.146	33.3	1.586	1.575
6	F	57	12	0	2	10	22.1	2.210	0.150	22.250	35.9	1.624	1.613
6	F	74	12	0	2	10	22.3	2.230	0.210	22.510	35.5	1.592	1.577
Female Total & Average			60	0	10	50		2.148				1.590	1.579
6	M	8	12	0	2	10	24.6	2.460	0.170	24.770	37.6	1.528	1.518
6	M	27	12	0	2	10	23.6	2.360	0.140	23.740	35.6	1.508	1.500
6	M	48*	12	0	2	9	22.2	2.467	0.066	22.266	34.8	1.568	1.563
6	M	58	12	0	2	10	25.1	2.510	0.082	25.182	37.8	1.506	1.501
6	M	75	12	0	2	10	25.6	2.560	0.210	25.810	38.2	1.492	1.480
Male Total & Average			60	0	10	49		2.471				1.521	1.512
Treatment Total & Average			120	0	20	99		2.310				1.555	1.546

Appendix Table 2. Performance data at 42 days of age (8/23/00) Project No. MN-00-3 (Monsanto #2000-01-39-02)

Treatment	Sex	Pen	Number of Birds				Pen Net Wt. (kg)	Ave. Wt. (kg)	R/M Wt. (kg) ^b	Total Wt. (kg)	Kg Feed Consumption	Feed Conversion ^c	Adjusted Feed Conversion ^c
			Started	Mortality	Removed ^a	Weighed							
8	F	10	12	0	2	10	20.8	2.080	0.070	20.870	32.8	1.577	1.572
8	F	29	12	0	2	10	21.0	2.100	0.102	21.102	33.3	1.586	1.578
8	F	33	12	0	2	10	21.7	2.170	0.180	21.880	33.4	1.539	1.527
8	F	59	12	0	2	10	20.8	2.080	0.200	21.000	33.3	1.601	1.586
8	F	66	12	0	2	10	22.0	2.200	0.150	22.150	34.0	1.545	1.535
Female Total & Average			60	0	10	50		2.126				1.570	1.559
8	M	2	12	0	2	10	25.0	2.500	0.112	25.112	38.1	1.524	1.517
8	M	31	12	1	2	9	22.0	2.444	0.930	22.930	33.9	1.541	1.478
8	M	42	12	0	2	10	25.7	2.570	0.180	25.880	38.4	1.494	1.484
8	M	50	12	0	2	10	24.1	2.410	0.150	24.250	36.0	1.494	1.485
8	M	67	12	0	2	10	24.6	2.460	0.170	24.770	37.7	1.533	1.522
Male Total & Average			60	1	10	49		2.477				1.517	1.497
Treatment Total & Average			120	1	20	99		2.301				1.543	1.528

^a includes mortality/removals from days 0-7 (i.e. birds were recounted at day 7 to 10/pen and extras were removed)

^b R/M - removed birds and mortalities

^c Feed conversion = feed intake/pen bird weight. The weight of mortalities and removed birds are added to the pen bird weight to calculate adjusted feed conversion

*At study end Pen 48 was one bird short. Possibly a bird died and the carcass was lost in the litter. The number weighed is considered correct.

Appendix Table 3. Summary of mortality and probable cause of death from 7-42 days of age.
Project No. MN-00-3 (Monsanto #2000-01-39-02)

Treatment	Sex	Pen Number	Number Started ^a	Total Mortality	Percent Mortality	Probable cause of death
1	F	5	10	0	0.0%	
1	F	24	10	0	0.0%	
1	F	41	10	0	0.0%	
1	F	51	10	0	0.0%	
1	F	76	10	0	0.0%	
1	M	1	10	0	0.0%	
1	M	26	10	0	0.0%	
1	M	47	10	0	0.0%	
1	M	56	10	0	0.0%	
1	M	70	10	0	0.0%	
Total & Average			100	0	0.0%	
2	F	14	10	0	0.0%	
2	F	25	10	0	0.0%	
2	F	38	10	0	0.0%	
2	F	63	10	0	0.0%	
2	F	73	10	0	0.0%	
2	M	4	10	0	0.0%	
2	M	30	10	0	0.0%	
2	M	34	10	0	0.0%	
2	M	54	10	0	0.0%	
2	M	79	10	0	0.0%	
Total & Average			100	0	0.0%	
3	F	13	10	0	0.0%	
3	F	23	10	0	0.0%	
3	F	35	10	0	0.0%	
3	F	60	10	0	0.0%	
3	F	80	10	0	0.0%	
3	M	16	10	0	0.0%	
3	M	19	10	0	0.0%	
3	M	40	10	2	20.0%	2 Sudden death syndrome (SDS)
3	M	62	10	0	0.0%	
3	M	77	10	0	0.0%	
Total & Average			100	2	2.0%	
4	F	15	10	0	0.0%	
4	F	18	10	0	0.0%	
4	F	43	10	0	0.0%	
4	F	53	10	0	0.0%	
4	F	72	10	0	0.0%	
4	M	9	10	1	10.0%	1 Ascites (ACT)
4	M	17	10	1	10.0%	1 Sudden death syndrome (SDS)
4	M	39	10	0	0.0%	
4	M	64	10	1	10.0%	1 Sudden death syndrome (SDS)
4	M	69	10	0	0.0%	
Total & Average			100	3	3.0%	

Appendix Table 3. Summary of mortality and probable cause of death from 7-42 days of age.
Project No. MN-00-3 (Monsanto #2000-01-39-02)

Treatment	Sex	Pen Number	Number Started ^a	Total Mortality	Percent Mortality	Probable cause of death
5	F	3	10	0	0.0%	
5	F	22	10	0	0.0%	
5	F	46	10	0	0.0%	
5	F	52	10	1	10.0%	1 Sudden death syndrome (SDS)
5	F	65	10	0	0.0%	
5	M	12	10	0	0.0%	
5	M	32	10	0	0.0%	
5	M	45	10	0	0.0%	
5	M	49	10	0	0.0%	
5	M	78	10	1	10.0%	1 Unknown (decomposed)
Total & Average			100	2	2.0%	
6	F	6	10	0	0.0%	
6	F	20	10	0	0.0%	
6	F	44	10	0	0.0%	
6	F	57	10	0	0.0%	
6	F	74	10	0	0.0%	
6	M	8	10	0	0.0%	
6	M	27	10	0	0.0%	
6	M	48	10	0	0.0%	
6	M	58	10	0	0.0%	
6	M	75	10	0	0.0%	
Total & Average			100	0	0.0%	
8	F	10	10	0	0.0%	
8	F	29	10	0	0.0%	
8	F	33	10	0	0.0%	
8	F	59	10	0	0.0%	
8	F	66	10	0	0.0%	
8	M	2	10	0	0.0%	
8	M	31	10	1	10.0%	1 Sudden death syndrome (SDS)
8	M	42	10	0	0.0%	
8	M	50	10	0	0.0%	
8	M	67	10	0	0.0%	
Total & Average			100	1	1.0%	

^aTwelve (12) birds were started per pen and then reduced to 10/pen on Day 7. The percent mortality is based on mortality data from days 7-42 therefore only 10 birds/pen is indicated here.

Appendix Table 4. Feed added, and weighed back, by pen. Project No. MN-00-3 (Monsanto #2000-01-39-02)

2000 Date	Treatment	Sex	Pen	Kg Feed							Grower/Finisher Consump.	Total Consump.
				7/11 ^a Feed 1	8/1 WB (Day 20)	Starter Consump.	8/1 Feed 2	8/11 Feed 3	8/17 Feed 4	8/23 WB (Day 42) ^b		
1		F	5	20.0	-10.5	9.5	15.0	10.0	10.0	-9.0	26.0	35.5
1		F	24	20.0	-11.9	8.1	15.0	10.0	10.0	-7.6	27.4	35.5
1		F	41	20.0	-12.2	7.8	15.0	10.0	10.0	-9.8	25.2	33.0
1		F	51	20.0	-11.8	8.2	15.0	10.0	10.0	-9.4	25.6	33.8
1		F	76	20.0	-11.0	9.0	15.0	10.0	10.0	-8.0	27.0	36.0
1		M	1	20.0	-10.7	9.3	15.0	10.0	10.0	-4.2	30.8	40.1
1		M	26	20.0	-11.4	8.6	15.0	10.0	10.0	-4.9	30.1	38.7
1		M	47	20.0	-11.9	8.1	15.0	10.0	10.0	-4.9	30.1	38.2
1		M	56	20.0	-11.2	8.8	15.0	10.0	10.0	-5.2	29.8	38.6
1		M	70	20.0	-11.4	8.6	15.0	10.0	10.0	-3.6	31.4	40.0
2		F	14	20.0	-13.0	7.0	15.0	10.0	10.0	-10.0	25.0	32.0
2		F	25	20.0	-12.3	7.7	15.0	10.0	10.0	-10.7	24.3	32.0
2		F	38	20.0	-12.9	7.1	15.0	10.0	10.0	-11.7	23.3	30.4
2		F	63	20.0	-10.4	9.6	15.0	10.0	10.0	-8.3	26.7	36.3
2		F	73	20.0	-11.5	8.5	15.0	10.0	10.0	-8.1	26.9	35.4
2		M	4	20.0	-11.4	8.6	15.0	10.0	10.0	-6.7	28.3	36.9
2		M	30	20.0	-12.2	7.8	15.0	10.0	10.0	-7.2	27.8	35.6
2		M	34	20.0	-11.7	8.3	15.0	10.0	10.0	-3.9	31.1	39.4
2		M	54	20.0	-11.4	8.6	15.0	10.0	10.0	-5.4	29.6	38.2
2		M	79	20.0	-10.9	9.1	15.0	10.0	10.0	-6.0	29.0	38.1
3		F	13	20.0	-11.3	8.7	15.0	10.0	10.0	-7.6	27.4	36.1
3		F	23	20.0	-11.6	8.4	15.0	10.0	10.0	-10.1	24.9	33.3
3		F	35	20.0	-11.7	8.3	15.0	10.0	10.0	-7.8	27.2	35.5
3		F	60	20.0	-11.7	8.3	15.0	10.0	10.0	-10.2	24.8	33.1
3		F	80	20.0	-11.4	8.6	15.0	10.0	10.0	-7.3	27.7	36.3
3		M	16	20.0	-12.3	7.7	15.0	10.0	10.0	-5.2	29.8	37.5
3		M	19	20.0	-11.6	8.4	15.0	10.0	10.0	-3.9	31.1	39.5
3		M	40	20.0	-11.7	8.3	15.0	10.0	10.0	-9.4	25.6	33.9
3		M	62	20.0	-11.9	8.1	15.0	10.0	10.0	-6.2	28.8	36.9
3		M	77	20.0	-11.2	8.8	15.0	10.0	10.0	-5.5	29.5	38.3

Appendix Table 4. Feed added, and weighed back, by pen. Project No. MN-00-3 (Monsanto #2000-01-39-02)

2000 Date	Treatment	Sex	Pen	Kg Feed							Grower/Finisher Consump.	Total Consump.
				7/11 ^a Feed 1	8/1 WB (Day 20)	Starter Consump.	8/1 Feed 2	8/11 Feed 3	8/17 Feed 4	8/23 WB (Day 42) ^b		
4		F	15	20.0	-11.2	8.8	15.0	10.0	10.0	-7.9	27.1	35.9
4		F	18	20.0	-11.8	8.2	15.0	10.0	10.0	-9.9	25.1	33.3
4		F	43	20.0	-11.7	8.3	15.0	10.0	10.0	-8.6	26.4	34.7
4		F	53	20.0	-12.0	8.0	15.0	10.0	10.0	-8.1	26.9	34.9
4		F	72	20.0	-12.0	8.0	15.0	10.0	10.0	-8.9	26.1	34.1
4		M	9	20.0	-10.8	9.2	15.0	10.0	10.0	-5.3	29.7	38.9
4		M	17	20.0	-11.5	8.5	15.0	10.0	10.0	-11.1	23.9	32.4
4		M	39	20.0	-12.1	7.9	15.0	10.0	10.0	-4.3	30.7	38.6
4		M	64	20.0	-11.7	8.3	15.0	10.0	10.0	-7.1	27.9	36.2
4		M	69	20.0	-11.8	8.2	15.0	10.0	10.0	-3.5	31.5	39.7
5		F	3	20.0	-11.7	8.3	15.0	10.0	10.0	-9.1	25.9	34.2
5		F	22	20.0	-11.8	8.2	15.0	10.0	10.0	-8.9	26.1	34.3
5		F	46	20.0	-11.3	8.7	15.0	10.0	10.0	-8.6	26.4	35.1
5		F	52	20.0	-12.7	7.3	15.0	10.0	10.0	-11.7	23.3	30.6
5		F	65	20.0	-11.0	9.0	15.0	10.0	10.0	-7.8	27.2	36.2
5		M	12	20.0	-11.7	8.3	15.0	10.0	10.0	-4.5	30.5	38.8
5		M	32	20.0	-12.4	7.6	15.0	10.0	10.0	-8.2	26.8	34.4
5		M	45	20.0	-11.0	9.0	15.0	10.0	10.0	-5.2	29.8	38.8
5		M	49	20.0	-11.4	8.6	15.0	10.0	10.0	-4.7	30.3	38.9
5		M	78	20.0	-10.7	9.3	15.0	10.0	10.0	-9.9	25.1	34.4
6		F	6	20.0	-11.8	8.2	15.0	10.0	10.0	-10.4	24.6	32.8
6		F	20	20.0	-12.1	7.9	15.0	10.0	10.0	-9.7	25.3	33.2
6		F	44	20.0	-11.7	8.3	15.0	10.0	10.0	-10.0	25.0	33.3
6		F	57	20.0	-10.7	9.3	15.0	10.0	10.0	-8.4	26.6	35.9
6		F	74	20.0	-11.6	8.4	15.0	10.0	10.0	-7.9	27.1	35.5
6		M	8	20.0	-11.6	8.4	15.0	10.0	10.0	-5.8	29.2	37.6
6		M	27	20.0	-12.5	7.5	15.0	10.0	10.0	-6.9	28.1	35.6
6		M	48	20.0	-11.9	8.1	15.0	10.0	10.0	-8.3	26.7	34.8
6		M	58	20.0	-11.7	8.3	15.0	10.0	10.0	-5.5	29.5	37.8
6		M	75	20.0	-11.6	8.4	15.0	10.0	10.0	-5.2	29.8	38.2

Appendix Table 4. Feed added, and weighed back, by pen. Project No. MN-00-3 (Monsanto #2000-01-39-02)

			Kg Feed									
2000 Date			7/11 ^a	8/1	Starter	8/1	8/11	8/17	8/23	Grower/Finisher	Total	
Treatment	Sex	Pen	Feed 1	WB (Day 20)	Consump.	Feed 2	Feed 3	Feed 4	WB (Day 42) ^b	Consump.	Consump.	
8	F	10	20.0	-12.5	7.5	15.0	10.0	10.0	-9.7	25.3	32.8	
8	F	29	20.0	-12.0	8.0	15.0	10.0	10.0	-9.7	25.3	33.3	
8	F	33	20.0	-12.1	7.9	15.0	10.0	10.0	-9.5	25.5	33.4	
8	F	59	20.0	-11.5	8.5	15.0	10.0	10.0	-10.2	24.8	33.3	
8	F	66	20.0	-12.1	7.9	15.0	10.0	10.0	-8.9	26.1	34.0	
8	M	2	20.0	-11.6	8.4	15.0	10.0	10.0	-5.3	29.7	38.1	
8	M	31	20.0	-10.9	9.1	15.0	10.0	10.0	-10.2	24.8	33.9	
8	M	42	20.0	-11.3	8.7	15.0	10.0	10.0	-5.3	29.7	38.4	
8	M	50	20.0	-11.6	8.4	15.0	10.0	10.0	-7.4	27.6	36.0	
8	M	67	20.0	-11.0	9.0	15.0	10.0	10.0	-6.3	28.7	37.7	

^aFeed weighed in prior to the 7/12/00 chick placement

^bAfter birds were weighed, this feed was returned until ~12 hours prior to slaughter for processing

Conversion factor for lbs to kg = 2.205

Appendix Table 5. Moisture, protein and fat analysis of chicken thighs (as-is basis).

CQR Project No. MN-00-3 (Monsanto No. 2000-01-39-02)

Treatment	Pen	Sex	Percent Moisture	Percent Protein (by Kjeldahl)	Percent Fat (by acid hydrolysis)
1	1	M	77.15	20.88	2.32
1	26	M	76.28	21.77	2.77
1	47	M	76.32	21.16	2.30
1	56	M	76.13	21.53	1.77
1	70	M	75.87	21.83	1.85
Male Average			76.35	21.43	2.20
1	5	F	76.80	20.57	1.72
1	24	F	76.21	21.48	1.31
1	41	F	76.59	20.81	0.94
1	51	F	76.14	20.82	2.28
1	76	F	76.11	20.75	2.40
Female Average			76.37	20.89	1.73
Treatment Average			76.36	21.16	1.97
2	4	M	76.25	21.66	1.57
2	30	M	76.19	21.80	3.53
2	34	M	76.60	20.44	2.15
2	54	M	75.50	21.62	2.06
2	79	M	75.95	20.25	2.28
Male Average			76.10	21.16	2.32
2	14	F	76.82	21.02	1.43
2	25	F	76.14	21.45	1.63
2	38	F	76.86	20.62	2.04
2	63	F	75.77	20.48	2.05
2	73	F	74.31	21.99	2.79
Female Average			75.98	21.11	1.99
Treatment Average			76.04	21.13	2.15
3	16	M	76.07	21.87	2.58
3	19	M	76.36	20.72	2.22
3	40	M	76.31	21.42	2.51
3	62	M	76.40	20.38	1.85
3	77	M	76.66	20.57	1.90
Male Average			76.36	20.99	2.21
3	13	F	76.13	21.20	2.06
3	23	F	76.46	21.23	2.02
3	35	F	75.88	21.32	2.23
3	60	F	76.43	21.30	1.94
3	80	F	76.23	20.24	2.08
Female Average			76.23	21.06	2.07
Treatment Average			76.29	21.02	2.14

Appendix Table 5. Moisture, protein and fat analysis of chicken thighs (as-is basis).

CQR Project No. MN-00-3 (Monsanto No. 2000-01-39-02)

Treatment	Pen	Sex	Percent Moisture	Percent Protein (by Kjeldahl)	Percent Fat (by acid hydrolysis)
4	9	M	76.46	21.63	1.85
4	17	M	77.79	20.39	1.15
4	39	M	77.39	19.15	1.61
4	64	M	76.01	20.67	1.67
4	69	M	76.39	20.79	1.71
Male Average			76.81	20.52	1.60
4	15	F	76.21	21.25	2.56
4	18	F	76.54	20.54	1.94
4	43	F	76.62	20.93	1.44
4	53	F	76.33	20.54	2.63
4	72	F	76.32	20.70	1.91
Female Average			76.40	20.79	2.10
Treatment Average			76.61	20.66	1.85
5	12	M	76.63	21.32	1.25
5	32	M	76.24	21.16	2.26
5	45	M	76.61	20.50	1.87
5	49	M	76.83	20.14	1.62
5	78	M	76.41	20.97	1.47
Male Average			76.54	20.82	1.69
5	3	F	77.54	20.51	1.20
5	22	F	76.45	20.04	3.35
5	46	F	77.42	19.89	1.34
5	52	F	77.30	19.85	2.11
5	65	F	76.61	20.65	1.86
Female Average			77.06	20.19	1.97
Treatment Average			76.80	20.50	1.83
6	8	M	76.58	20.35	2.92
6	27	M	76.33	20.35	2.63
6	48	M	75.57	21.39	3.02
6	58	M	76.01	21.16	1.37
6	75	M	76.04	21.08	1.70
Male Average			76.11	20.87	2.33
6	6	F	75.61	22.59	2.21
6	20	F	76.12	20.94	2.03
6	44	F	72.97	23.52	2.99
6	57	F	76.31	20.95	1.69
6	74	F	75.98	21.05	2.55
Female Average			75.40	21.81	2.29
Treatment Average			75.75	21.34	2.31

Appendix Table 5. Moisture, protein and fat analysis of chicken thighs (as-is basis).

CQR Project No. MN-00-3 (Monsanto No. 2000-01-39-02)

Treatment	Pen	Sex	Percent Moisture	Percent Protein (by Kjeldahl)	Percent Fat (by acid hydrolysis)
8	2	M	76.38	21.16	2.01
8	31	M	75.45	21.63	1.80
8	42	M	75.63	20.79	3.43
8	50	M	76.19	21.15	1.30
8	67	M	75.30	19.91	4.82
Male Average			75.79	20.93	2.67
8	10	F	76.20	20.90	2.16
8	29	F	75.81	22.30	2.51
8	33	F	76.73	21.08	1.55
8	59	F	75.05	20.86	3.14
8	66	F	76.20	20.84	1.83
Female Average			76.00	21.20	2.24
Treatment Average			75.89	21.06	2.46

Samples from males (M) were collected on 8/24/00, samples from females (F) were collected on 8/25/00

Analysis conducted by Experiment Station Chemical Laboratories, University of Missouri

Appendix Table 6. Moisture, protein and fat analysis of chicken breasts (as-is basis).
CQR Project No. MN-00-3 (Monsanto No. 2000-01-39-02)

Treatment	Pen	Sex	Percent Moisture	Percent Protein (by Kjeldahl)	Percent Fat (by acid hydrolysis)
1	1	M	73.32	25.54	0.89
1	26	M	75.26	23.76	0.56
1	47	M	74.33	24.63	0.99
1	56	M	74.60	24.37	0.76
1	70	M	74.43	24.41	0.64
Male Average			74.39	24.54	0.77
1	5	F	74.70	24.01	0.97
1	24	F	75.37	23.79	0.81
1	41	F	74.85	23.94	0.90
1	51	F	75.20	24.07	0.84
1	76	F	75.10	23.83	0.74
Female Average			75.04	23.93	0.85
Treatment Average			74.72	24.24	0.81
2	4	M	71.08	27.72	0.94
2	30	M	74.17	24.20	1.64
2	34	M	74.78	23.64	0.76
2	54	M	74.05	24.66	0.71
2	79	M	74.87	24.06	1.10
Male Average			73.79	24.86	1.03
2	14	F	75.22	24.01	0.76
2	25	F	75.12	24.00	0.77
2	38	F	75.08	23.74	1.02
2	63	F	75.18	23.43	1.62
2	73	F	74.84	23.99	1.03
Female Average			75.09	23.83	1.04
Treatment Average			74.44	24.35	1.04
3	16	M	74.21	24.37	0.88
3	19	M	75.17	23.80	1.00
3	40	M	74.27	24.95	0.95
3	62	M	74.23	24.80	0.85
3	77	M	75.14	23.93	0.71
Male Average			74.60	24.37	0.88
3	13	F	74.82	23.77	0.81
3	23	F	74.55	24.50	0.83
3	35	F	75.03	24.28	0.63
3	60	F	74.69	23.63	0.80
3	80	F	75.63	23.55	0.63
Female Average			74.94	23.94	0.74
Treatment Average			74.77	24.16	0.81

Appendix Table 6. Moisture, protein and fat analysis of chicken breasts (as-is basis).

CQR Project No. MN-00-3 (Monsanto No. 2000-01-39-02)

Treatment	Pen	Sex	Percent Moisture	Percent Protein (by Kjeldahl)	Percent Fat (by acid hydrolysis)
4	9	M	75.54	23.52	0.84
4	17	M	75.08	23.31	1.14
4	39	M	74.08	24.78	1.05
4	64	M	74.45	24.47	0.86
4	69	M	74.13	24.88	1.11
Male Average			74.66	24.19	1.00
4	15	F	75.14	23.40	1.38
4	18	F	74.99	23.76	1.07
4	43	F	74.81	24.32	0.72
4	53	F	74.65	24.43	0.78
4	72	F	74.39	23.22	1.41
Female Average			74.80	23.83	1.07
Treatment Average			74.73	24.01	1.04
5	12	M	74.84	24.02	1.37
5	32	M	74.59	24.23	1.03
5	45	M	74.43	23.86	0.96
5	49	M	74.96	23.95	0.91
5	78	M	74.72	24.25	0.82
Male Average			74.71	24.06	1.02
5	3	F	74.67	24.32	0.73
5	22	F	75.43	23.18	0.78
5	46	F	75.45	23.12	0.96
5	52	F	75.60	22.96	0.69
5	65	F	75.24	23.23	1.06
Female Average			75.28	23.36	0.84
Treatment Average			74.99	23.71	0.93
6	8	M	74.41	24.58	0.71
6	27	M	74.99	24.04	0.95
6	48	M	75.03	23.74	1.13
6	58	M	74.99	23.63	0.60
6	75	M	74.45	24.13	1.00
Male Average			74.77	24.03	0.88
6	6	F	74.62	24.30	0.71
6	20	F	74.90	24.27	0.69
6	44	F	75.29	23.61	0.94
6	57	F	74.95	23.90	0.57
6	74	F	75.16	23.98	0.68
Female Average			74.98	24.01	0.72
Treatment Average			74.88	24.02	0.80

Appendix Table 6. Moisture, protein and fat analysis of chicken breasts (as-is basis).

CQR Project No. MN-00-3 (Monsanto No. 2000-01-39-02)

Treatment	Pen	Sex	Percent Moisture	Percent Protein (by Kjeldahl)	Percent Fat (by acid hydrolysis)
8	2	M	74.49	23.74	0.91
8	31	M	74.65	24.79	0.92
8	42	M	74.96	23.74	0.82
8	50	M	74.50	24.09	0.62
8	67	M	74.82	24.13	1.04
Male Average			74.68	24.10	0.86
8	10	F	74.89	23.57	1.11
8	29	F	74.59	24.28	0.81
8	33	F	74.92	24.43	0.68
8	59	F	74.63	24.26	1.07
8	66	F	74.96	24.09	0.69
Female Average			74.80	24.12	0.87
Treatment Average			74.74	24.11	0.87

Samples from males (M) were collected on 8/24/00, samples from females (F) were collected on 8/25/00

Analysis conducted by Experiment Station Chemical Laboratories, University of Missouri

Appendix Table 7. Individual mortality weights, date and study day of death. Project No. MN-00-3
Monsanto Study No. 2000-01-39-02

Treatment	Sex	Pen Number	Birds - Mortality/removal weights (kg) [Date is year 2000]								
			Day 0 - 7						Day 7-42		
			Wt (kg)	Date	Day	Wt (kg)	Date	Day	Wt (kg)	Date	Day
1	M	1	0.190	7/19	7						
8	M	2	0.062	7/15	3	0.050	7/19	7			
5	F	3	0.180	7/19	7						
2	M	4	0.240	7/19	7						
1	F	5	0.130	7/19	7						
6	F	6	0.032	7/15	3	0.040	7/19	7			
6	M	8	0.170	7/19	7						
4	M	9	0.200	7/19	7				1.23	8/11	30
8	F	10	0.070	7/19	7						
5	M	12	0.190	7/19	7						
3	F	13	0.190	7/19	7						
2	F	14	0.032	7/15	3	0.070	7/19	7			
4	F	15	0.030	7/16	4	0.100	7/19	7			
3	M	16	0.150	7/19	7						
4	M	17	0.160	7/19	7				0.34	7/29	17
4	F	18	0.034	7/15	3	0.070	7/19	7			
3	M	19	0.180	7/19	7						
6	F	20	0.170	7/19	7						
5	F	22	0.032	7/15	3	0.068	7/16	4			
3	F	23	0.030	7/16	4	0.050	7/19	7			
1	F	24	0.150	7/19	7						
2	F	25	0.034	7/15	3	0.070	7/19	7			
1	M	26	0.180	7/19	7						
6	M	27	0.140	7/19	7						
8	F	29	0.032	7/16	4	0.070	7/19	7			
2	M	30	0.030	7/16	4	0.028	7/17	5			
8	M	31	0.100	7/19	7				0.83	8/5	24

Appendix Table 7. Individual mortality weights, date and study day of death. Project No. MN-00-3

Monsanto Study No. 2000-01-39-02

Treatment	Sex	Pen Number	Birds - Mortality/removal weights (kg) [Date is year 2000]								
			Day 0 - 7						Day 7-42		
			Wt (kg)	Date	Day	Wt (kg)	Date	Day	Wt (kg)	Date	Day
5	M	32	0.030	7/16	4	0.060	7/19	7	0.18	8/3	22
8	F	33	0.180	7/19	7						
2	M	34	0.170	7/19	7						
3	F	35	0.030	7/16	4	0.090	7/19	7			
2	F	38	0.032	7/16	4	0.040	7/19	7			
4	M	39	0.170	7/19	7						
3	M	40	0.230	7/19	7				0.43	7/28	16
1	F	41	0.034	7/15	3	0.080	7/19	7			
8	M	42	0.180	7/19	7						
4	F	43	0.082	7/18	6	0.110	7/19	7			
6	F	44	0.036	7/15	3	0.110	7/19	7			
5	M	45	0.130	7/19	7						
5	F	46	0.120	7/19	7						
1	M	47	0.210	7/19	7						
6	M	48	0.026	7/16	4	0.040	7/19	7			
5	M	49	0.130	7/19	7						
8	M	50	0.150	7/19	7						
1	F	51	0.130	7/19	7						
5	F	52	0.140	7/19	7				1.36	8/14	33
4	F	53	0.028	7/15	3	0.090	7/19	7			
2	M	54	0.200	7/19	7						
1	M	56	0.210	7/19	7						
6	F	57	0.150	7/19	7						
6	M	58	0.032	7/15	3	0.050	7/19	7			
8	F	59	0.200	7/19	7						
3	F	60	0.190	7/19	7						
3	M	62	0.220	7/19	7						

Appendix Table 7. Individual mortality weights, date and study day of death. Project No. MN-00-3
Monsanto Study No. 2000-01-39-02

Treatment	Sex	Pen Number	Birds - Mortality/removal weights (kg) [Date is year 2000]								
			Day 0 - 7						Day 7-42		
			Wt (kg)	Date	Day	Wt (kg)	Date	Day	Wt (kg)	Date	Day
2	F	63	0.190	7/19	7						
4	M	64	0.190	7/19	7				1.72	8/13	32
5	F	65	0.230	7/19	7						
8	F	66	0.150	7/19	7						
8	M	67	0.170	7/19	7						
4	M	69	0.034	7/15	3	0.028	7/17	5			
1	M	70	0.190	7/19	7						
4	F	72	0.120	7/19	7						
2	F	73	0.190	7/19	7						
6	F	74	0.210	7/19	7						
6	M	75	0.210	7/19	7						
1	F	76	0.200	7/19	7						
3	M	77	0.190	7/19	7						
5	M	78	0.140	7/19	7				0.11	7/24	12
2	M	79	0.230	7/19	7						
3	F	80	0.032	7/15	3	0.050	7/19	7			

Day = study day of death [day 0 = 7/12/00]

Table P1. Summary, by pen, of processing data at 43 & 44 days of age (8/24/00 & 8/25/00)
(live wt is after ~12 hr feed withdrawal)

Project No. MN-00-3 (Monsanto #2000-01-39-02)

(live wt is after ~12 hr feed withdrawal)																
			No. of Birds	Pen Average							% Chill	% Fat Pad	Percent of Chill Weight			
				Live Wt. (kg)	Fat Pad Wt. (kg)	Chill Wt. (kg)	Breast Wt. (kg)	Wings Wt. (kg)	Thighs Wt. (kg)	Drums Wt. (kg)			Breast	Wings	Thighs	Drums
Treatment	Sex	Pen														
1	F	5	10	2.137	0.0361	1.532	0.397	0.177	0.260	0.210	71.70%	1.68%	25.89%	11.56%	16.99%	13.73%
1	F	24	10	2.206	0.0408	1.580	0.392	0.186	0.276	0.227	71.61%	1.85%	24.72%	11.76%	17.45%	14.38%
1	F	41	10	2.052	0.0379	1.465	0.384	0.173	0.242	0.201	71.37%	1.85%	26.20%	11.80%	16.52%	13.69%
1	F	51	10	2.055	0.0347	1.450	0.372	0.173	0.245	0.204	70.55%	1.67%	25.62%	11.99%	16.87%	14.06%
1	F	76	10	2.184	0.0383	1.579	0.430	0.182	0.267	0.215	72.23%	1.76%	27.10%	11.53%	16.91%	13.62%
Total & Average			50	2.127	0.0376	1.521	0.395	0.178	0.258	0.211	71.49%	1.76%	25.91%	11.73%	16.95%	13.90%
1	M	1	10	2.494	0.0377	1.766	0.484	0.200	0.306	0.249	70.80%	1.53%	27.34%	11.38%	17.31%	14.08%
1	M	26	10	2.413	0.0334	1.713	0.449	0.205	0.301	0.239	71.00%	1.38%	26.18%	12.01%	17.57%	13.91%
1	M	47	9	2.541	0.0370	1.780	0.449	0.208	0.314	0.253	70.06%	1.46%	25.19%	11.72%	17.63%	14.21%
1	M	56	10	2.388	0.0339	1.698	0.424	0.196	0.294	0.251	71.08%	1.44%	25.00%	11.56%	17.30%	14.78%
1	M	70	10	2.485	0.0340	1.784	0.448	0.206	0.310	0.262	71.76%	1.35%	25.08%	11.54%	17.35%	14.74%
Total & Average			49	2.464	0.0352	1.748	0.451	0.203	0.305	0.251	70.94%	1.43%	25.76%	11.64%	17.43%	14.34%
Treatment Total & Average			99	2.296	0.0364	1.635	0.423	0.191	0.282	0.231	71.22%	1.60%	25.83%	11.69%	17.19%	14.12%
2	F	14	10	1.996	0.0386	1.414	0.347	0.167	0.237	0.205	70.80%	1.94%	24.53%	11.82%	16.71%	14.48%
2	F	25	10	2.003	0.0353	1.407	0.353	0.167	0.237	0.199	70.24%	1.75%	25.07%	11.87%	16.85%	14.12%
2	F	38	10	1.973	0.0373	1.391	0.354	0.164	0.233	0.195	70.19%	1.81%	25.10%	11.90%	16.77%	13.97%
2	F	63	10	2.180	0.0411	1.550	0.411	0.179	0.272	0.212	71.10%	1.88%	26.53%	11.58%	17.53%	13.70%
2	F	73	10	2.184	0.0421	1.551	0.393	0.181	0.267	0.219	71.03%	1.93%	25.28%	11.68%	17.19%	14.10%
Total & Average			50	2.067	0.0389	1.463	0.372	0.172	0.249	0.206	70.67%	1.86%	25.30%	11.77%	17.01%	14.07%
2	M	4	10	2.228	0.0362	1.571	0.394	0.182	0.284	0.233	70.46%	1.63%	25.08%	11.62%	18.07%	14.83%
2	M	30	10	2.256	0.0331	1.591	0.399	0.191	0.269	0.231	70.41%	1.47%	25.01%	12.05%	16.91%	14.45%
2	M	34	10	2.469	0.0396	1.759	0.449	0.203	0.303	0.257	71.19%	1.59%	25.49%	11.58%	17.20%	14.64%
2	M	54	10	2.366	0.0364	1.687	0.422	0.195	0.297	0.250	71.31%	1.52%	24.97%	11.60%	17.59%	14.85%
2	M	79	10	2.373	0.0325	1.691	0.437	0.196	0.291	0.240	71.28%	1.36%	25.82%	11.59%	17.18%	14.23%
Total & Average			50	2.338	0.0356	1.660	0.420	0.193	0.289	0.242	70.93%	1.51%	25.27%	11.69%	17.39%	14.60%
Treatment Total & Average			100	2.203	0.0372	1.561	0.396	0.183	0.269	0.224	70.80%	1.69%	25.29%	11.73%	17.20%	14.34%

Percent chill and fat pad are percent of live weight, percent breast, wings, drums and thighs are percent of chill weight

Males processed on day 43 and females processed on day 44.

Table P1. Summary, by pen, of processing data at 43 & 44 days of age (8/24/00 & 8/25/00)
(live wt is after ~12 hr feed withdrawal)

Project No. MN-00-3 (Monsanto #2000-01-39-02)

			No. of Birds	Pen Average							% Chill	% Fat Pad	Percent of Chill Weight			
Treatment	Sex	Pen		Live	Fat Pad	Chill	Breast	Wings	Thighs	Drums			Breast	Wings	Thighs	Drums
				Wt. (kg)	Wt. (kg)	Wt. (kg)	Wt. (kg)	Wt. (kg)	Wt. (kg)	Wt. (kg)						
3	F	13	10	2.209	0.0427	1.568	0.413	0.182	0.262	0.214	70.97%	1.93%	26.33%	11.60%	16.70%	13.64%
3	F	23	10	2.059	0.0369	1.449	0.377	0.172	0.239	0.202	70.23%	1.78%	26.01%	11.89%	16.47%	13.96%
3	F	35	10	2.228	0.0415	1.582	0.414	0.186	0.268	0.216	71.03%	1.87%	26.18%	11.75%	16.94%	13.63%
3	F	60	10	2.053	0.0332	1.471	0.382	0.178	0.252	0.208	71.62%	1.61%	25.88%	12.13%	17.15%	14.17%
3	F	80	10	2.211	0.0454	1.578	0.405	0.182	0.263	0.219	71.33%	2.08%	25.63%	11.57%	16.69%	13.86%
Total & Average			50	2.152	0.0399	1.530	0.398	0.180	0.257	0.212	71.04%	1.85%	26.01%	11.79%	16.79%	13.85%
3	M	16	10	2.343	0.0434	1.649	0.408	0.193	0.287	0.233	70.36%	1.84%	24.77%	11.73%	17.35%	14.12%
3	M	19	10	2.425	0.0358	1.706	0.441	0.196	0.295	0.238	70.32%	1.49%	25.76%	11.49%	17.28%	13.96%
3	M	40	8	2.424	0.0323	1.704	0.436	0.195	0.294	0.247	70.23%	1.34%	25.60%	11.47%	17.24%	14.55%
3	M	62	10	2.361	0.0368	1.684	0.434	0.194	0.295	0.238	71.29%	1.55%	25.77%	11.55%	17.52%	14.13%
3	M	77	9	2.434	0.0394	1.743	0.435	0.201	0.304	0.250	71.57%	1.61%	24.89%	11.56%	17.42%	14.30%
Total & Average			47	2.397	0.0375	1.697	0.431	0.196	0.295	0.241	70.75%	1.57%	25.36%	11.56%	17.36%	14.21%
Treatment Total & Average			97	2.275	0.0387	1.613	0.415	0.188	0.276	0.227	70.90%	1.71%	25.68%	11.67%	17.08%	14.03%
4	F	15	10	2.206	0.0379	1.563	0.400	0.183	0.269	0.214	70.84%	1.72%	25.62%	11.71%	17.22%	13.68%
4	F	18	10	2.085	0.0388	1.485	0.384	0.175	0.245	0.199	71.19%	1.85%	25.84%	11.79%	16.45%	13.37%
4	F	43	10	2.177	0.0398	1.565	0.401	0.182	0.262	0.215	71.87%	1.82%	25.57%	11.64%	16.68%	13.76%
4	F	53	10	2.179	0.0456	1.548	0.402	0.178	0.271	0.215	71.00%	2.08%	25.90%	11.52%	17.54%	13.93%
4	F	72	10	2.128	0.0412	1.520	0.381	0.173	0.251	0.206	71.38%	1.95%	25.10%	11.44%	16.55%	13.58%
Total & Average			50	2.155	0.0407	1.536	0.394	0.178	0.260	0.210	71.26%	1.88%	25.61%	11.62%	16.89%	13.66%
4	M	9	8	2.524	0.0403	1.792	0.474	0.204	0.318	0.250	70.97%	1.56%	26.57%	11.44%	17.66%	13.94%
4	M	17	9	2.216	0.0346	1.554	0.393	0.181	0.275	0.219	70.10%	1.56%	25.22%	11.68%	17.71%	14.13%
4	M	39	10	2.440	0.0378	1.727	0.450	0.199	0.287	0.243	70.76%	1.55%	25.99%	11.55%	16.60%	14.10%
4	M	64	9	2.365	0.0319	1.668	0.410	0.191	0.291	0.249	70.55%	1.34%	24.59%	11.52%	17.46%	14.92%
4	M	69	10	2.547	0.0421	1.803	0.455	0.209	0.306	0.258	70.67%	1.65%	25.18%	11.60%	16.94%	14.36%
Total & Average			46	2.418	0.0373	1.709	0.436	0.197	0.295	0.244	70.61%	1.53%	25.51%	11.56%	17.27%	14.29%
Treatment Total & Average			96	2.287	0.0390	1.623	0.415	0.188	0.278	0.227	70.93%	1.71%	25.56%	11.59%	17.08%	13.98%

Percent chill and fat pad are percent of live weight, percent breast, wings, drums and thighs are percent of chill weight

Males processed on day 43 and females processed on day 44.

Table P1. Summary, by pen, of processing data at 43 & 44 days of age (8/24/00 & 8/25/00)
(live wt is after ~12 hr feed withdrawal)

Project No. MN-00-3 (Monsanto #2000-01-39-02)

(live wt is after 12 hr feed withdrawal)																
Treatment	Sex	Pen	No. of Birds	Pen Average							% Chill	% Fat Pad	Percent of Chill Weight			
				Live	Fat Pad	Chill	Breast	Wings	Thighs	Drums			Breast	Wings	Thighs	Drums
				Wt. (kg)	Wt. (kg)	Wt. (kg)	Wt. (kg)	Wt. (kg)	Wt. (kg)	Wt. (kg)						
5	F	3	10	2.092	0.0382	1.492	0.379	0.172	0.252	0.204	71.32%	1.83%	25.33%	11.53%	16.82%	13.71%
5	F	22	10	2.130	0.0424	1.518	0.396	0.174	0.256	0.212	71.22%	1.99%	26.11%	11.46%	16.87%	13.99%
5	F	46	10	2.142	0.0431	1.541	0.404	0.176	0.255	0.212	71.94%	2.01%	26.22%	11.44%	16.56%	13.78%
5	F	52	9	2.026	0.0384	1.428	0.353	0.169	0.248	0.203	70.48%	1.89%	24.74%	11.85%	17.30%	14.20%
5	F	65	10	2.184	0.0399	1.550	0.405	0.178	0.262	0.215	70.95%	1.82%	26.09%	11.49%	16.91%	13.84%
Total & Average			49	2.115	0.0404	1.506	0.387	0.174	0.255	0.209	71.18%	1.91%	25.70%	11.55%	16.89%	13.90%
5	M	12	10	2.464	0.0362	1.741	0.432	0.201	0.314	0.249	70.57%	1.47%	24.77%	11.59%	18.09%	14.29%
5	M	32	9	2.373	0.0322	1.674	0.430	0.197	0.294	0.240	70.49%	1.37%	25.67%	11.80%	17.51%	14.36%
5	M	45	10	2.440	0.0305	1.734	0.436	0.202	0.306	0.248	71.07%	1.25%	25.15%	11.63%	17.63%	14.29%
5	M	49	9	2.388	0.0360	1.689	0.429	0.193	0.294	0.245	70.78%	1.50%	25.42%	11.44%	17.39%	14.49%
5	M	78	9	2.345	0.0374	1.646	0.386	0.196	0.290	0.246	70.18%	1.60%	23.42%	11.94%	17.65%	14.91%
Total & Average			47	2.402	0.0345	1.697	0.423	0.198	0.300	0.246	70.62%	1.44%	24.89%	11.68%	17.65%	14.47%
Treatment Total & Average			96	2.258	0.0374	1.601	0.405	0.186	0.277	0.227	70.90%	1.67%	25.29%	11.62%	17.27%	14.19%
6	F	6	10	1.966	0.0391	1.396	0.355	0.165	0.234	0.190	70.96%	1.96%	25.34%	11.88%	16.68%	13.64%
6	F	20	10	2.177	0.0331	1.548	0.398	0.185	0.266	0.215	71.07%	1.52%	25.76%	11.99%	17.23%	13.86%
6	F	44	10	2.106	0.0380	1.507	0.380	0.179	0.252	0.210	71.53%	1.80%	25.22%	11.90%	16.72%	13.92%
6	F	57	10	2.215	0.0433	1.583	0.403	0.191	0.269	0.222	71.38%	1.94%	25.46%	12.06%	16.97%	13.95%
6	F	74	10	2.197	0.0397	1.570	0.395	0.183	0.270	0.225	71.41%	1.84%	25.21%	11.70%	17.19%	14.30%
Total & Average			50	2.132	0.0386	1.521	0.386	0.181	0.258	0.212	71.27%	1.81%	25.40%	11.91%	16.96%	13.93%
6	M	8	10	2.376	0.0365	1.697	0.422	0.194	0.296	0.233	71.38%	1.53%	24.68%	11.47%	17.42%	13.75%
6	M	27	10	2.234	0.0332	1.560	0.376	0.181	0.280	0.223	69.81%	1.50%	24.03%	11.61%	17.90%	14.28%
6	M	48	9	2.348	0.0381	1.644	0.409	0.190	0.295	0.241	69.98%	1.63%	24.81%	11.58%	17.94%	14.70%
6	M	58	10	2.390	0.0351	1.699	0.406	0.200	0.303	0.254	71.06%	1.47%	23.88%	11.79%	17.89%	14.97%
6	M	75	10	2.457	0.0337	1.764	0.439	0.202	0.314	0.259	71.71%	1.36%	24.88%	11.48%	17.77%	14.68%
Total & Average			49	2.361	0.0353	1.673	0.410	0.193	0.298	0.242	70.79%	1.50%	24.46%	11.59%	17.78%	14.48%
Treatment Total & Average			99	2.247	0.0370	1.597	0.398	0.187	0.278	0.227	71.03%	1.66%	24.93%	11.75%	17.37%	14.21%

Percent chill and fat pad are percent of live weight, percent breast, wings, drums and thighs are percent of chill weight

Males processed on day 43 and females processed on day 44.

Table P1. Summary, by pen, of processing data at 43 & 44 days of age (8/24/00 & 8/25/00)
(live wt is after ~12 hr feed withdrawal)

Project No. MN-00-3 (Monsanto #2000-01-39-02)

Treatment	Sex	Pen	No. of Birds	Pen Average							% Chill	% Fat Pad	Percent of Chill Weight			
				Live Wt. (kg)	Fat Pad Wt. (kg)	Chill Wt. (kg)	Breast Wt. (kg)	Wings Wt. (kg)	Thighs Wt. (kg)	Drums Wt. (kg)			Breast	Wings	Thighs	Drums
8	F	10	10	2.089	0.0363	1.494	0.397	0.177	0.263	0.207	71.48%	1.73%	26.52%	11.88%	17.60%	13.86%
8	F	29	10	2.105	0.0340	1.477	0.381	0.177	0.262	0.208	70.14%	1.62%	25.75%	12.01%	17.69%	14.08%
8	F	33	10	2.150	0.0364	1.523	0.395	0.182	0.251	0.212	70.79%	1.71%	25.81%	11.98%	16.56%	13.97%
8	F	59	10	2.078	0.0349	1.474	0.374	0.175	0.256	0.206	70.97%	1.68%	23.56%	11.91%	17.37%	14.01%
8	F	66	10	2.196	0.0365	1.563	0.397	0.183	0.283	0.226	71.14%	1.67%	25.47%	11.72%	18.15%	14.46%
Total & Average			50	2.124	0.0356	1.506	0.389	0.179	0.263	0.212	70.90%	1.68%	25.42%	11.90%	17.47%	14.08%
8	M	2	10	2.396	0.0331	1.711	0.435	0.198	0.302	0.239	71.31%	1.38%	25.30%	11.62%	17.60%	14.01%
8	M	31	9	2.339	0.0346	1.646	0.410	0.189	0.291	0.242	70.25%	1.49%	24.82%	11.44%	17.68%	14.77%
8	M	42	10	2.483	0.0328	1.773	0.453	0.202	0.315	0.254	71.32%	1.33%	25.49%	11.43%	17.76%	14.31%
8	M	50	10	2.316	0.0297	1.642	0.413	0.194	0.285	0.242	70.89%	1.28%	25.12%	11.82%	17.34%	14.75%
8	M	67	10	2.350	0.0281	1.653	0.421	0.192	0.290	0.240	70.34%	1.20%	25.49%	11.63%	17.54%	14.52%
Total & Average			49	2.377	0.0317	1.685	0.426	0.195	0.297	0.243	70.82%	1.34%	25.24%	11.59%	17.58%	14.47%
Treatment Total & Average			99	2.250	0.0336	1.596	0.408	0.187	0.280	0.228	70.86%	1.51%	25.33%	11.74%	17.53%	14.27%

Percent chill and fat pad are percent of live weight, percent breast, wings, drums and thighs are percent of chill weight

Males processed on day 43 and females processed on day 44.

Table P2. Individual male bird processing data at 43 days of age (8/24/00) Project No. MN-00-3 (monsanto #2000-0135-02)
(live wt is after ~12 hr feed withdrawal)

Treatment	Pen	Bird No.	Live Wt. (kg)	Fat Pad Wt. (kg)	Chill Wt. (kg)	Breast Wt. (kg)	Wings Wt. (kg)	Thighs Wt. (kg)	Drums Wt. (kg)	% Chill	% Fat Pad	Percent of Chill Weight			
												Breast	Wings	Thighs	Drums
1	1	1	2.470	0.0361	1.780	0.453	0.209	0.323	0.248	72.06%	1.46%	25.45%	11.74%	18.15%	13.93%
1	1	2	2.066	0.0501	1.430	0.341	0.179	0.253	0.189	69.22%	2.42%	23.85%	12.52%	17.69%	13.22%
1	1	3	2.584	0.0433	1.790	0.504	0.213	0.293	0.244	69.27%	1.68%	28.16%	11.90%	16.37%	13.63%
1	1	4	2.568	0.0355	1.785	0.506	0.203	0.283	0.250	69.51%	1.38%	28.35%	11.37%	15.85%	14.01%
1	1	5	2.544	0.0273	1.800	0.504	0.210	0.330	0.263	70.75%	1.07%	28.00%	11.67%	18.33%	14.61%
1	1	6	2.460	0.0312	1.745	0.471	0.194	0.292	0.229	70.93%	1.27%	26.99%	11.12%	16.73%	13.12%
1	1	7	2.624	0.0430	1.835	0.488	0.215	0.356	0.271	69.93%	1.64%	26.59%	11.72%	19.40%	14.77%
1	1	8	2.584	0.0300	1.860	0.540	0.203	0.311	0.273	71.98%	1.16%	29.03%	10.91%	16.72%	14.68%
1	1	9	2.522	0.0476	1.835	0.527	0.184	0.300	0.246	72.76%	1.89%	28.72%	10.03%	16.35%	13.41%
1	1	10	2.516	0.0324	1.800	0.509	0.194	0.315	0.278	71.54%	1.29%	28.28%	10.78%	17.50%	15.44%
Number of Birds		10													
Pen Average			2.494	0.0377	1.766	0.484	0.200	0.306	0.249	70.80%	1.53%	27.34%	11.38%	17.31%	14.08%
8	2	501	1.936	0.0321	1.360	0.321	0.161	0.248	0.204	70.25%	1.66%	23.60%	11.84%	18.24%	15.00%
8	2	502	2.142	0.0371	1.495	0.358	0.174	0.276	0.201	69.79%	1.73%	23.95%	11.64%	18.46%	13.44%
8	2	503	2.270	0.0201	1.555	0.378	0.206	0.260	0.236	68.50%	0.89%	24.31%	13.25%	16.72%	15.18%
8	2	504	2.668	0.0291	1.885	0.472	0.206	0.318	0.267	70.65%	1.09%	25.04%	10.93%	16.87%	14.16%
8	2	505	2.710	0.0406	1.950	0.498	0.232	0.362	0.272	71.96%	1.50%	25.54%	11.90%	18.56%	13.95%
8	2	506	2.772	0.0479	2.035	0.525	0.225	0.386	0.268	73.41%	1.73%	25.80%	11.06%	18.97%	13.17%
8	2	507	2.176	0.0302	1.510	0.375	0.173	0.260	0.223	69.39%	1.39%	24.83%	11.46%	17.22%	14.77%
8	2	508	2.604	0.0307	1.910	0.525	0.213	0.330	0.243	73.35%	1.18%	27.49%	11.15%	17.28%	12.72%
8	2	509	2.298	0.0305	1.675	0.457	0.183	0.254	0.231	72.89%	1.33%	27.28%	10.93%	15.16%	13.79%
8	2	510	2.380	0.0323	1.735	0.437	0.210	0.322	0.242	72.90%	1.36%	25.19%	12.10%	18.56%	13.95%
Number of Birds		10													
Pen Average			2.396	0.0331	1.711	0.435	0.198	0.302	0.239	71.31%	1.38%	25.30%	11.62%	17.60%	14.01%
2	4	11	2.030	0.0407	1.400	0.362	0.173	0.262	0.199	68.97%	2.00%	25.86%	12.36%	18.71%	14.21%
2	4	12	2.396	0.0342	1.675	0.452	0.194	0.295	0.232	69.91%	1.43%	26.99%	11.58%	17.61%	13.85%
2	4	13	2.372	0.0282	1.720	0.440	0.196	0.300	0.260	72.51%	1.19%	25.58%	11.40%	17.44%	15.12%
2	4	14	2.262	0.0474	1.585	0.330	0.191	0.300	0.237	70.07%	2.10%	20.82%	12.05%	18.93%	14.95%
2	4	15	2.144	0.0405	1.510	0.381	0.180	0.276	0.236	70.43%	1.89%	25.23%	11.92%	18.28%	15.63%
2	4	16	2.316	0.0372	1.645	0.418	0.183	0.285	0.254	71.03%	1.61%	25.41%	11.12%	17.33%	15.44%
2	4	17	2.040	0.0343	1.410	0.341	0.164	0.242	0.212	69.12%	1.68%	24.18%	11.63%	17.16%	15.04%
2	4	18	2.136	0.0225	1.535	0.387	0.185	0.274	0.228	71.86%	1.05%	25.21%	12.05%	17.85%	14.85%
2	4	19	2.314	0.0379	1.635	0.415	0.184	0.297	0.236	70.66%	1.64%	25.38%	11.25%	18.17%	14.43%
2	4	20	2.270	0.0394	1.590	0.415	0.172	0.305	0.235	70.04%	1.74%	26.10%	10.82%	19.18%	14.78%
Number of Birds		10													
Pen Average			2.228	0.0362	1.571	0.394	0.182	0.284	0.233	70.46%	1.63%	25.08%	11.62%	18.07%	14.83%

Percent chill and fat pad are percent of live weight, percent breast, wings, thighs and drums are percent of chill weight

ss = sex slip (female bird)

Table P2. Individual male bird processing data at 43 days of age (8/24/00) Project No. MN-00-3 (Monsanto #2000-01-39-02)
(live wt is after ~12 hr feed withdrawal)

Treatment	Pen	Bird No.	Live Wt. (kg)	Fat Pad Wt. (kg)	Chill Wt. (kg)	Breast Wt. (kg)	Wings Wt. (kg)	Thighs Wt. (kg)	Drums Wt. (kg)	% Chill	% Fat Pad	Percent of Chill Weight			
												Breast	Wings	Thighs	Drums
6	8	511	2.496	0.0382	1.785	0.452	0.198	0.316	0.238	71.51%	1.53%	25.32%	11.09%	17.70%	13.33%
6	8	512	2.074	0.0264	1.425	0.336	0.182	0.231	0.201	68.71%	1.27%	23.58%	12.77%	16.21%	14.11%
6	8	513	2.174	0.0258	1.585	0.349	0.195	0.286	0.226	72.91%	1.19%	22.02%	12.30%	18.04%	14.26%
6	8	514	2.366	0.0336	1.650	0.422	0.196	0.291	0.236	69.74%	1.42%	25.58%	11.88%	17.64%	14.30%
6	8	515	2.596	0.0456	1.895	0.522	0.201	0.311	0.245	73.00%	1.76%	27.55%	10.61%	16.41%	12.93%
6	8	516	2.754	0.0423	1.970	0.511	0.218	0.355	0.272	71.53%	1.54%	25.94%	11.07%	18.02%	13.81%
6	8	517	2.260	0.0446	1.690	0.434	0.184	0.278	0.213	74.78%	1.97%	25.68%	10.89%	16.45%	12.60%
6	8	518	2.776	0.0459	1.975	0.512	0.217	0.345	0.270	71.15%	1.65%	25.92%	10.99%	17.47%	13.67%
6	8	519	2.014	0.0256	1.415	0.294	0.160	0.263	0.202	70.26%	1.27%	20.78%	11.31%	18.59%	14.28%
6	8	520	2.250	0.0372	1.580	0.386	0.186	0.279	0.225	70.22%	1.65%	24.43%	11.77%	17.66%	14.24%
Number of Birds		10													
Pen Average			2.376	0.0365	1.697	0.422	0.194	0.296	0.233	71.38%	1.53%	24.68%	11.47%	17.42%	13.75%
4	9	21	2.330	0.0328	1.635	0.426	0.197	0.291	0.222	70.17%	1.41%	26.06%	12.05%	17.80%	13.58%
4	9	22	2.824	0.0617	2.010	0.526	0.229	0.327	0.277	71.18%	2.18%	26.17%	11.39%	16.27%	13.78%
4	9	23	2.248	0.0333	1.605	0.463	0.188	0.268	0.223	71.40%	1.48%	28.85%	11.71%	16.70%	13.89%
4	9	25	2.602	0.0389	1.835	0.493	0.201	0.335	0.256	70.52%	1.50%	26.87%	10.95%	18.26%	13.95%
4	9	26	2.862	0.0549	2.045	0.518	0.225	0.387	0.297	71.45%	1.92%	25.33%	11.00%	18.92%	14.52%
4	9	27	2.574	0.0347	1.855	0.474	0.223	0.356	0.239	72.07%	1.35%	25.55%	12.02%	19.19%	12.88%
4	9	28	2.712	0.0497	1.920	0.481	0.202	0.357	0.281	70.80%	1.83%	25.05%	10.52%	18.59%	14.64%
4	9	29	2.038	0.0162	1.430	0.410	0.170	0.222	0.204	70.17%	0.79%	28.67%	11.89%	15.52%	14.27%
Number of Birds		8													
Pen Average			2.524	0.0403	1.792	0.474	0.204	0.318	0.250	70.97%	1.56%	26.57%	11.44%	17.66%	13.94%
5	12	31	2.330	0.0405	1.650	0.392	0.190	0.311	0.235	70.82%	1.74%	23.76%	11.52%	18.85%	14.24%
5	12	32	2.464	0.0562	1.710	0.384	0.197	0.312	0.256	69.40%	2.28%	22.46%	11.52%	18.25%	14.97%
5	12	33	2.086	0.0300	1.445	0.341	0.182	0.278	0.199	69.27%	1.44%	23.60%	12.60%	19.24%	13.77%
5	12	34	2.550	0.0331	1.780	0.422	0.201	0.355	0.278	69.80%	1.30%	23.71%	11.29%	19.94%	15.62%
5	12	35	2.566	0.0442	1.830	0.486	0.211	0.336	0.258	71.32%	1.72%	26.56%	11.53%	18.36%	14.10%
5	12	36	2.546	0.0241	1.800	0.454	0.201	0.323	0.255	70.70%	0.95%	25.22%	11.17%	17.94%	14.17%
5	12	37	2.866	0.0354	2.075	0.474	0.241	0.340	0.298	72.40%	1.24%	22.84%	11.61%	16.39%	14.36%
5	12	38	2.650	0.0354	1.885	0.556	0.211	0.315	0.255	71.13%	1.34%	29.50%	11.19%	16.71%	13.53%
5	12	39	2.190	0.0226	1.535	0.372	0.186	0.272	0.218	70.09%	1.03%	24.23%	12.12%	17.72%	14.20%
5	12	40	2.394	0.0408	1.695	0.438	0.192	0.296	0.236	70.80%	1.70%	25.84%	11.33%	17.46%	13.92%
Number of Birds		10													
Pen Average			2.464	0.0362	1.741	0.432	0.201	0.314	0.249	70.57%	1.47%	24.77%	11.59%	18.09%	14.29%

Percent chill and fat pad are percent of live weight, percent breast, wings, thighs and drums are percent of chill weight

Table P2. Individual male bird processing data at 45 days of age (8/24/00) Project No. MN-00-3 (Monsanto #2000-01-39-02)
(live wt is after ~12 hr feed withdrawal)

Treatment	Pen	Bird No.	Live Wt. (kg)	Fat Pad Wt. (kg)	Chill Wt. (kg)	Breast Wt. (kg)	Wings Wt. (kg)	Thighs Wt. (kg)	Drums Wt. (kg)	% Chill	% Fat Pad	Percent of Chill Weight			
												Breast	Wings	Thighs	Drums
3	16	531	2.554	0.0573	1.765	0.394	0.222	0.326	0.228	69.11%	2.24%	22.32%	12.58%	18.47%	12.92%
3	16	532	2.318	0.0332	1.630	0.408	0.188	0.292	0.241	70.32%	1.43%	25.03%	11.53%	17.91%	14.79%
3	16	533	2.470	0.0667	1.745	0.425	0.216	0.309	0.250	70.65%	2.70%	24.36%	12.38%	17.71%	14.33%
3	16	534	2.416	0.0530	1.700	0.422	0.197	0.311	0.228	70.36%	2.19%	24.82%	11.59%	18.29%	13.41%
3	16	535	2.232	0.0280	1.570	0.394	0.185	0.263	0.229	70.34%	1.25%	25.10%	11.78%	16.75%	14.59%
3	16	536	2.460	0.0464	1.715	0.450	0.196	0.299	0.241	69.72%	1.89%	26.24%	11.43%	17.43%	14.05%
3	16	537	2.038	0.0397	1.415	0.329	0.169	0.232	0.203	69.43%	1.95%	23.25%	11.94%	16.40%	14.35%
3	16	538	2.346	0.0331	1.685	0.419	0.189	0.302	0.232	71.82%	1.41%	24.87%	11.22%	17.92%	13.77%
3	16	539	2.354	0.0359	1.690	0.445	0.186	0.285	0.242	71.79%	1.53%	26.33%	11.01%	16.86%	14.32%
3	16	540	2.240	0.0404	1.570	0.398	0.186	0.247	0.231	70.09%	1.80%	25.35%	11.85%	15.73%	14.71%
Number of Birds		10													
Pen Average			2.343	0.0434	1.649	0.408	0.193	0.287	0.233	70.36%	1.84%	24.77%	11.73%	17.35%	14.12%
4	17	41	2.114	0.0308	1.475	0.375	0.171	0.272	0.211	69.77%	1.46%	25.42%	11.59%	18.44%	14.31%
4	17	42	2.172	0.0361	1.545	0.400	0.180	0.273	0.206	71.13%	1.66%	25.89%	11.65%	17.67%	13.33%
4	17	43	2.298	0.0425	1.620	0.390	0.193	0.290	0.257	70.50%	1.85%	24.07%	11.91%	17.90%	15.86%
4	17	44	2.246	0.0272	1.590	0.439	0.188	0.270	0.223	70.79%	1.21%	27.61%	11.82%	16.98%	14.03%
4	17	45	2.010	0.0360	1.395	0.332	0.156	0.250	0.205	69.40%	1.79%	23.80%	11.18%	17.92%	14.70%
4	17	46	1.800	0.0261	1.235	0.295	0.157	0.219	0.176	68.61%	1.45%	23.89%	12.71%	17.73%	14.25%
4	17	47	2.540	0.0386	1.760	0.479	0.196	0.306	0.247	69.29%	1.52%	27.22%	11.14%	17.39%	14.03%
4	17	48	2.352	0.0371	1.685	0.447	0.195	0.302	0.225	71.64%	1.58%	26.53%	11.57%	17.92%	13.35%
4	17	49	2.408	0.0366	1.680	0.379	0.194	0.293	0.223	69.77%	1.52%	22.56%	11.55%	17.44%	13.27%
Number of Birds		9													
Pen Average			2.216	0.0346	1.554	0.393	0.181	0.275	0.219	70.10%	1.56%	25.22%	11.68%	17.71%	14.13%
3	19	541	2.006	0.0352	1.385	0.322	0.172	0.247	0.186	69.04%	1.75%	23.25%	12.42%	17.83%	13.43%
3	19	542	2.436	0.0424	1.720	0.472	0.194	0.296	0.229	70.61%	1.74%	27.44%	11.28%	17.21%	13.31%
3	19	543	2.502	0.0351	1.750	0.463	0.188	0.284	0.250	69.94%	1.40%	26.46%	10.74%	16.23%	14.29%
3	19	544	2.330	0.0323	1.660	0.413	0.196	0.295	0.246	71.24%	1.39%	24.88%	11.81%	17.77%	14.82%
3	19	545	2.770	0.0440	1.935	0.482	0.210	0.350	0.264	69.86%	1.59%	24.91%	10.85%	18.09%	13.64%
3	19	546	2.516	0.0399	1.775	0.437	0.199	0.316	0.256	70.55%	1.59%	24.62%	11.21%	17.80%	14.42%
3	19	547	2.268	0.0510	1.540	0.367	0.182	0.269	0.219	67.90%	2.25%	23.83%	11.82%	17.47%	14.22%
3	19	548	2.520	0.0310	1.785	0.531	0.202	0.283	0.232	70.83%	1.23%	29.75%	11.32%	15.85%	13.00%
3	19	549	2.298	0.0215	1.665	0.449	0.192	0.293	0.238	72.45%	0.94%	26.97%	11.53%	17.60%	14.29%
3	19	550	2.608	0.0257	1.845	0.471	0.220	0.313	0.262	70.74%	0.99%	25.53%	11.92%	16.96%	14.20%
Number of Birds		10													
Pen Average			2.425	0.0358	1.706	0.441	0.196	0.295	0.238	70.32%	1.49%	25.76%	11.49%	17.28%	13.96%

Percent chill and fat pad are percent of live weight, percent breast, wings, thighs and drums are percent of chill weight

ss = sex slip (female bird)

Table P2. Individual male bird processing data at 43 days of age (8/24/00) Project No. MN-00-3 (Monsanto #2000-01-39-02)
(live wt is after ~12 hr feed withdrawal)

Treatment	Pen	Bird No.	Live Wt. (kg)	Fat Pad Wt. (kg)	Chill Wt. (kg)	Breast Wt. (kg)	Wings Wt. (kg)	Thighs Wt. (kg)	Drums Wt. (kg)	% Chill	% Fat Pad	Percent of Chill Weight			
												Breast	Wings	Thighs	Drums
1	26	51	2.204	0.0212	1.590	0.427	0.207	0.272	0.203	72.14%	0.96%	26.86%	13.02%	17.11%	12.77%
1	26	52	2.270	0.0321	1.600	0.423	0.201	0.290	0.226	70.48%	1.41%	26.44%	12.56%	18.13%	14.13%
1	26	53	2.506	0.0445	1.715	0.400	0.208	0.311	0.244	68.44%	1.78%	23.32%	12.13%	18.13%	14.23%
1	26	54	2.322	0.0398	1.655	0.409	0.193	0.299	0.223	71.27%	1.71%	24.71%	11.66%	18.07%	13.47%
1	26	55	2.426	0.0336	1.775	0.489	0.198	0.314	0.242	73.17%	1.38%	27.55%	11.15%	17.69%	13.63%
1	26	56	2.518	0.0362	1.720	0.445	0.213	0.273	0.246	68.31%	1.44%	25.87%	12.38%	15.87%	14.30%
1	26	57	2.486	0.0247	1.805	0.516	0.216	0.311	0.263	72.61%	0.99%	28.59%	11.97%	17.23%	14.57%
1	26	58	2.394	0.0302	1.715	0.459	0.203	0.321	0.239	71.64%	1.26%	26.76%	11.84%	18.72%	13.94%
1	26	59	2.512	0.0260	1.790	0.421	0.210	0.308	0.255	71.26%	1.04%	23.52%	11.73%	17.21%	14.25%
1	26	60	2.490	0.0461	1.760	0.496	0.205	0.309	0.244	70.68%	1.85%	28.18%	11.65%	17.56%	13.86%
Number of Birds		10													
Pen Average			2.413	0.0334	1.713	0.449	0.205	0.301	0.239	71.00%	1.38%	26.18%	12.01%	17.57%	13.91%
6	27	551	2.626	0.0378	1.805	0.455	0.201	0.306	0.249	68.74%	1.44%	25.21%	11.14%	16.95%	13.80%
6	27	552	2.306	0.0318	1.685	0.451	0.189	0.288	0.229	73.07%	1.38%	26.77%	11.22%	17.09%	13.59%
6	27	553	2.208	0.0326	1.515	0.357	0.177	0.282	0.235	68.61%	1.48%	23.56%	11.68%	18.61%	15.51%
6	27	554	1.728	0.0325	1.210	0.287	0.132	0.195	0.167	70.02%	1.88%	23.72%	10.91%	16.12%	13.80%
6	27	555	2.516	0.0462	1.765	0.465	0.204	0.304	0.252	70.15%	1.84%	26.35%	11.56%	17.22%	14.28%
6	27	556	2.026	0.0329	1.365	0.311	0.164	0.229	0.200	67.37%	1.62%	22.78%	12.01%	16.78%	14.65%
6	27	557	2.090	0.0378	1.465	0.352	0.168	0.279	0.200	70.10%	1.81%	24.03%	11.47%	19.04%	13.65%
6	27	558	2.364	0.0309	1.620	0.432	0.193	0.307	0.211	68.53%	1.31%	26.67%	11.91%	18.95%	13.02%
6	27	559	2.016	0.0290	1.435	0.284	0.175	0.278	0.220	71.18%	1.44%	19.79%	12.20%	19.37%	15.33%
6	27	560	2.460	0.0206	1.730	0.370	0.207	0.327	0.262	70.33%	0.84%	21.39%	11.97%	18.90%	15.14%
Number of Birds		10													
Pen Average			2.234	0.0332	1.560	0.376	0.181	0.280	0.223	69.81%	1.50%	24.03%	11.61%	17.90%	14.28%
2	30	561	1.966	0.0279	1.370	0.349	0.169	0.216	0.195	69.68%	1.42%	25.47%	12.34%	15.77%	14.23%
2	30	562	2.438	0.0369	1.720	0.432	0.208	0.286	0.250	70.55%	1.51%	25.12%	12.09%	16.63%	14.53%
2	30	563	2.386	0.0358	1.705	0.430	0.202	0.297	0.242	71.46%	1.50%	25.22%	11.85%	17.42%	14.19%
2	30	564	2.152	0.0318	1.470	0.363	0.180	0.251	0.211	68.31%	1.48%	24.69%	12.24%	17.07%	14.35%
2	30	565	2.040	0.0340	1.430	0.337	0.174	0.237	0.188	70.10%	1.67%	23.57%	12.17%	16.57%	13.15%
2	30	566	2.154	0.0374	1.500	0.356	0.183	0.271	0.225	69.64%	1.74%	23.73%	12.20%	18.07%	15.00%
2	30	567	2.532	0.0408	1.795	0.452	0.210	0.298	0.264	70.89%	1.61%	25.18%	11.70%	16.60%	14.71%
2	30	568	2.490	0.0187	1.800	0.462	0.212	0.328	0.284	72.29%	0.75%	25.67%	11.78%	18.22%	15.78%
2	30	569	2.436	0.0382	1.755	0.475	0.198	0.285	0.255	72.04%	1.57%	27.07%	11.28%	16.24%	14.53%
2	30	570	1.968	0.0290	1.360	0.332	0.175	0.225	0.191	69.11%	1.47%	24.41%	12.87%	16.54%	14.04%
Number of Birds		10													
Pen Average			2.256	0.0331	1.591	0.399	0.191	0.269	0.231	70.41%	1.47%	25.01%	12.05%	16.91%	14.45%

Percent chill and fat pad are percent of live weight, percent breast, wings, thighs and drums are percent of chill weight

(live wt is after ~12 hr feed withdrawal)															
Treatment	Pen	Bird No.	Live Wt. (kg)	Fat Pad Wt. (kg)	Chill Wt. (kg)	Breast Wt. (kg)	Wings Wt. (kg)	Thighs Wt. (kg)	Drums Wt. (kg)	% Chill	% Fat Pad	Percent of Chill Weight			
												Breast	Wings	Thighs	Drums
8	31	71	2.192	0.0230	1.540	0.345	0.183	0.267	0.238	70.26%	1.05%	22.40%	11.88%	17.34%	15.45%
8	31	72	2.364	0.0492	1.635	0.402	0.184	0.320	0.246	69.16%	2.08%	24.59%	11.25%	19.57%	15.05%
8	31	73	2.222	0.0342	1.555	0.363	0.177	0.281	0.246	69.98%	1.54%	23.34%	11.38%	18.07%	15.82%
8	31	74	1.706	0.0286	1.155	0.274	0.122	0.207	0.171	67.70%	1.68%	23.72%	10.56%	17.92%	14.81%
8	31	75	2.534	0.0397	1.800	0.429	0.205	0.297	0.262	71.03%	1.57%	23.83%	11.39%	16.50%	14.56%
8	31	76	2.632	0.0356	1.860	0.485	0.221	0.319	0.254	70.67%	1.35%	26.08%	11.88%	17.15%	13.66%
8	31	77	2.388	0.0330	1.695	0.429	0.196	0.290	0.257	70.98%	1.38%	25.31%	11.56%	17.11%	15.16%
8	31	78	2.574	0.0300	1.855	0.494	0.208	0.322	0.264	72.07%	1.17%	26.63%	11.21%	17.36%	14.23%
8	31	79	2.442	0.0383	1.720	0.472	0.203	0.312	0.244	70.43%	1.57%	27.44%	11.80%	18.14%	14.19%
Number of Birds		9													
Pen Average			2.339	0.0346	1.646	0.410	0.189	0.291	0.242	70.25%	1.49%	24.82%	11.44%	17.68%	14.77%
5	32	571	2.364	0.0327	1.665	0.433	0.188	0.294	0.241	70.43%	1.38%	26.01%	11.29%	17.66%	14.47%
5	32	572	1.998	0.0258	1.355	0.330	0.180	0.226	0.191	67.82%	1.29%	24.35%	13.28%	16.68%	14.10%
5	32	573	2.334	0.0485	1.635	0.454	0.191	0.299	0.230	70.05%	2.08%	27.77%	11.68%	18.29%	14.07%
5	32	574	2.446	0.0195	1.760	0.455	0.202	0.302	0.249	71.95%	0.80%	25.85%	11.48%	17.16%	14.15%
5	32	575	2.476	0.0280	1.755	0.472	0.202	0.307	0.254	70.88%	1.13%	26.89%	11.51%	17.49%	14.47%
5	32	576	2.236	0.0275	1.570	0.412	0.186	0.268	0.229	70.21%	1.23%	26.24%	11.85%	17.07%	14.59%
5	32	577	2.220	0.0453	1.555	0.361	0.191	0.271	0.225	70.05%	2.04%	23.22%	12.28%	17.43%	14.47%
5	32	578	2.582	0.0245	1.845	0.455	0.209	0.342	0.287	71.46%	0.95%	24.66%	11.33%	18.54%	15.56%
5	32	579	2.698	0.0383	1.930	0.502	0.222	0.334	0.258	71.53%	1.42%	26.01%	11.50%	17.31%	13.37%
Number of Birds		9													
Pen Average			2.373	0.0322	1.674	0.430	0.197	0.294	0.240	70.49%	1.37%	25.67%	11.80%	17.51%	14.36%
2	34	81	2.626	0.0441	1.920	0.510	0.215	0.346	0.294	73.12%	1.68%	26.56%	11.20%	18.02%	15.31%
2	34	82	2.308	0.0219	1.600	0.397	0.184	0.259	0.242	69.32%	0.95%	24.81%	11.50%	16.19%	15.13%
2	34	83	2.322	0.0276	1.645	0.442	0.189	0.284	0.235	70.84%	1.19%	26.87%	11.49%	17.26%	14.29%
2	34	84	2.564	0.0410	1.840	0.497	0.215	0.301	0.273	71.76%	1.60%	27.01%	11.68%	16.36%	14.84%
2	34	85	2.052	0.0383	1.430	0.342	0.178	0.249	0.210	69.69%	1.87%	23.92%	12.45%	17.41%	14.69%
2	34	86	2.626	0.0570	1.900	0.502	0.206	0.317	0.263	72.35%	2.17%	26.42%	10.84%	16.68%	13.84%
2	34	87	2.272	0.0300	1.610	0.411	0.196	0.275	0.238	70.86%	1.32%	25.53%	12.17%	17.08%	14.78%
2	34	88	2.552	0.0390	1.860	0.484	0.214	0.325	0.273	72.88%	1.53%	26.02%	11.51%	17.47%	14.68%
2	34	89	2.612	0.0414	1.835	0.459	0.216	0.317	0.265	70.25%	1.58%	25.01%	11.77%	17.28%	14.44%
2	34	90	2.752	0.0559	1.950	0.444	0.219	0.356	0.281	70.86%	2.03%	22.77%	11.23%	18.26%	14.41%
Number of Birds		10													
Pen Average			2.469	0.0396	1.759	0.449	0.203	0.303	0.257	71.19%	1.59%	25.49%	11.58%	17.20%	14.64%

Percent chill and fat pad are percent of live weight, percent breast, wings, thighs and drums are percent of chill weight

ss = sex slip (female bird)

Table P2. Individual male bird processing data at 43 days of age (8/24/00) Project No. MN-00-3 (Monsanto #2000-01-39-02)
(live wt is after ~12 hr feed withdrawal)

Treatment	Pen	Bird No.	Live Wt. (kg)	Fat Pad Wt. (kg)	Chill Wt. (kg)	Breast Wt. (kg)	Wings Wt. (kg)	Thighs Wt. (kg)	Drums Wt. (kg)	% Chill	% Fat Pad	Percent of Chill Weight			
												Breast	Wings	Thighs	Drums
4	39	91	2.494	0.0437	1.780	0.468	0.204	0.287	0.223	71.37%	1.75%	26.29%	11.46%	16.12%	12.53%
4	39	92	2.372	0.0436	1.675	0.432	0.208	0.270	0.250	70.62%	1.84%	25.79%	12.42%	16.12%	14.93%
4	39	93	2.484	0.0411	1.765	0.477	0.185	0.296	0.244	71.05%	1.65%	27.03%	10.48%	16.77%	13.82%
4	39	94	2.472	0.0426	1.735	0.446	0.208	0.316	0.233	70.19%	1.72%	25.71%	11.99%	18.21%	13.43%
4	39	95	2.614	0.0319	1.865	0.550	0.213	0.284	0.276	71.35%	1.22%	29.49%	11.42%	15.23%	14.80%
4	39	96	2.254	0.0258	1.580	0.390	0.202	0.250	0.246	70.10%	1.14%	24.68%	12.78%	15.82%	15.57%
4	39	97	2.432	0.0271	1.705	0.430	0.203	0.285	0.244	70.11%	1.11%	25.22%	11.91%	16.72%	14.31%
4	39	98	2.594	0.0281	1.830	0.500	0.206	0.318	0.248	70.55%	1.08%	27.32%	11.26%	17.38%	13.55%
4	39	99	2.292	0.0412	1.620	0.411	0.164	0.266	0.229	70.68%	1.80%	25.37%	10.12%	16.42%	14.14%
4	39	100	2.390	0.0528	1.710	0.393	0.199	0.295	0.238	71.55%	2.21%	22.98%	11.64%	17.25%	13.92%
Number of Birds		10													
Pen Average			2.440	0.0378	1.727	0.450	0.199	0.287	0.243	70.76%	1.55%	25.99%	11.55%	16.60%	14.10%
3	40	591	2.266	0.0270	1.590	0.448	0.196	0.272	0.239	70.17%	1.19%	28.18%	12.33%	17.11%	15.03%
3	40	592	2.306	0.0306	1.610	0.399	0.175	0.275	0.239	69.82%	1.33%	24.78%	10.87%	17.08%	14.84%
3	40	593	2.514	0.0497	1.750	0.445	0.201	0.318	0.266	69.61%	1.98%	25.43%	11.49%	18.17%	15.20%
3	40	594	2.518	0.0391	1.755	0.417	0.193	0.306	0.250	69.70%	1.55%	23.76%	11.00%	17.44%	14.25%
3	40	595	2.074	0.0233	1.440	0.363	0.162	0.242	0.225	69.43%	1.12%	25.21%	11.25%	16.81%	15.63%
3	40	596	2.442	0.0287	1.705	0.426	0.214	0.289	0.241	69.82%	1.18%	24.99%	12.55%	16.95%	14.13%
3	40	597	2.822	0.0182	2.030	0.536	0.209	0.337	0.279	71.93%	0.64%	26.40%	10.30%	16.60%	13.74%
3	40	598	2.452	0.0414	1.750	0.456	0.210	0.311	0.238	71.37%	1.69%	26.06%	12.00%	17.77%	13.60%
Number of Birds		8													
Pen Average			2.424	0.0323	1.704	0.436	0.195	0.294	0.247	70.23%	1.34%	25.60%	11.47%	17.24%	14.55%
8	42	101	2.606	0.0352	1.835	0.426	0.218	0.329	0.275	70.41%	1.35%	23.22%	11.88%	17.93%	14.99%
8	42	102	2.118	0.0391	1.515	0.338	0.181	0.276	0.208	71.53%	1.85%	22.31%	11.95%	18.22%	13.73%
8	42	103	2.486	0.0306	1.740	0.450	0.199	0.300	0.248	69.99%	1.23%	25.86%	11.44%	17.24%	14.25%
8	42	104	2.338	0.0246	1.615	0.416	0.188	0.295	0.254	69.08%	1.05%	25.76%	11.64%	18.27%	15.73%
8	42	105	2.482	0.0146	1.760	0.447	0.199	0.288	0.247	70.91%	0.59%	25.40%	11.31%	16.36%	14.03%
8	42	106	2.374	0.0388	1.715	0.420	0.195	0.306	0.228	72.24%	1.63%	24.49%	11.37%	17.84%	13.29%
8	42	107	3.090	0.0405	2.305	0.614	0.241	0.422	0.329	74.60%	1.31%	26.64%	10.46%	18.31%	14.27%
8	42	108	2.470	0.0341	1.765	0.467	0.189	0.307	0.250	71.46%	1.38%	26.46%	10.71%	17.39%	14.16%
8	42	109	2.534	0.0247	1.815	0.514	0.211	0.328	0.257	71.63%	0.97%	28.32%	11.63%	18.07%	14.16%
8	42	110	2.332	0.0454	1.665	0.440	0.198	0.299	0.241	71.40%	1.95%	26.43%	11.89%	17.96%	14.47%
Number of Birds		10													
Pen Average			2.483	0.0328	1.773	0.453	0.202	0.315	0.254	71.32%	1.33%	25.49%	11.43%	17.76%	14.31%

Percent chill and fat pad are percent of live weight, percent breast, wings, thighs and drums are percent of chill weight

Sex slip the bird

Table P2. Individual male bird processing data at 43 days of age (0/24/00) Project No. MN-00-3 (Monsanto #2000-01-00-02)
(live wt is after ~12 hr feed withdrawal)

Treatment	Pen	Bird No.	Live Wt. (kg)	Fat Pad Wt. (kg)	Chill Wt. (kg)	Breast Wt. (kg)	Wings Wt. (kg)	Thighs Wt. (kg)	Drums Wt. (kg)	% Chill	% Fat Pad	Percent of Chill Weight			
												Breast	Wings	Thighs	Drums
5	45	601	2.380	0.0260	1.710	0.449	0.206	0.314	0.238	71.85%	1.09%	26.26%	12.05%	18.36%	13.92%
5	45	602	2.314	0.0295	1.600	0.395	0.185	0.300	0.236	69.14%	1.27%	24.69%	11.56%	18.75%	14.75%
5	45	603	2.390	0.0281	1.675	0.449	0.205	0.296	0.215	70.08%	1.18%	26.81%	12.24%	17.67%	12.84%
5	45	604	2.498	0.0323	1.775	0.464	0.207	0.302	0.255	71.06%	1.29%	26.14%	11.66%	17.01%	14.37%
5	45	605	2.524	0.0259	1.805	0.425	0.221	0.318	0.270	71.51%	1.03%	23.55%	12.24%	17.62%	14.96%
5	45	606	2.620	0.0338	1.855	0.437	0.205	0.336	0.262	70.80%	1.29%	23.56%	11.05%	18.11%	14.12%
5	45	607	2.510	0.0298	1.785	0.445	0.210	0.292	0.273	71.12%	1.19%	24.93%	11.76%	16.36%	15.29%
5	45	608	2.176	0.0262	1.580	0.379	0.179	0.276	0.236	72.61%	1.20%	23.99%	11.33%	17.47%	14.94%
5	45	609	2.326	0.0343	1.645	0.417	0.188	0.282	0.225	70.72%	1.47%	25.35%	11.43%	17.14%	13.68%
5	45	610	2.660	0.0386	1.910	0.501	0.210	0.340	0.269	71.80%	1.45%	26.23%	10.99%	17.80%	14.08%
Number of Birds		10													
Pen Average			2.440	0.0305	1.734	0.436	0.202	0.306	0.248	71.07%	1.25%	25.15%	11.63%	17.63%	14.29%
1	47	111	2.548	0.0428	1.775	0.410	0.203	0.325	0.267	69.66%	1.68%	23.10%	11.44%	18.31%	15.04%
1	47	112	2.512	0.0403	1.690	0.440	0.211	0.310	0.226	67.28%	1.60%	26.04%	12.49%	18.34%	13.37%
1	47	113	2.342	0.0236	1.685	0.426	0.202	0.303	0.257	71.95%	1.01%	25.28%	11.99%	17.98%	15.25%
1	47	115	2.490	0.0706	1.725	0.396	0.208	0.305	0.229	69.28%	2.84%	22.96%	12.06%	17.68%	13.28%
1	47	116	2.540	0.0192	1.815	0.455	0.206	0.322	0.270	71.46%	0.76%	25.07%	11.35%	17.74%	14.88%
1	47	117	2.598	0.0375	1.785	0.458	0.215	0.309	0.246	68.71%	1.44%	25.66%	12.04%	17.31%	13.78%
1	47	118	2.678	0.0336	1.885	0.506	0.217	0.299	0.262	70.39%	1.25%	26.84%	11.51%	15.86%	13.90%
1	47	119	2.626	0.0323	1.875	0.468	0.205	0.334	0.268	71.40%	1.23%	24.96%	10.93%	17.81%	14.29%
1	47	120	2.536	0.0334	1.785	0.479	0.209	0.315	0.251	70.39%	1.32%	26.83%	11.71%	17.65%	14.06%
Number of Birds		9													
Pen Average			2.541	0.0370	1.780	0.449	0.208	0.314	0.253	70.06%	1.46%	25.19%	11.72%	17.63%	14.21%
6	48	611	2.454	0.0281	1.720	0.442	0.197	0.305	0.239	70.09%	1.15%	25.70%	11.45%	17.73%	13.90%
6	48	612	1.922	0.0432	1.315	0.331	0.155	0.229	0.183	68.42%	2.25%	25.17%	11.79%	17.41%	13.92%
6	48	613	2.254	0.0317	1.570	0.391	0.192	0.280	0.240	69.65%	1.41%	24.90%	12.23%	17.83%	15.29%
6	48	614	2.058	0.0245	1.420	0.308	0.176	0.257	0.232	69.00%	1.19%	21.69%	12.39%	18.10%	16.34%
6	48	615	2.474	0.0561	1.725	0.420	0.190	0.302	0.245	69.73%	2.27%	24.35%	11.01%	17.51%	14.20%
6	48	616	2.712	0.0372	1.940	0.504	0.221	0.356	0.276	71.53%	1.37%	25.98%	11.39%	18.35%	14.23%
6	48	617	2.542	0.0388	1.800	0.442	0.203	0.326	0.244	70.81%	1.53%	24.56%	11.28%	18.11%	13.56%
6	48	618	2.066	0.0351	1.465	0.359	0.171	0.261	0.233	70.91%	1.70%	24.51%	11.67%	17.82%	15.90%
6	48	619	2.648	0.0480	1.845	0.488	0.203	0.343	0.276	69.68%	1.81%	26.45%	11.00%	18.59%	14.96%
Number of Birds		9													
Pen Average			2.348	0.0381	1.644	0.409	0.190	0.295	0.241	69.98%	1.63%	24.81%	11.58%	17.94%	14.70%

Percent chill and fat pad are percent of live weight, percent breast, wings, thighs and drums are percent of chill weight

ss = sex slip (female bird)

Table P2. Individual male bird processing data at 43 days of age (8/24/00) Project No. MN-00-3 (Monsanto #2000-01-39-02)
(live wt is after ~12 hr feed withdrawal)

Treatment	Pen	Bird No.	Live Wt. (kg)	Fat Pad Wt. (kg)	Chill Wt. (kg)	Breast Wt. (kg)	Wings Wt. (kg)	Thighs Wt. (kg)	Drums Wt. (kg)	% Chill	% Fat Pad	Percent of Chill Weight			
												Breast	Wings	Thighs	Drums
5	49	121	2.530	0.0349	1.755	0.426	0.199	0.281	0.248	69.37%	1.38%	24.27%	11.34%	16.01%	14.13%
5	49	123	2.250	0.0420	1.570	0.411	0.187	0.272	0.214	69.78%	1.87%	26.18%	11.91%	17.32%	13.63%
5	49	124	2.598	0.0415	1.850	0.438	0.205	0.338	0.272	71.21%	1.60%	23.68%	11.08%	18.27%	14.70%
5	49	125	2.570	0.0412	1.785	0.440	0.198	0.308	0.264	69.46%	1.60%	24.65%	11.09%	17.25%	14.79%
5	49	126	2.392	0.0281	1.740	0.458	0.192	0.313	0.262	72.74%	1.17%	26.32%	11.03%	17.99%	15.06%
5	49	127	2.188	0.0172	1.585	0.453	0.178	0.260	0.243	72.44%	0.79%	28.58%	11.23%	16.40%	15.33%
5	49	128	2.294	0.0314	1.645	0.386	0.192	0.320	0.248	71.71%	1.37%	23.47%	11.67%	19.45%	15.08%
5	49	129	2.406	0.0489	1.700	0.441	0.193	0.276	0.238	70.66%	2.03%	25.94%	11.35%	16.24%	14.00%
5	49	130	2.262	0.0384	1.575	0.405	0.193	0.276	0.216	69.63%	1.70%	25.71%	12.25%	17.52%	13.71%
Number of Birds		9													
Pen Average			2.388	0.0360	1.689	0.429	0.193	0.294	0.245	70.78%	1.50%	25.42%	11.44%	17.39%	14.49%
8	50	621	2.502	0.0435	1.775	0.458	0.200	0.326	0.263	70.94%	1.74%	25.80%	11.27%	18.37%	14.82%
8	50	622	2.430	0.0411	1.720	0.425	0.203	0.301	0.253	70.78%	1.69%	24.71%	11.80%	17.50%	14.71%
8	50	623	2.444	0.0391	1.725	0.457	0.195	0.300	0.266	70.58%	1.60%	26.49%	11.30%	17.39%	15.42%
8	50	624	2.478	0.0295	1.765	0.424	0.218	0.314	0.268	71.23%	1.19%	24.02%	12.35%	17.79%	15.18%
8	50	625	2.196	0.0345	1.540	0.395	0.180	0.275	0.211	70.13%	1.57%	25.65%	11.69%	17.86%	13.70%
8	50	626	2.164	0.0164	1.555	0.382	0.182	0.278	0.238	71.86%	0.76%	24.57%	11.70%	17.88%	15.31%
8	50	627	2.474	0.0182	1.750	0.445	0.215	0.319	0.254	70.74%	0.74%	25.43%	12.29%	18.23%	14.51%
8	50	628	2.000	0.0271	1.410	0.340	0.168	0.230	0.211	70.50%	1.36%	24.11%	11.91%	16.31%	14.96%
8	50	629	2.264	0.0202	1.610	0.401	0.190	0.246	0.233	71.11%	0.89%	24.91%	11.80%	15.28%	14.47%
8	50	630	2.210	0.0277	1.570	0.400	0.189	0.263	0.227	71.04%	1.25%	25.48%	12.04%	16.75%	14.46%
Number of Birds		10													
Pen Average			2.316	0.0297	1.642	0.413	0.194	0.285	0.242	70.89%	1.28%	25.12%	11.82%	17.34%	14.75%
2	54	131	2.628	0.0820	1.855	0.479	0.207	0.347	0.249	70.59%	3.12%	25.82%	11.16%	18.71%	13.42%
2	54	132	2.324	0.0413	1.645	0.407	0.190	0.267	0.238	70.78%	1.78%	24.74%	11.55%	16.23%	14.47%
2	54	133	2.108	0.0300	1.520	0.376	0.177	0.267	0.243	72.11%	1.42%	24.74%	11.64%	17.57%	15.99%
2	54	134	2.334	0.0326	1.710	0.434	0.188	0.282	0.262	73.26%	1.40%	25.38%	10.99%	16.49%	15.32%
2	54	135	2.354	0.0212	1.645	0.381	0.194	0.309	0.250	69.88%	0.90%	23.16%	11.79%	18.78%	15.20%
2	54	136	2.310	0.0313	1.670	0.435	0.202	0.299	0.231	72.29%	1.35%	26.05%	12.10%	17.90%	13.83%
2	54	137	2.670	0.0374	1.895	0.473	0.214	0.344	0.283	70.97%	1.40%	24.96%	11.29%	18.15%	14.93%
2	54	138	2.200	0.0378	1.545	0.380	0.180	0.270	0.240	70.23%	1.72%	24.60%	11.65%	17.48%	15.53%
2	54	139	2.372	0.0271	1.670	0.418	0.193	0.284	0.231	70.40%	1.14%	25.03%	11.56%	17.01%	13.83%
2	54	140	2.356	0.0236	1.710	0.432	0.209	0.300	0.273	72.58%	1.00%	25.26%	12.22%	17.54%	15.96%
Number of Birds		10													
Pen Average			2.366	0.0364	1.687	0.422	0.195	0.297	0.250	71.31%	1.52%	24.97%	11.60%	17.59%	14.85%

Percent chill and fat pad are percent of live weight, percent breast, wings, thighs and drums are percent of chill weight

ss slip (bird)

Table P2. Individual male bird processing data at 43 days of age (01/24/00) Project No. M17-00-3 (Monsanto #2000-0100-02)
(live wt is after ~12 hr feed withdrawal)

Treatment	Pen	Bird No.	Live Wt. (kg)	Fat Pad Wt. (kg)	Chill Wt. (kg)	Breast Wt. (kg)	Wings Wt. (kg)	Thighs Wt. (kg)	Drums Wt. (kg)	% Chill	% Fat Pad	Percent of Chill Weight			
												Breast	Wings	Thighs	Drums
1	56	141	2.174	0.0351	1.510	0.396	0.178	0.260	0.224	69.46%	1.61%	26.23%	11.79%	17.22%	14.83%
1	56	142	2.498	0.0125	1.810	0.438	0.204	0.313	0.272	72.46%	0.50%	24.20%	11.27%	17.29%	15.03%
1	56	143	2.576	0.0240	1.875	0.474	0.216	0.320	0.278	72.79%	0.93%	25.28%	11.52%	17.07%	14.83%
1	56	144	2.626	0.0417	1.870	0.475	0.203	0.326	0.253	71.21%	1.59%	25.40%	10.86%	17.43%	13.53%
1	56	145	2.236	0.0279	1.590	0.389	0.196	0.286	0.239	71.11%	1.25%	24.47%	12.33%	17.99%	15.03%
1	56	146	2.364	0.0352	1.660	0.424	0.187	0.295	0.261	70.22%	1.49%	25.54%	11.27%	17.77%	15.72%
1	56	147	2.278	0.0442	1.610	0.412	0.192	0.264	0.233	70.68%	1.94%	25.59%	11.93%	16.40%	14.47%
1	56	148	2.456	0.0284	1.750	0.416	0.196	0.311	0.269	71.25%	1.16%	23.77%	11.20%	17.77%	15.37%
1	56	149ss	2.034	0.0449	1.445	0.364	0.175	0.241	0.208	71.04%	2.21%	25.19%	12.11%	16.68%	14.39%
1	56	150	2.636	0.0452	1.860	0.453	0.210	0.324	0.271	70.56%	1.71%	24.35%	11.29%	17.42%	14.57%
Number of Birds		10													
Pen Average			2.388	0.0339	1.698	0.424	0.196	0.294	0.251	71.08%	1.44%	25.00%	11.56%	17.30%	14.78%
6	58	641	2.266	0.0273	1.560	0.323	0.193	0.278	0.248	68.84%	1.20%	20.71%	12.37%	17.82%	15.90%
6	58	642	2.652	0.0393	1.885	0.447	0.209	0.335	0.273	71.08%	1.48%	23.71%	11.09%	17.77%	14.48%
6	58	643	2.490	0.0597	1.755	0.440	0.202	0.310	0.265	70.48%	2.40%	25.07%	11.51%	17.66%	15.10%
6	58	644	2.324	0.0284	1.660	0.422	0.201	0.298	0.253	71.43%	1.22%	25.42%	12.11%	17.95%	15.24%
6	58	645	2.244	0.0282	1.605	0.372	0.177	0.295	0.254	71.52%	1.26%	23.18%	11.03%	18.38%	15.83%
6	58	646	2.344	0.0440	1.625	0.350	0.193	0.316	0.251	69.33%	1.88%	21.54%	11.88%	19.45%	15.45%
6	58	647	2.128	0.0363	1.530	0.386	0.178	0.282	0.221	71.90%	1.71%	25.23%	11.63%	18.43%	14.44%
6	58	648	2.208	0.0246	1.595	0.414	0.196	0.275	0.227	72.24%	1.11%	25.96%	12.29%	17.24%	14.23%
6	58	649	2.650	0.0333	1.885	0.417	0.218	0.326	0.288	71.13%	1.26%	22.12%	11.56%	17.29%	15.28%
6	58	650	2.594	0.0294	1.885	0.488	0.235	0.319	0.259	72.67%	1.13%	25.89%	12.47%	16.92%	13.74%
Number of Birds		10													
Pen Average			2.390	0.0351	1.699	0.406	0.200	0.303	0.254	71.06%	1.47%	23.88%	11.79%	17.89%	14.97%
3	62	151	2.464	0.0299	1.725	0.412	0.201	0.307	0.256	70.01%	1.21%	23.88%	11.65%	17.80%	14.84%
3	62	152	1.940	0.0139	1.385	0.364	0.157	0.213	0.202	71.39%	0.72%	26.28%	11.34%	15.38%	14.58%
3	62	153	2.262	0.0357	1.600	0.392	0.180	0.300	0.248	70.73%	1.58%	24.50%	11.25%	18.75%	15.50%
3	62	154	2.390	0.0389	1.745	0.467	0.198	0.310	0.233	73.01%	1.63%	26.76%	11.35%	17.77%	13.35%
3	62	155	2.280	0.0352	1.620	0.376	0.197	0.307	0.242	71.05%	1.54%	23.21%	12.16%	18.95%	14.94%
3	62	156	2.518	0.0392	1.790	0.489	0.205	0.343	0.248	71.09%	1.56%	27.32%	11.45%	19.16%	13.85%
3	62	157	2.376	0.0473	1.705	0.436	0.198	0.298	0.230	71.76%	1.99%	25.57%	11.61%	17.48%	13.49%
3	62	158	2.174	0.0423	1.545	0.421	0.178	0.270	0.192	71.07%	1.95%	27.25%	11.52%	17.48%	12.43%
3	62	159	2.802	0.0452	2.030	0.528	0.223	0.330	0.291	72.45%	1.61%	26.01%	10.99%	16.26%	14.33%
3	62	160	2.404	0.0405	1.690	0.454	0.206	0.274	0.237	70.30%	1.68%	26.86%	12.19%	16.21%	14.02%
Number of Birds		10													
Pen Average			2.361	0.0368	1.684	0.434	0.194	0.295	0.238	71.29%	1.55%	25.77%	11.55%	17.52%	14.13%

Percent chill and fat pad are percent of live weight, percent breast, wings, thighs and drums are percent of chill weight

ss = sex slip (female bird)

Table P2. Individual male bird processing data at 43 days of age (8/24/00) Project No. MN-00-3 (Monsanto #2000-01-39-02)
(live wt is after ~12 hr feed withdrawal)

Treatment	Pen	Bird No.	Live Wt. (kg)	Fat Pad Wt. (kg)	Chill Wt. (kg)	Breast Wt. (kg)	Wings Wt. (kg)	Thighs Wt. (kg)	Drums Wt. (kg)	% Chill	% Fat Pad	Percent of Chill Weight			
												Breast	Wings	Thighs	Drums
4	64	651	2.646	0.0428	1.875	0.391	0.203	0.339	0.297	70.86%	1.62%	20.85%	10.83%	18.08%	15.84%
4	64	652	2.622	0.0409	1.875	0.474	0.222	0.352	0.280	71.51%	1.56%	25.28%	11.84%	18.77%	14.93%
4	64	653	2.308	0.0412	1.610	0.404	0.192	0.275	0.245	69.76%	1.79%	25.09%	11.93%	17.08%	15.22%
4	64	654	2.042	0.0250	1.465	0.350	0.171	0.249	0.213	71.74%	1.22%	23.89%	11.67%	17.00%	14.54%
4	64	655	2.764	0.0326	1.975	0.504	0.212	0.344	0.298	71.45%	1.18%	25.52%	10.73%	17.42%	15.09%
4	64	656	2.046	0.0259	1.410	0.339	0.171	0.259	0.220	68.91%	1.27%	24.04%	12.13%	18.37%	15.60%
4	64	657	2.610	0.0346	1.790	0.444	0.200	0.290	0.252	68.58%	1.33%	24.80%	11.17%	16.20%	14.08%
4	64	658	2.300	0.0268	1.625	0.451	0.179	0.255	0.232	70.65%	1.17%	27.75%	11.02%	15.69%	14.28%
4	64	659	1.944	0.0177	1.390	0.335	0.172	0.257	0.204	71.50%	0.91%	24.10%	12.37%	18.49%	14.68%
Number of Birds		9													
Pen Average			2.365	0.0319	1.668	0.410	0.191	0.291	0.249	70.55%	1.34%	24.59%	11.52%	17.46%	14.92%
8	67	161	2.340	0.0226	1.685	0.390	0.194	0.320	0.265	72.01%	0.97%	23.15%	11.51%	18.99%	15.73%
8	67	162	2.022	0.0322	1.420	0.394	0.164	0.240	0.216	70.23%	1.59%	27.75%	11.55%	16.90%	15.21%
8	67	163	2.528	0.0184	1.790	0.491	0.190	0.314	0.251	70.81%	0.73%	27.43%	10.61%	17.54%	14.02%
8	67	164	2.150	0.0299	1.480	0.352	0.179	0.271	0.222	68.84%	1.39%	23.78%	12.09%	18.31%	15.00%
8	67	165	2.456	0.0327	1.670	0.389	0.208	0.299	0.232	68.00%	1.33%	23.29%	12.46%	17.90%	13.89%
8	67	166	2.492	0.0254	1.785	0.447	0.202	0.321	0.248	71.63%	1.02%	25.04%	11.32%	17.98%	13.89%
8	67	167	2.502	0.0355	1.765	0.457	0.206	0.292	0.270	70.54%	1.42%	25.89%	11.67%	16.54%	15.30%
8	67	168	2.622	0.0412	1.825	0.470	0.204	0.326	0.265	69.60%	1.57%	25.75%	11.18%	17.86%	14.52%
8	67	169	2.184	0.0285	1.555	0.427	0.184	0.270	0.220	71.20%	1.30%	27.46%	11.83%	17.36%	14.15%
8	67	170	2.204	0.0142	1.555	0.394	0.187	0.248	0.210	70.55%	0.64%	25.34%	12.03%	15.95%	13.50%
Number of Birds		10													
Pen Average			2.350	0.0281	1.653	0.421	0.192	0.290	0.240	70.34%	1.20%	25.49%	11.63%	17.54%	14.52%
4	69	661	2.562	0.0632	1.800	0.433	0.209	0.315	0.261	70.26%	2.47%	24.06%	11.61%	17.50%	14.50%
4	69	662	2.858	0.0443	2.060	0.553	0.230	0.339	0.302	72.08%	1.55%	26.84%	11.17%	16.46%	14.66%
4	69	663	2.066	0.0349	1.420	0.330	0.175	0.238	0.225	68.73%	1.69%	23.24%	12.32%	16.76%	15.85%
4	69	664	2.032	0.0312	1.435	0.383	0.165	0.228	0.201	70.62%	1.54%	26.69%	11.50%	15.89%	14.01%
4	69	665	2.336	0.0322	1.610	0.396	0.189	0.281	0.234	68.92%	1.38%	24.60%	11.74%	17.45%	14.53%
4	69	666	2.822	0.0466	1.995	0.488	0.245	0.334	0.291	70.69%	1.65%	24.46%	12.28%	16.74%	14.59%
4	69	667	2.876	0.0374	2.060	0.520	0.234	0.370	0.281	71.63%	1.30%	25.24%	11.36%	17.96%	13.64%
4	69	668	2.828	0.0473	2.050	0.552	0.223	0.326	0.277	72.49%	1.67%	26.93%	10.88%	15.90%	13.51%
4	69	669	2.488	0.0371	1.740	0.430	0.192	0.296	0.252	69.94%	1.49%	24.71%	11.03%	17.01%	14.48%
4	69	670	2.606	0.0470	1.860	0.466	0.226	0.330	0.258	71.37%	1.80%	25.05%	12.15%	17.74%	13.87%
Number of Birds		10													
Pen Average			2.547	0.0421	1.803	0.455	0.209	0.306	0.258	70.67%	1.65%	25.18%	11.60%	16.94%	14.36%

Percent chill and fat pad are percent of live weight, percent breast, wings, thighs and drums are percent of chill weight

ss - don slip (1 bird)

Percent chill and fat pad are percent of live weight, percent breast, wings, thighs and drums are percent of chill weight

ss = sex slip (female bird)

Table P2. Individual male bird processing data at 43 days of age (8/24/00) Project No. MN-00-3 (Monsanto #2000-01-39-02)
(live wt is after ~12 hr feed withdrawal)

Treatment	Pen	Bird No.	Live Wt. (kg)	Fat Pad Wt. (kg)	Chill Wt. (kg)	Breast Wt. (kg)	Wings Wt. (kg)	Thighs Wt. (kg)	Drums Wt. (kg)	% Chill	% Fat Pad	Percent of Chill Weight			
												Breast	Wings	Thighs	Drums
5	78	191	2.658	0.0462	1.885	0.426	0.223	0.318	0.274	70.92%	1.74%	22.60%	11.83%	16.87%	14.54%
5	78	192	2.544	0.0304	1.810	0.464	0.217	0.318	0.282	71.15%	1.19%	25.64%	11.99%	17.57%	15.58%
5	78	193	2.394	0.0374	1.675	0.398	0.186	0.303	0.266	69.97%	1.56%	23.76%	11.10%	18.09%	15.88%
5	78	194	2.448	0.0332	1.715	0.404	0.194	0.313	0.254	70.06%	1.36%	23.56%	11.31%	18.25%	14.81%
5	78	195	2.132	0.0332	1.510	0.349	0.181	0.257	0.217	70.83%	1.56%	23.11%	11.99%	17.02%	14.37%
5	78	196	2.234	0.0453	1.570	0.373	0.192	0.263	0.239	70.28%	2.03%	23.76%	12.23%	16.75%	15.22%
5	78	197	2.262	0.0337	1.550	0.370	0.187	0.269	0.227	68.52%	1.49%	23.87%	12.06%	17.35%	14.65%
5	78	198	2.056	0.0273	1.430	0.311	0.182	0.263	0.212	69.55%	1.33%	21.75%	12.73%	18.39%	14.83%
5	78	199	2.374	0.0501	1.670	0.380	0.204	0.310	0.239	70.35%	2.11%	22.75%	12.22%	18.56%	14.31%
Number of Birds		9													
Pen Average			2.345	0.0374	1.646	0.386	0.196	0.290	0.246	70.18%	1.60%	23.42%	11.94%	17.65%	14.91%
2	79	691	2.192	0.0370	1.570	0.405	0.180	0.288	0.211	71.62%	1.69%	25.80%	11.46%	18.34%	13.44%
2	79	692	2.226	0.0265	1.585	0.404	0.188	0.267	0.241	71.20%	1.19%	25.49%	11.86%	16.85%	15.21%
2	79	693	2.490	0.0354	1.775	0.410	0.210	0.303	0.256	71.29%	1.42%	23.10%	11.83%	17.07%	14.42%
2	79	694	2.638	0.0376	1.870	0.456	0.214	0.319	0.264	70.89%	1.43%	24.39%	11.44%	17.06%	14.12%
2	79	695	2.054	0.0246	1.470	0.371	0.183	0.244	0.225	71.57%	1.20%	25.24%	12.45%	16.60%	15.31%
2	79	696	2.642	0.0319	1.880	0.540	0.209	0.311	0.262	71.16%	1.21%	28.72%	11.12%	16.54%	13.94%
2	79	697	2.510	0.0455	1.775	0.444	0.195	0.333	0.251	70.72%	1.81%	25.01%	10.99%	18.76%	14.14%
2	79	698	2.682	0.0380	1.935	0.515	0.223	0.343	0.270	72.15%	1.42%	26.61%	11.52%	17.73%	13.95%
2	79	699	2.048	0.0252	1.500	0.414	0.169	0.228	0.205	73.24%	1.23%	27.60%	11.27%	15.20%	13.67%
2	79	700	2.246	0.0232	1.550	0.407	0.185	0.273	0.219	69.01%	1.03%	26.26%	11.94%	17.61%	14.13%
Number of Birds		10													
Pen Average			2.373	0.0325	1.691	0.437	0.196	0.291	0.240	71.28%	1.36%	25.82%	11.59%	17.18%	14.23%

Percent chill and fat pad are percent of live weight, percent breast, wings, thighs and drums are percent of chill weight

Table P3. Individual female bird processing data at 44 days of age (8/25/00) Project No. MN-00-3 (Monsanto #2000-01-39-02)
(live wt is after ~12 hr feed withdrawal)

Treatment	Pen	Bird No.	Live Wt. (kg)	Fat Pad Wt. (kg)	Chill Wt. (kg)	Breast Wt. (kg)	Wings Wt. (kg)	Thighs Wt. (kg)	Drums Wt. (kg)	% Chill	% Fat Pad	Percent of Chill Weight			
												Breast	Wings	Thighs	Drums
5	3	201	1.700	0.0336	1.245	0.287	0.144	0.182	0.176	73.24%	1.98%	23.05%	11.57%	14.62%	14.11%
5	3	202	2.076	0.0314	1.505	0.374	0.171	0.281	0.198	72.50%	1.51%	24.85%	11.36%	18.67%	13.16%
5	3	203	1.942	0.0323	1.370	0.382	0.162	0.199	0.185	70.55%	1.66%	27.88%	11.82%	14.53%	13.50%
5	3	204	1.954	0.0414	1.370	0.336	0.166	0.244	0.191	70.11%	2.12%	24.53%	12.12%	17.81%	13.94%
5	3	205	2.108	0.0373	1.500	0.364	0.159	0.230	0.210	71.16%	1.77%	24.27%	10.60%	15.33%	14.00%
5	3	206	2.024	0.0466	1.420	0.352	0.169	0.264	0.203	70.16%	2.30%	24.79%	11.90%	18.59%	14.30%
5	3	207	2.174	0.0412	1.535	0.404	0.175	0.262	0.213	70.61%	1.90%	26.32%	11.40%	17.07%	13.88%
5	3	208	2.262	0.0367	1.620	0.423	0.180	0.250	0.210	71.62%	1.62%	26.11%	11.11%	15.43%	12.96%
5	3	209ss	2.450	0.0429	1.775	0.457	0.206	0.318	0.258	72.45%	1.75%	25.75%	11.61%	17.92%	14.54%
5	3	210	2.232	0.0387	1.580	0.407	0.186	0.288	0.200	70.79%	1.73%	25.76%	11.77%	18.23%	12.66%
Number of Birds		10													
Pen Average			2.092	0.0382	1.492	0.379	0.172	0.252	0.204	71.32%	1.83%	25.33%	11.53%	16.82%	13.71%
1	5	701	1.992	0.0280	1.440	0.349	0.180	0.246	0.202	72.29%	1.41%	24.24%	12.50%	17.08%	14.03%
1	5	702	2.228	0.0238	1.575	0.409	0.184	0.272	0.224	70.69%	1.07%	25.97%	11.68%	17.27%	14.22%
1	5	703	2.184	0.0203	1.570	0.401	0.193	0.250	0.238	71.89%	0.93%	25.54%	12.29%	15.92%	15.16%
1	5	704	2.164	0.0410	1.555	0.448	0.177	0.256	0.207	71.86%	1.89%	28.81%	11.38%	16.46%	13.31%
1	5	705	2.010	0.0240	1.460	0.388	0.155	0.248	0.187	72.64%	1.19%	26.58%	10.62%	16.99%	12.81%
1	5	706	2.302	0.0497	1.650	0.418	0.186	0.275	0.208	71.68%	2.16%	25.33%	11.27%	16.67%	12.61%
1	5	707	2.102	0.0367	1.490	0.385	0.177	0.261	0.216	70.88%	1.75%	25.84%	11.88%	17.52%	14.50%
1	5	708	2.072	0.0412	1.505	0.401	0.163	0.255	0.211	72.64%	1.99%	26.64%	10.83%	16.94%	14.02%
1	5	709	2.078	0.0466	1.480	0.366	0.177	0.257	0.197	71.22%	2.24%	24.73%	11.96%	17.36%	13.31%
1	5	710	2.240	0.0492	1.595	0.402	0.179	0.282	0.212	71.21%	2.20%	25.20%	11.22%	17.68%	13.29%
Number of Birds		10													
Pen Average			2.137	0.0361	1.532	0.397	0.177	0.260	0.210	71.70%	1.68%	25.89%	11.56%	16.99%	13.73%
6	6	211	2.306	0.0429	1.635	0.435	0.185	0.268	0.215	70.90%	1.86%	26.61%	11.31%	16.39%	13.15%
6	6	212	1.348	0.0112	0.960	0.240	0.122	0.148	0.142	71.22%	0.83%	25.00%	12.71%	15.42%	14.79%
6	6	213	1.842	0.0249	1.315	0.342	0.158	0.213	0.187	71.39%	1.35%	26.01%	12.02%	16.20%	14.22%
6	6	214	2.004	0.0230	1.440	0.387	0.172	0.244	0.201	71.86%	1.15%	26.88%	11.94%	16.94%	13.96%
6	6	215	2.010	0.0203	1.435	0.347	0.170	0.246	0.210	71.39%	1.01%	24.18%	11.85%	17.14%	14.63%
6	6	216	1.880	0.0330	1.315	0.339	0.163	0.218	0.182	69.95%	1.76%	25.78%	12.40%	16.58%	13.84%
6	6	217	2.346	0.0633	1.645	0.416	0.181	0.298	0.209	70.12%	2.70%	25.29%	11.00%	18.12%	12.71%
6	6	218	1.620	0.0570	1.140	0.259	0.140	0.185	0.140	70.37%	3.52%	22.72%	12.28%	16.23%	12.28%
6	6	219	1.948	0.0598	1.350	0.344	0.163	0.235	0.181	69.30%	3.07%	25.48%	12.07%	17.41%	13.41%
6	6	220	2.354	0.0558	1.720	0.438	0.193	0.281	0.230	73.07%	2.37%	25.47%	11.22%	16.34%	13.37%
Number of Birds		10													
Pen Average			1.966	0.0391	1.396	0.355	0.165	0.234	0.190	70.96%	1.96%	25.34%	11.88%	16.68%	13.64%

Percent chill and fat pad are percent of live weight, percent breast, wings, thighs and drums are percent of chill weight

ss = sex-slin (male bird)

Table P3. Individual female bird processing data at 44 days of age (8/25/00) Project No. MN-00-3 (Monsanto #2000-01-39-02)
(live wt is after ~12 hr feed withdrawal)

Treatment	Pen	Bird No.	Live Wt. (kg)	Fat Pad Wt. (kg)	Chill Wt. (kg)	Breast Wt. (kg)	Wings Wt. (kg)	Thighs Wt. (kg)	Drums Wt. (kg)	% Chill	% Fat Pad	Percent of Chill Weight			
												Breast	Wings	Thighs	Drums
8	10	221	1.922	0.0248	1.380	0.361	0.164	0.256	0.201	71.80%	1.29%	26.16%	11.88%	18.55%	14.57%
8	10	222	2.198	0.0463	1.565	0.376	0.198	0.270	0.221	71.20%	2.11%	24.03%	12.65%	17.25%	14.12%
8	10	223	2.338	0.0323	1.710	0.490	0.183	0.324	0.232	73.14%	1.38%	28.65%	10.70%	18.95%	13.57%
8	10	224	2.030	0.0341	1.440	0.382	0.166	0.252	0.190	70.94%	1.68%	26.53%	11.53%	17.50%	13.19%
8	10	225	2.034	0.0369	1.425	0.359	0.171	0.244	0.179	70.06%	1.81%	25.19%	12.00%	17.12%	12.56%
8	10	226	1.794	0.0285	1.275	0.342	0.157	0.218	0.179	71.07%	1.59%	26.82%	12.31%	17.10%	14.04%
8	10	227	2.164	0.0464	1.510	0.390	0.194	0.270	0.211	69.78%	2.14%	25.83%	12.85%	17.88%	13.97%
8	10	228	2.226	0.0475	1.590	0.433	0.181	0.303	0.230	71.43%	2.13%	27.23%	11.38%	19.06%	14.47%
8	10	229	2.082	0.0302	1.490	0.393	0.182	0.244	0.212	71.57%	1.45%	26.38%	12.21%	16.38%	14.23%
8	10	230	2.100	0.0360	1.550	0.440	0.174	0.251	0.215	73.81%	1.71%	28.39%	11.23%	16.19%	13.87%
Number of Birds		10													
Pen Average			2.089	0.0363	1.494	0.397	0.177	0.263	0.207	71.48%	1.73%	26.52%	11.88%	17.60%	13.86%
3	13	721	2.174	0.0258	1.535	0.372	0.194	0.272	0.215	70.61%	1.19%	24.23%	12.64%	17.72%	14.01%
3	13	722	2.334	0.0343	1.680	0.462	0.195	0.271	0.229	71.98%	1.47%	1.83%	11.61%	16.13%	13.63%
3	13	723	2.138	0.0369	1.480	0.393	0.175	0.246	0.218	69.22%	1.73%	26.55%	11.82%	16.62%	14.73%
3	13	724	2.216	0.0429	1.565	0.421	0.174	0.251	0.219	70.62%	1.94%	26.90%	11.12%	16.04%	13.99%
3	13	725	1.950	0.0434	1.400	0.361	0.160	0.233	0.184	71.79%	2.23%	25.79%	11.43%	16.64%	13.14%
3	13	726	2.210	0.0565	1.580	0.455	0.183	0.251	0.204	71.49%	2.56%	28.80%	11.58%	15.89%	12.91%
3	13	727	2.056	0.0360	1.455	0.391	0.164	0.267	0.204	70.77%	1.75%	26.87%	11.27%	18.35%	14.02%
3	13	728	2.220	0.0427	1.565	0.432	0.176	0.257	0.203	70.50%	1.92%	27.60%	11.25%	16.42%	12.97%
3	13	729	2.386	0.0663	1.705	0.407	0.186	0.294	0.223	71.46%	2.78%	23.87%	10.91%	17.24%	13.08%
3	13	730	2.406	0.0421	1.715	0.431	0.213	0.274	0.238	71.28%	1.75%	25.13%	12.42%	15.98%	13.88%
Number of Birds		10													
Pen Average			2.209	0.0427	1.568	0.413	0.182	0.262	0.214	70.97%	1.93%	23.76%	11.60%	16.70%	13.64%
2	14	231	2.080	0.0361	1.490	0.352	0.173	0.279	0.230	71.63%	1.74%	23.62%	11.61%	18.72%	15.44%
2	14	232	2.074	0.0393	1.425	0.372	0.166	0.224	0.216	68.71%	1.89%	26.11%	11.65%	15.72%	15.16%
2	14	233	1.620	0.0376	1.140	0.255	0.145	0.191	0.159	70.37%	2.32%	22.37%	12.72%	16.75%	13.95%
2	14	234	2.220	0.0390	1.595	0.375	0.190	0.281	0.232	71.85%	1.76%	23.51%	11.91%	17.62%	14.55%
2	14	235	2.044	0.0398	1.505	0.351	0.169	0.258	0.221	73.63%	1.95%	23.32%	11.23%	17.14%	14.68%
2	14	236	2.150	0.0500	1.515	0.362	0.174	0.247	0.227	70.47%	2.33%	23.89%	11.49%	16.30%	14.98%
2	14	237	1.972	0.0342	1.400	0.372	0.156	0.203	0.187	70.99%	1.73%	26.57%	11.14%	14.50%	13.36%
2	14	238	1.898	0.0462	1.325	0.322	0.166	0.237	0.201	69.81%	2.43%	24.30%	12.53%	17.89%	15.17%
2	14	239	1.868	0.0300	1.325	0.350	0.152	0.215	0.187	70.93%	1.61%	26.42%	11.47%	16.23%	14.11%
2	14	240	2.034	0.0340	1.415	0.356	0.176	0.230	0.190	69.57%	1.67%	25.16%	12.44%	16.25%	13.43%
Number of Birds		10													
Pen Average			1.996	0.0386	1.414	0.347	0.167	0.237	0.205	70.80%	1.94%	24.53%	11.82%	16.71%	14.48%

Percent chill and fat pad are percent of live weight, percent breast, wings, thighs and drums are percent of chill weight

Table P3. Individual female bird processing data at 44 days of age (8/25/00) Project No. MN-00-3 (Monsanto #2000-01-39-02)
(live wt is after ~12 hr feed withdrawal)

Treatment	Pen	Bird No.	Live Wt. (kg)	Fat Pad Wt. (kg)	Chill Wt. (kg)	Breast Wt. (kg)	Wings Wt. (kg)	Thighs Wt. (kg)	Drums Wt. (kg)	% Chill	% Fat Pad	Percent of Chill Weight			
												Breast	Wings	Thighs	Drums
4	15	731	2.344	0.0448	1.660	0.401	0.191	0.275	0.219	70.82%	1.91%	24.16%	11.51%	16.57%	13.19%
4	15	732	2.296	0.0415	1.620	0.404	0.195	0.270	0.221	70.56%	1.81%	24.94%	12.04%	16.67%	13.64%
4	15	733	2.138	0.0581	1.530	0.436	0.172	0.278	0.200	71.56%	2.72%	28.50%	11.24%	18.17%	13.07%
4	15	734	1.966	0.0270	1.370	0.342	0.166	0.236	0.182	69.68%	1.37%	24.96%	12.12%	17.23%	13.28%
4	15	735	2.378	0.0334	1.700	0.450	0.193	0.294	0.245	71.49%	1.40%	26.47%	11.35%	17.29%	14.41%
4	15	736	2.184	0.0339	1.515	0.378	0.183	0.277	0.210	69.37%	1.55%	24.95%	12.08%	18.28%	13.86%
4	15	737	2.092	0.0382	1.480	0.385	0.177	0.271	0.209	70.75%	1.83%	26.01%	11.96%	18.31%	14.12%
4	15	738	2.314	0.0436	1.635	0.389	0.194	0.269	0.226	70.66%	1.88%	23.79%	11.87%	16.45%	13.82%
4	15	739	2.334	0.0271	1.660	0.423	0.186	0.275	0.230	71.12%	1.16%	25.48%	11.20%	16.57%	13.86%
4	15	740	2.016	0.0315	1.460	0.393	0.172	0.244	0.198	72.42%	1.56%	26.92%	11.78%	16.71%	13.56%
Number of Birds		10													
Pen Average			2.206	0.0379	1.563	0.400	0.183	0.269	0.214	70.84%	1.72%	25.62%	11.71%	17.22%	13.68%
4	18	241	2.052	0.0462	1.450	0.364	0.169	0.246	0.181	70.66%	2.25%	25.10%	11.66%	16.97%	12.48%
4	18	242	1.850	0.0232	1.305	0.343	0.157	0.208	0.173	70.54%	1.25%	26.28%	12.03%	15.94%	13.26%
4	18	243	1.978	0.0334	1.405	0.386	0.167	0.205	0.198	71.03%	1.69%	27.47%	11.89%	14.59%	14.09%
4	18	244	2.326	0.0530	1.670	0.427	0.198	0.278	0.233	71.80%	2.28%	25.57%	11.86%	16.65%	13.95%
4	18	245	2.108	0.0508	1.480	0.366	0.170	0.268	0.191	70.21%	2.41%	24.73%	11.49%	18.11%	12.91%
4	18	246	1.962	0.0422	1.380	0.369	0.174	0.230	0.186	70.34%	2.15%	26.74%	12.61%	16.67%	13.48%
4	18	247	2.064	0.0431	1.455	0.353	0.173	0.254	0.185	70.49%	2.09%	24.26%	11.89%	17.46%	12.71%
4	18	248	2.074	0.0201	1.555	0.442	0.181	0.246	0.207	74.98%	0.97%	28.42%	11.64%	15.82%	13.31%
4	18	249	2.172	0.0389	1.520	0.369	0.177	0.238	0.201	69.98%	1.79%	24.28%	11.64%	15.66%	13.22%
4	18	250	2.268	0.0369	1.630	0.417	0.183	0.272	0.233	71.87%	1.63%	25.58%	11.23%	16.69%	14.29%
Number of Birds		10													
Pen Average			2.085	0.0388	1.485	0.384	0.175	0.245	0.199	71.19%	1.85%	25.84%	11.79%	16.45%	13.37%
6	20	741	2.212	0.0291	1.540	0.400	0.196	0.248	0.206	69.62%	1.32%	25.97%	12.73%	16.10%	13.38%
6	20	742	2.064	0.0344	1.505	0.403	0.161	0.270	0.203	72.92%	1.67%	26.78%	10.70%	17.94%	13.49%
6	20	743	2.312	0.0380	1.665	0.391	0.205	0.287	0.228	72.02%	1.64%	23.48%	12.31%	17.24%	13.69%
6	20	744	1.984	0.0364	1.400	0.386	0.158	0.238	0.194	70.56%	1.83%	27.57%	11.29%	17.00%	13.86%
6	20	745	1.978	0.0326	1.410	0.393	0.166	0.246	0.188	71.28%	1.65%	27.87%	11.77%	17.45%	13.33%
6	20	746	2.172	0.0223	1.575	0.367	0.187	0.281	0.213	72.51%	1.03%	23.30%	11.87%	17.84%	13.52%
6	20	747	1.862	0.0237	1.305	0.312	0.173	0.231	0.198	70.09%	1.27%	23.91%	13.26%	17.70%	15.17%
6	20	748ss	2.664	0.0359	1.900	0.508	0.226	0.318	0.272	71.32%	1.35%	26.74%	11.89%	16.74%	14.32%
6	20	749	2.240	0.0425	1.560	0.420	0.193	0.258	0.206	69.64%	1.90%	26.92%	12.37%	16.54%	13.21%
6	20	750	2.282	0.0361	1.615	0.404	0.189	0.287	0.237	70.77%	1.58%	25.02%	11.70%	17.77%	14.67%
Number of Birds		10													
Pen Average			2.177	0.0331	1.548	0.398	0.185	0.266	0.215	71.07%	1.52%	25.76%	11.99%	17.23%	13.86%

Percent chill and fat pad are percent of live weight, percent breast, wings, thighs and drums are percent of chill weight

ss = sex-slin (male bird)

Table P3. Individual female bird processing data at 44 days of age (8/25/00) Project No. MN-00-3 (Monsanto #2000-01-39-02)
(live wt is after ~12 hr feed withdrawal)

Treatment	Pen	Bird No.	Live Wt. (kg)	Fat Pad Wt. (kg)	Chill Wt. (kg)	Breast Wt. (kg)	Wings Wt. (kg)	Thighs Wt. (kg)	Drums Wt. (kg)	% Chill	% Fat Pad	Percent of Chill Weight			
												Breast	Wings	Thighs	Drums
5	22	751	1.906	0.0470	1.345	0.323	0.148	0.255	0.202	70.57%	2.47%	24.01%	11.00%	18.96%	15.02%
5	22	752	1.972	0.0404	1.370	0.366	0.166	0.226	0.199	69.47%	2.05%	26.72%	12.12%	16.50%	14.53%
5	22	753	2.056	0.0412	1.425	0.325	0.166	0.236	0.195	69.31%	2.00%	22.81%	11.65%	16.56%	13.68%
5	22	754	2.412	0.0657	1.695	0.411	0.200	0.289	0.241	70.27%	2.72%	24.25%	11.80%	17.05%	14.22%
5	22	755	2.018	0.0354	1.445	0.401	0.166	0.242	0.201	71.61%	1.75%	27.75%	11.49%	16.75%	13.91%
5	22	756	2.248	0.0557	1.640	0.443	0.178	0.262	0.221	72.95%	2.48%	27.01%	10.85%	15.98%	13.48%
5	22	757	2.136	0.0360	1.550	0.406	0.186	0.251	0.209	72.57%	1.69%	26.19%	12.00%	16.19%	13.48%
5	22	758	2.154	0.0178	1.570	0.407	0.174	0.274	0.229	72.89%	0.83%	25.92%	11.08%	17.45%	14.59%
5	22	759	2.028	0.0468	1.440	0.418	0.162	0.246	0.189	71.01%	2.31%	29.03%	11.25%	17.08%	13.13%
5	22	760	2.368	0.0378	1.695	0.464	0.192	0.275	0.235	71.58%	1.60%	27.37%	11.33%	16.22%	13.86%
Number of Birds		10													
Pen Average			2.130	0.0424	1.518	0.396	0.174	0.256	0.212	71.22%	1.99%	26.11%	11.46%	16.87%	13.99%
3	23	261	1.986	0.0411	1.375	0.368	0.157	0.221	0.187	69.23%	2.07%	26.76%	11.42%	16.07%	13.60%
3	23	262	1.832	0.0203	1.295	0.346	0.146	0.220	0.186	70.69%	1.11%	26.72%	11.27%	16.99%	14.36%
3	23	263	2.104	0.0419	1.490	0.402	0.167	0.244	0.204	70.82%	1.99%	26.98%	11.21%	16.38%	13.69%
3	23	264	2.220	0.0383	1.555	0.353	0.188	0.288	0.232	70.05%	1.73%	22.70%	12.09%	18.52%	14.92%
3	23	265	1.534	0.0250	1.020	0.248	0.129	0.157	0.154	66.49%	1.63%	24.31%	12.65%	15.39%	15.10%
3	23	266	2.144	0.0394	1.510	0.391	0.176	0.259	0.202	70.43%	1.84%	25.89%	11.66%	17.15%	13.38%
3	23	267	2.170	0.0334	1.530	0.411	0.180	0.230	0.217	70.51%	1.54%	26.86%	11.76%	15.03%	14.18%
3	23	268	2.184	0.0409	1.585	0.424	0.198	0.258	0.204	72.57%	1.87%	26.75%	12.49%	16.28%	12.87%
3	23	269	2.164	0.0410	1.515	0.397	0.181	0.254	0.214	70.01%	1.89%	26.20%	11.95%	16.77%	14.13%
3	23	270	2.252	0.0479	1.610	0.433	0.199	0.260	0.215	71.49%	2.13%	26.89%	12.36%	16.15%	13.35%
Number of Birds		10													
Pen Average			2.059	0.0369	1.449	0.377	0.172	0.239	0.202	70.23%	1.78%	26.01%	11.89%	16.47%	13.96%
1	24	761	2.194	0.0327	1.605	0.401	0.187	0.285	0.216	73.15%	1.49%	24.98%	11.65%	17.76%	13.46%
1	24	762	2.066	0.0316	1.475	0.334	0.166	0.272	0.226	71.39%	1.53%	22.64%	11.25%	18.44%	15.32%
1	24	763	2.150	0.0449	1.520	0.341	0.185	0.252	0.232	70.70%	2.09%	22.43%	12.17%	16.58%	15.26%
1	24	764	2.554	0.0434	1.855	0.501	0.213	0.325	0.262	72.63%	1.70%	27.01%	11.48%	17.52%	14.12%
1	24	765	2.176	0.0367	1.575	0.405	0.173	0.281	0.231	72.38%	1.69%	25.71%	10.98%	17.84%	14.67%
1	24	766	2.152	0.0362	1.535	0.392	0.176	0.263	0.224	71.33%	1.68%	25.54%	11.47%	17.13%	14.59%
1	24	767	2.202	0.0637	1.585	0.362	0.184	0.289	0.223	71.98%	2.89%	22.84%	11.61%	18.23%	14.07%
1	24	768	1.996	0.0361	1.405	0.338	0.182	0.245	0.204	70.39%	1.81%	24.06%	12.95%	17.44%	14.52%
1	24	769	2.210	0.0405	1.575	0.429	0.190	0.282	0.223	71.27%	1.83%	27.24%	12.06%	17.90%	14.16%
1	24	770	2.356	0.0424	1.670	0.413	0.200	0.261	0.228	70.88%	1.80%	24.73%	11.98%	15.63%	13.65%
Number of Birds		10													
Pen Average			2.206	0.0408	1.580	0.392	0.186	0.276	0.227	71.61%	1.85%	24.72%	11.76%	17.45%	14.38%

Percent chill and fat pad are percent of live weight, percent breast, wings, thighs and drums are percent of chill weight

Table P3. Individual female bird processing data at 44 days of age (8/25/00) Project No. MN-00-5 (Monsanto #2000-01-59-02)
(live wt is after ~12 hr feed withdrawal)

Treatment	Pen	Bird No.	Live Wt. (kg)	Fat Pad Wt. (kg)	Chill Wt. (kg)	Breast Wt. (kg)	Wings Wt. (kg)	Thighs Wt. (kg)	Drums Wt. (kg)	% Chill	% Fat Pad	Percent of Chill Weight			
												Breast	Wings	Thighs	Drums
2	25	271	1.968	0.0362	1.355	0.317	0.166	0.222	0.198	68.85%	1.84%	23.39%	12.25%	16.38%	14.61%
2	25	272	1.890	0.0200	1.310	0.328	0.176	0.206	0.180	69.31%	1.06%	25.04%	13.44%	15.73%	13.74%
2	25	273	2.094	0.0319	1.460	0.360	0.179	0.268	0.211	69.72%	1.52%	24.66%	12.26%	18.36%	14.45%
2	25	274	2.058	0.0393	1.430	0.355	0.169	0.238	0.202	69.48%	1.91%	24.83%	11.82%	16.64%	14.13%
2	25	275	2.040	0.0501	1.445	0.378	0.158	0.233	0.191	70.83%	2.46%	26.16%	10.93%	16.12%	13.22%
2	25	276	2.068	0.0378	1.455	0.370	0.168	0.250	0.212	70.36%	1.83%	25.43%	11.55%	17.18%	14.57%
2	25	277	2.094	0.0397	1.455	0.360	0.166	0.244	0.217	69.48%	1.90%	24.74%	11.41%	16.77%	14.91%
2	25	278	1.990	0.0441	1.390	0.336	0.160	0.230	0.183	69.85%	2.22%	24.17%	11.51%	16.55%	13.17%
2	25	279	1.786	0.0246	1.275	0.336	0.150	0.227	0.192	71.39%	1.38%	26.35%	11.76%	17.80%	15.06%
2	25	280	2.038	0.0291	1.490	0.387	0.176	0.253	0.199	73.11%	1.43%	25.97%	11.81%	16.98%	13.36%
Number of Birds		10													
Pen Average			2.003	0.0353	1.407	0.353	0.167	0.237	0.199	70.24%	1.75%	25.07%	11.87%	16.85%	14.12%
8	29	771	2.126	0.0296	1.475	0.411	0.173	0.275	0.203	69.38%	1.39%	27.86%	11.73%	18.64%	13.76%
8	29	772	2.074	0.0250	1.410	0.378	0.171	0.247	0.199	67.98%	1.21%	26.81%	12.13%	17.52%	14.11%
8	29	773	2.108	0.0397	1.510	0.408	0.174	0.237	0.205	71.63%	1.88%	27.02%	11.52%	15.70%	13.58%
8	29	774	2.052	0.0341	1.450	0.367	0.174	0.240	0.190	70.66%	1.66%	25.31%	12.00%	16.55%	13.10%
8	29	775	1.970	0.0268	1.365	0.350	0.167	0.246	0.207	69.29%	1.36%	25.64%	12.23%	18.02%	15.16%
8	29	776	2.346	0.0290	1.675	0.398	0.198	0.318	0.243	71.40%	1.24%	23.76%	11.82%	18.99%	14.51%
8	29	777	2.246	0.0420	1.580	0.411	0.191	0.279	0.226	70.35%	1.87%	26.01%	12.09%	17.66%	14.30%
8	29	778	1.954	0.0262	1.375	0.318	0.183	0.248	0.201	70.37%	1.34%	23.13%	13.31%	18.04%	14.62%
8	29	779	2.230	0.0462	1.590	0.428	0.169	0.292	0.223	71.30%	2.07%	26.92%	10.63%	18.36%	14.03%
8	29	780	1.942	0.0415	1.340	0.336	0.170	0.233	0.182	69.00%	2.14%	25.07%	12.69%	17.39%	13.58%
Number of Birds		10													
Pen Average			2.105	0.0340	1.477	0.381	0.177	0.262	0.208	70.14%	1.62%	25.75%	12.01%	17.69%	14.08%
8	33	281	2.370	0.0530	1.655	0.418	0.203	0.269	0.229	69.83%	2.24%	25.26%	12.27%	16.25%	13.84%
8	33	282	2.140	0.0178	1.525	0.377	0.199	0.259	0.222	71.26%	0.83%	24.72%	13.05%	16.98%	14.56%
8	33	283	2.086	0.0229	1.440	0.370	0.179	0.224	0.205	69.03%	1.10%	25.69%	12.43%	15.56%	14.24%
8	33	284	2.230	0.0370	1.585	0.407	0.182	0.259	0.217	71.08%	1.66%	25.68%	11.48%	16.34%	13.69%
8	33	285	2.186	0.0251	1.585	0.424	0.182	0.245	0.219	72.51%	1.15%	26.75%	11.48%	15.46%	13.82%
8	33	286	1.882	0.0556	1.315	0.337	0.162	0.228	0.182	69.87%	2.95%	25.63%	12.32%	17.34%	13.84%
8	33	287	2.186	0.0404	1.570	0.448	0.182	0.266	0.217	71.82%	1.85%	28.54%	11.59%	16.94%	13.82%
8	33	288	2.172	0.0438	1.560	0.433	0.174	0.244	0.201	71.82%	2.02%	27.76%	11.15%	15.64%	12.88%
8	33	289	1.798	0.0332	1.250	0.267	0.157	0.237	0.191	69.52%	1.85%	21.36%	12.56%	18.96%	15.28%
8	33	290	2.446	0.0350	1.740	0.465	0.199	0.281	0.239	71.14%	1.43%	26.72%	11.44%	16.15%	13.74%
Number of Birds		10													
Pen Average			2.150	0.0364	1.523	0.395	0.182	0.251	0.212	70.79%	1.71%	25.81%	11.98%	16.56%	13.97%

Percent chill and fat pad are percent of live weight, percent breast, wings, thighs and drums are percent of chill weight

cc = covclin (male bird)

Table P3. Individual female bird processing data at 44 days of age (8/25/00) Project No. MN-00-3 (Monsanto #2000-01-39-02)
(live wt is after ~12 hr feed withdrawal)

Treatment	Pen	Bird No.	Live Wt. (kg)	Fat Pad Wt. (kg)	Chill Wt. (kg)	Breast Wt. (kg)	Wings Wt. (kg)	Thighs Wt. (kg)	Drums Wt. (kg)	% Chill	% Fat Pad	Percent of Chill Weight			
												Breast	Wings	Thighs	Drums
3	35	781	2.428	0.0569	1.710	0.418	0.195	0.301	0.236	70.43%	2.34%	24.44%	11.40%	17.60%	13.80%
3	35	782	2.262	0.0391	1.625	0.445	0.188	0.250	0.230	71.84%	1.73%	27.38%	11.57%	15.38%	14.15%
3	35	783	2.150	0.0273	1.525	0.433	0.184	0.259	0.214	70.93%	1.27%	28.39%	12.07%	16.98%	14.03%
3	35	784	2.100	0.0399	1.510	0.402	0.180	0.246	0.190	71.90%	1.90%	26.62%	11.92%	16.29%	12.58%
3	35	785	2.414	0.0282	1.715	0.443	0.201	0.300	0.241	71.04%	1.17%	25.83%	11.72%	17.49%	14.05%
3	35	786	1.934	0.0415	1.340	0.308	0.165	0.230	0.194	69.29%	2.15%	22.99%	12.31%	17.16%	14.48%
3	35	787	2.114	0.0628	1.495	0.400	0.171	0.273	0.182	70.72%	2.97%	26.76%	11.44%	18.26%	12.17%
3	35	788	1.948	0.0310	1.425	0.382	0.175	0.223	0.187	73.15%	1.59%	26.81%	12.28%	15.65%	13.12%
3	35	789ss	2.836	0.0519	1.990	0.501	0.227	0.348	0.275	70.17%	1.83%	25.18%	11.41%	17.49%	13.82%
3	35	790	2.096	0.0366	1.485	0.407	0.169	0.254	0.209	70.85%	1.75%	27.41%	11.38%	17.10%	14.07%
Number of Birds		10													
Pen Average			2.228	0.0415	1.582	0.414	0.186	0.268	0.216	71.03%	1.87%	26.18%	11.75%	16.94%	13.63%
2	38	791	2.028	0.0400	1.445	0.376	0.164	0.261	0.208	71.25%	1.97%	26.02%	11.35%	18.06%	14.39%
2	38	792	2.094	0.0383	1.480	0.390	0.166	0.247	0.200	70.68%	1.83%	26.35%	11.22%	16.69%	13.51%
2	38	793	1.878	0.0378	1.335	0.332	0.169	0.216	0.200	71.09%	2.01%	24.87%	12.66%	16.18%	14.98%
2	38	794	2.040	0.0502	1.480	0.427	0.157	0.260	0.203	72.55%	2.46%	28.85%	10.61%	17.57%	13.72%
2	38	795	2.270	0.0403	1.625	0.423	0.182	0.288	0.242	71.59%	1.78%	26.03%	11.20%	17.72%	14.89%
2	38	796	1.936	0.0333	1.335	0.313	0.171	0.219	0.180	68.96%	1.72%	23.45%	12.81%	16.40%	13.48%
2	38	797	1.806	0.0286	1.285	0.353	0.154	0.193	0.168	71.15%	1.58%	27.47%	11.98%	15.02%	13.07%
2	38	798ss	2.640	0.0678	1.865	0.466	0.212	0.293	0.257	70.64%	2.57%	24.99%	11.37%	15.71%	13.78%
2	38	799	1.154	0.0081	0.745	0.141	0.100	0.127	0.103	64.56%	0.70%	18.93%	13.42%	17.05%	13.83%
2	38	800	1.886	0.0285	1.310	0.315	0.162	0.227	0.184	69.46%	1.51%	24.05%	12.37%	17.33%	14.05%
Number of Birds		10													
Pen Average			1.973	0.0373	1.391	0.354	0.164	0.233	0.195	70.19%	1.81%	25.10%	11.90%	16.77%	13.97%
1	41	301	1.990	0.0308	1.435	0.360	0.183	0.224	0.185	72.11%	1.55%	25.09%	12.75%	15.61%	12.89%
1	41	302	2.160	0.0422	1.585	0.454	0.177	0.269	0.211	73.38%	1.95%	28.64%	11.17%	16.97%	13.31%
1	41	303	2.008	0.0357	1.460	0.416	0.162	0.265	0.218	72.71%	1.78%	28.49%	11.10%	18.15%	14.93%
1	41	304	2.066	0.0425	1.475	0.373	0.166	0.249	0.191	71.39%	2.06%	25.29%	11.25%	16.88%	12.95%
1	41	305	1.884	0.0476	1.300	0.324	0.164	0.205	0.183	69.00%	2.53%	24.92%	12.62%	15.77%	14.08%
1	41	306	1.994	0.0337	1.440	0.390	0.163	0.230	0.207	72.22%	1.69%	27.08%	11.32%	15.97%	14.38%
1	41	307	2.076	0.0315	1.430	0.347	0.173	0.229	0.204	68.88%	1.52%	24.27%	12.10%	16.01%	14.27%
1	41	308	2.006	0.0301	1.430	0.387	0.181	0.225	0.181	71.29%	1.50%	27.06%	12.66%	15.73%	12.66%
1	41	309	2.134	0.0385	1.530	0.422	0.161	0.266	0.205	71.70%	1.80%	27.58%	10.52%	17.39%	13.40%
1	41	310	2.204	0.0461	1.565	0.369	0.196	0.262	0.220	71.01%	2.09%	23.58%	12.52%	16.74%	14.06%
Number of Birds		10													
Pen Average			2.052	0.0379	1.465	0.384	0.173	0.242	0.201	71.37%	1.85%	26.20%	11.80%	16.52%	13.69%

Percent chill and fat pad are percent of live weight, percent breast, wings, thighs and drums are percent of chill weight

Table P3. Individual female bird processing data at 44 days of age (8/25/00) Project No. MN-00-3 (Monsanto #2000-01-39-02)
(live wt is after ~12 hr feed withdrawal)

Treatment	Pen	Bird No.	Live Wt. (kg)	Fat Pad Wt. (kg)	Chill Wt. (kg)	Breast Wt. (kg)	Wings Wt. (kg)	Thighs Wt. (kg)	Drums Wt. (kg)	% Chill	% Fat Pad	Percent of Chill Weight			
												Breast	Wings	Thighs	Drums
4	43	801	2.262	0.0396	1.655	0.454	0.179	0.271	0.218	73.17%	1.75%	27.43%	10.82%	16.37%	13.11%
4	43	802	2.144	0.0447	1.525	0.363	0.181	0.273	0.206	71.13%	2.08%	23.80%	11.87%	17.90%	13.51%
4	43	803	2.176	0.0453	1.605	0.389	0.190	0.278	0.229	73.76%	2.08%	24.24%	11.84%	17.32%	14.27%
4	43	804	2.284	0.0444	1.625	0.446	0.188	0.286	0.229	71.15%	1.94%	27.45%	11.57%	17.60%	14.09%
4	43	805	1.900	0.0258	1.355	0.354	0.158	0.205	0.189	71.32%	1.36%	26.13%	11.66%	15.13%	13.95%
4	43	806	2.488	0.0478	1.810	0.473	0.193	0.302	0.234	72.75%	1.92%	26.13%	10.66%	16.69%	12.93%
4	43	807	2.076	0.0282	1.470	0.390	0.184	0.234	0.211	70.81%	1.36%	26.53%	12.52%	15.92%	14.35%
4	43	808	2.192	0.0488	1.555	0.394	0.180	0.252	0.204	70.94%	2.23%	25.34%	11.58%	16.21%	13.12%
4	43	809	1.946	0.0295	1.405	0.318	0.180	0.229	0.208	72.20%	1.52%	22.63%	12.81%	16.30%	14.80%
4	43	810	2.300	0.0440	1.645	0.428	0.183	0.286	0.221	71.52%	1.91%	26.02%	11.12%	17.39%	13.43%
Number of Birds		10													
Pen Average			2.177	0.0398	1.565	0.401	0.182	0.262	0.215	71.87%	1.82%	25.57%	11.64%	16.68%	13.76%
6	44	311	1.880	0.0349	1.305	0.302	0.159	0.202	0.184	69.41%	1.86%	23.14%	12.18%	15.48%	14.10%
6	44	312	1.904	0.0288	1.365	0.330	0.168	0.228	0.193	71.69%	1.51%	24.18%	12.31%	16.70%	14.14%
6	44	313	2.040	0.0374	1.440	0.361	0.182	0.243	0.210	70.59%	1.83%	25.07%	12.64%	16.88%	14.58%
6	44	314	2.180	0.0457	1.615	0.454	0.173	0.248	0.227	74.08%	2.10%	28.11%	10.71%	15.36%	14.06%
6	44	315	2.614	0.0497	1.880	0.425	0.213	0.333	0.261	71.92%	1.90%	22.61%	11.33%	17.71%	13.88%
6	44	316	2.296	0.0419	1.630	0.445	0.193	0.257	0.217	70.99%	1.82%	27.30%	11.84%	15.77%	13.31%
6	44	317	2.040	0.0344	1.470	0.395	0.172	0.266	0.198	72.06%	1.69%	26.87%	11.70%	18.10%	13.47%
6	44	318	1.958	0.0399	1.405	0.352	0.171	0.221	0.193	71.76%	2.04%	25.05%	12.17%	15.73%	13.74%
6	44	319	2.050	0.0381	1.445	0.366	0.170	0.250	0.198	70.49%	1.86%	25.33%	11.76%	17.30%	13.70%
6	44	320	2.096	0.0290	1.515	0.372	0.187	0.275	0.215	72.28%	1.38%	24.55%	12.34%	18.15%	14.19%
Number of Birds		10													
Pen Average			2.106	0.0380	1.507	0.380	0.179	0.252	0.210	71.53%	1.80%	25.22%	11.90%	16.72%	13.92%
5	46	811	2.336	0.0567	1.680	0.462	0.182	0.296	0.245	71.92%	2.43%	27.50%	10.83%	17.62%	14.58%
5	46	812	2.054	0.0509	1.480	0.407	0.168	0.219	0.219	72.05%	2.48%	27.50%	11.35%	14.80%	14.80%
5	46	813	1.982	0.0321	1.430	0.367	0.162	0.239	0.190	72.15%	1.62%	25.66%	11.33%	16.71%	13.29%
5	46	814	2.102	0.0319	1.515	0.410	0.170	0.246	0.227	72.07%	1.52%	27.06%	11.22%	16.24%	14.98%
5	46	815	2.192	0.0395	1.600	0.408	0.192	0.273	0.213	72.99%	1.80%	25.50%	12.00%	17.06%	13.31%
5	46	816	2.032	0.0558	1.430	0.361	0.162	0.237	0.180	70.37%	2.75%	25.24%	11.33%	16.57%	12.59%
5	46	817	2.060	0.0366	1.505	0.387	0.174	0.266	0.208	73.06%	1.78%	25.71%	11.56%	17.67%	13.82%
5	46	818	2.328	0.0366	1.645	0.445	0.192	0.267	0.214	70.66%	1.57%	27.05%	11.67%	16.23%	13.01%
5	46	819	2.166	0.0373	1.570	0.391	0.172	0.261	0.213	72.48%	1.72%	24.90%	10.96%	16.62%	13.57%
5	46	820	2.164	0.0536	1.550	0.404	0.188	0.249	0.215	71.63%	2.48%	26.06%	12.13%	16.06%	13.87%
Number of Birds		10													
Pen Average			2.142	0.0431	1.541	0.404	0.176	0.255	0.212	71.94%	2.01%	26.22%	11.44%	16.56%	13.78%

Percent chill and fat pad are percent of live weight, percent breast, wings, thighs and drums are percent of chill weight

ss = sex-slip (male bird)

Table P3. Individual female bird processing data at 44 days of age (8/25/00) Project No. MN-00-3 (Monsanto #2000-01-39-02)
(live wt is after ~12 hr feed withdrawal)

Treatment	Pen	Bird No.	Live Wt. (kg)	Fat Pad Wt. (kg)	Chill Wt. (kg)	Breast Wt. (kg)	Wings Wt. (kg)	Thighs Wt. (kg)	Drums Wt. (kg)	% Chill	% Fat Pad	Percent of Chill Weight			
												Breast	Wings	Thighs	Drums
1	51	321	2.228	0.0436	1.610	0.368	0.190	0.270	0.225	72.26%	1.96%	22.86%	11.80%	16.77%	13.98%
1	51	322	1.880	0.0271	1.330	0.356	0.168	0.217	0.188	70.74%	1.44%	26.77%	12.63%	16.32%	14.14%
1	51	323	2.042	0.0282	1.455	0.399	0.159	0.262	0.205	71.25%	1.38%	27.42%	10.93%	18.01%	14.09%
1	51	324	2.300	0.0437	1.610	0.445	0.180	0.276	0.221	70.00%	1.90%	27.64%	11.18%	17.14%	13.73%
1	51	325	2.040	0.0342	1.440	0.365	0.177	0.234	0.186	70.59%	1.68%	25.35%	12.29%	16.25%	12.92%
1	51	326	2.098	0.0427	1.460	0.367	0.180	0.242	0.205	69.59%	2.04%	25.14%	12.33%	16.58%	14.04%
1	51	327	1.810	0.0173	1.255	0.313	0.165	0.207	0.190	69.34%	0.96%	24.94%	13.15%	16.49%	15.14%
1	51	328	1.886	0.0319	1.330	0.322	0.160	0.209	0.198	70.52%	1.69%	24.21%	12.03%	15.71%	14.89%
1	51	329	2.032	0.0391	1.420	0.357	0.167	0.260	0.199	69.88%	1.92%	25.14%	11.76%	18.31%	14.01%
1	51	330	2.230	0.0396	1.590	0.425	0.188	0.273	0.218	71.30%	1.78%	26.73%	11.82%	17.17%	13.71%
Number of Birds		10													
Pen Average			2.055	0.0347	1.450	0.372	0.173	0.245	0.204	70.55%	1.67%	25.62%	11.99%	16.87%	14.06%
5	52	822	1.770	0.0267	1.230	0.336	0.153	0.190	0.170	69.49%	1.51%	27.32%	12.44%	15.45%	13.82%
5	52	823	2.268	0.0530	1.595	0.399	0.187	0.275	0.224	70.33%	2.34%	25.02%	11.72%	17.24%	14.04%
5	52	824	2.002	0.0299	1.430	0.368	0.176	0.247	0.210	71.43%	1.49%	25.73%	12.31%	17.27%	14.69%
5	52	825	1.888	0.0232	1.350	0.323	0.155	0.232	0.193	71.50%	1.23%	23.93%	11.48%	17.19%	14.30%
5	52	826	2.038	0.0539	1.460	0.385	0.162	0.250	0.180	71.64%	2.64%	26.37%	11.10%	17.12%	12.33%
5	52	827	2.472	0.0387	1.735	0.385	0.192	0.338	0.253	70.19%	1.57%	22.19%	11.07%	19.48%	14.58%
5	52	828	1.744	0.0350	1.195	0.250	0.152	0.215	0.181	68.52%	2.01%	20.92%	12.72%	17.99%	15.15%
5	52	829	2.156	0.0416	1.525	0.391	0.181	0.258	0.220	70.73%	1.93%	25.64%	11.87%	16.92%	14.43%
5	52	830	1.894	0.0432	1.335	0.341	0.159	0.228	0.193	70.49%	2.28%	25.54%	11.91%	17.08%	14.46%
Number of Birds		9													
Pen Average			2.026	0.0384	1.428	0.353	0.169	0.248	0.203	70.48%	1.89%	24.74%	11.85%	17.30%	14.20%
4	53	331	1.872	0.0373	1.315	0.344	0.149	0.251	0.187	70.25%	1.99%	26.16%	11.33%	19.09%	14.22%
4	53	332	2.336	0.0505	1.670	0.456	0.179	0.293	0.215	71.49%	2.16%	27.31%	10.72%	17.54%	12.87%
4	53	333	2.008	0.0294	1.460	0.414	0.173	0.247	0.197	72.71%	1.46%	28.36%	11.85%	16.92%	13.49%
4	53	334	2.058	0.0322	1.450	0.378	0.167	0.264	0.232	70.46%	1.56%	26.07%	11.52%	18.21%	16.00%
4	53	335	2.040	0.0459	1.395	0.312	0.176	0.245	0.205	68.38%	2.25%	22.37%	12.62%	17.56%	14.70%
4	53	336	2.288	0.0394	1.645	0.426	0.189	0.286	0.239	71.90%	1.72%	25.90%	11.49%	17.39%	14.53%
4	53	337	2.222	0.0481	1.590	0.420	0.184	0.252	0.210	71.56%	2.16%	26.42%	11.57%	15.85%	13.21%
4	53	338	2.120	0.0524	1.505	0.364	0.177	0.257	0.205	70.99%	2.47%	24.19%	11.76%	17.08%	13.62%
4	53	339	2.444	0.0306	1.760	0.473	0.197	0.310	0.243	72.01%	1.25%	26.88%	11.19%	17.61%	13.81%
4	53	340	2.404	0.0902	1.690	0.428	0.188	0.306	0.217	70.30%	3.75%	25.33%	11.12%	18.11%	12.84%
Number of Birds		10													
Pen Average			2.179	0.0456	1.548	0.402	0.178	0.271	0.215	71.00%	2.08%	25.90%	11.52%	17.54%	13.9

Percent chill and fat pad are percent of live weight, percent breast, wings, thighs and drums are percent of chill weight

Table P3. Individual female bird processing data at 44 days of age (8/25/00) Project No. MN-00-3 (Monsanto #2000-01-39-02)
(live wt is after ~12 hr feed withdrawal)

Treatment	Pen	Bird No.	Live Wt. (kg)	Fat Pad Wt. (kg)	Chill Wt. (kg)	Breast Wt. (kg)	Wings Wt. (kg)	Thighs Wt. (kg)	Drums Wt. (kg)	% Chill	% Fat Pad	Percent of Chill Weight			
												Breast	Wings	Thighs	Drums
6	57	831	2.172	0.0400	1.540	0.365	0.178	0.263	0.220	70.90%	1.84%	23.70%	11.56%	17.08%	14.20%
6	57	832ss	2.976	0.0619	2.175	0.526	0.255	0.378	0.332	73.08%	2.08%	24.18%	11.72%	17.38%	15.26%
6	57	833	2.348	0.0431	1.685	0.463	0.208	0.278	0.226	71.76%	1.84%	27.48%	12.34%	16.50%	13.41%
6	57	834	2.188	0.0356	1.560	0.417	0.195	0.262	0.213	71.30%	1.63%	26.73%	12.50%	16.79%	13.65%
6	57	835	2.258	0.0479	1.560	0.391	0.179	0.294	0.218	69.09%	2.12%	25.06%	11.47%	18.85%	13.97%
6	57	836	2.300	0.0542	1.685	0.482	0.209	0.281	0.225	73.26%	2.36%	28.61%	12.40%	16.68%	13.35%
6	57	837	1.832	0.0211	1.315	0.339	0.159	0.211	0.185	71.78%	1.15%	25.78%	12.09%	16.05%	14.07%
6	57	838	2.032	0.0298	1.470	0.352	0.164	0.230	0.215	72.34%	1.47%	23.95%	11.16%	15.65%	14.63%
6	57	839	2.054	0.0540	1.450	0.386	0.172	0.246	0.191	70.59%	2.63%	26.62%	11.86%	16.97%	13.17%
6	57	840	1.994	0.0452	1.390	0.313	0.188	0.247	0.190	69.71%	2.27%	22.52%	13.53%	17.77%	13.67%
Number of Birds		10													
Pen Average			2.215	0.0433	1.583	0.403	0.191	0.269	0.222	71.38%	1.94%	25.46%	12.06%	16.97%	13.95%
8	59	341	2.000	0.0385	1.410	0.384	0.174	0.226	0.188	70.50%	1.93%	27.23%	12.34%	16.03%	13.33%
8	59	342	1.890	0.0389	1.350	0.319	0.159	0.255	0.200	71.43%	2.06%	23.63%	11.78%	18.89%	14.81%
8	59	343	2.222	0.0442	1.530	0.350	0.187	0.286	0.222	68.86%	1.99%	22.88%	12.22%	18.69%	14.51%
8	59	344	2.104	0.0413	1.495	0.365	0.175	0.264	0.197	71.06%	1.96%	24.41%	11.71%	17.66%	13.18%
8	59	345	2.074	0.0220	1.510	0.399	0.184	0.270	0.200	72.81%	1.06%	26.42%	12.19%	17.88%	13.25%
8	59	346	2.018	0.0310	1.450	0.379	0.176	0.229	0.211	71.85%	1.54%	26.14%	12.14%	15.79%	14.55%
8	59	347	1.936	0.0299	1.375	0.371	0.171	0.227	0.201	71.02%	1.54%	26.98%	12.44%	16.51%	14.62%
8	59	348	2.144	0.0428	1.510	0.399	0.166	0.274	0.202	70.43%	2.00%	26.42%	10.99%	18.15%	13.38%
8	59	349	2.176	0.0308	1.560	0.401	0.171	0.265	0.220	71.69%	1.42%	25.71%	10.96%	16.99%	14.10%
8	59	350	2.214	0.0291	1.550	0.369	0.191	0.265	0.223	70.01%	1.31%	23.81%	12.32%	17.10%	14.39%
Number of Birds		10													
Pen Average			2.078	0.0349	1.474	0.374	0.175	0.256	0.206	70.97%	1.68%	25.36%	11.91%	17.37%	14.01%
3	60	841	2.204	0.0350	1.570	0.413	0.182	0.273	0.229	71.23%	1.59%	26.31%	11.59%	17.39%	14.59%
3	60	842	1.956	0.0361	1.405	0.363	0.177	0.232	0.191	71.83%	1.85%	25.84%	12.60%	16.51%	13.59%
3	60	843	2.070	0.0310	1.515	0.390	0.173	0.263	0.214	73.19%	1.50%	25.74%	11.42%	17.36%	14.13%
3	60	844	1.866	0.0206	1.305	0.312	0.167	0.235	0.204	69.94%	1.10%	23.91%	12.80%	18.01%	15.63%
3	60	845	2.050	0.0413	1.460	0.356	0.181	0.253	0.189	71.22%	2.01%	24.38%	12.40%	17.33%	12.95%
3	60	846	1.970	0.0291	1.415	0.363	0.177	0.234	0.198	71.83%	1.48%	25.65%	12.51%	16.54%	13.99%
3	60	847	2.152	0.0448	1.530	0.414	0.180	0.271	0.215	71.10%	2.08%	27.06%	11.76%	17.71%	14.05%
3	60	848	2.066	0.0331	1.505	0.403	0.176	0.251	0.206	72.85%	1.60%	26.78%	11.69%	16.68%	13.69%
3	60	849	2.160	0.0395	1.555	0.449	0.186	0.250	0.204	71.99%	1.83%	28.87%	11.96%	16.08%	13.12%
3	60	850	2.040	0.0215	1.450	0.352	0.182	0.259	0.231	71.08%	1.05%	24.28%	12.55%	17.86%	15.93%
Number of Birds		10													
Pen Average			2.053	0.0332	1.471	0.382	0.178	0.252	0.208	71.62%	1.61%	25.88%	12.13%	17.15%	14.17%

Percent chill and fat pad are percent of live weight, percent breast, wings, thighs and drums are percent of chill weight

ss = sex clin (male bird)

Table P3. Individual female bird processing data at 44 days of age (8/25/00) Project No. MN-00-3 (Monsanto #2000-01-39-02)
(live wt is after ~12 hr feed withdrawal)

Treatment	Pen	Bird No.	Live Wt. (kg)	Fat Pad Wt. (kg)	Chill Wt. (kg)	Breast Wt. (kg)	Wings Wt. (kg)	Thighs Wt. (kg)	Drums Wt. (kg)	% Chill	% Fat Pad	Percent of Chill Weight			
												Breast	Wings	Thighs	Drums
2	63	851	2.152	0.0282	1.555	0.431	0.174	0.283	0.220	72.26%	1.31%	27.72%	11.19%	18.20%	14.15%
2	63	852	2.202	0.0464	1.585	0.440	0.187	0.270	0.205	71.98%	2.11%	27.76%	11.80%	17.03%	12.93%
2	63	853	2.284	0.0515	1.615	0.417	0.186	0.296	0.220	70.71%	2.25%	25.82%	11.52%	18.33%	13.62%
2	63	854	2.088	0.0373	1.470	0.372	0.166	0.263	0.210	70.40%	1.79%	25.31%	11.29%	17.89%	14.29%
2	63	855	2.272	0.0426	1.600	0.419	0.183	0.303	0.214	70.42%	1.88%	26.19%	11.44%	18.94%	13.38%
2	63	856	2.110	0.0254	1.485	0.359	0.187	0.259	0.226	70.38%	1.20%	24.18%	12.59%	17.44%	15.22%
2	63	857	2.082	0.0491	1.490	0.425	0.169	0.248	0.207	71.57%	2.36%	28.52%	11.34%	16.64%	13.89%
2	63	858	2.270	0.0457	1.600	0.455	0.176	0.256	0.206	70.48%	2.01%	28.44%	11.00%	16.00%	12.88%
2	63	859	2.048	0.0338	1.435	0.372	0.172	0.258	0.192	70.07%	1.65%	25.92%	11.99%	17.98%	13.38%
2	63	860	2.288	0.0513	1.665	0.423	0.194	0.281	0.221	72.77%	2.24%	25.41%	11.65%	16.88%	13.27%
Number of Birds		10													
Pen Average			2.180	0.0411	1.550	0.411	0.179	0.272	0.212	71.10%	1.88%	26.53%	11.58%	17.53%	13.70%
5	65	361	2.436	0.0376	1.760	0.495	0.181	0.270	0.257	72.25%	1.54%	28.13%	10.28%	15.34%	14.60%
5	65	362	2.204	0.0490	1.545	0.369	0.184	0.273	0.208	70.10%	2.22%	23.88%	11.91%	17.67%	13.46%
5	65	363	2.300	0.0402	1.635	0.444	0.186	0.288	0.208	71.09%	1.75%	27.16%	11.38%	17.61%	12.72%
5	65	364	2.332	0.0620	1.655	0.411	0.182	0.303	0.227	70.97%	2.66%	24.83%	11.00%	18.31%	13.72%
5	65	365	2.108	0.0161	1.470	0.366	0.183	0.247	0.209	69.73%	0.76%	24.90%	12.45%	16.80%	14.22%
5	65	366	2.086	0.0400	1.500	0.416	0.166	0.251	0.206	71.91%	1.92%	27.73%	11.07%	16.73%	13.73%
5	65	367	2.208	0.0415	1.580	0.433	0.176	0.258	0.223	71.56%	1.88%	27.41%	11.14%	16.33%	14.11%
5	65	368	2.172	0.0389	1.515	0.386	0.181	0.263	0.204	69.75%	1.79%	25.48%	11.95%	17.36%	13.47%
5	65	369	2.026	0.0375	1.450	0.409	0.163	0.236	0.195	71.57%	1.85%	28.21%	11.24%	16.28%	13.45%
5	65	370	1.970	0.0366	1.390	0.322	0.174	0.231	0.208	70.56%	1.86%	23.17%	12.52%	16.62%	14.96%
Number of Birds		10													
Pen Average			2.184	0.0399	1.550	0.405	0.178	0.262	0.215	70.95%	1.82%	26.09%	11.49%	16.91%	13.84%
8	66	861	2.296	0.0349	1.625	0.450	0.189	0.284	0.227	70.78%	1.52%	27.69%	11.63%	17.48%	13.97%
8	66	862	2.164	0.0134	1.550	0.412	0.180	0.246	0.219	71.63%	0.62%	26.58%	11.61%	15.87%	14.13%
8	66	863ss	2.584	0.0406	1.855	0.416	0.219	0.347	0.291	71.79%	1.57%	22.43%	11.81%	18.71%	15.69%
8	66	864	2.030	0.0222	1.445	0.350	0.163	0.257	0.196	71.18%	1.09%	24.22%	11.28%	17.79%	13.56%
8	66	865	2.228	0.0379	1.540	0.389	0.170	0.270	0.218	69.12%	1.70%	25.26%	11.04%	17.53%	14.16%
8	66	866	2.370	0.0364	1.710	0.459	0.188	0.285	0.245	72.15%	1.54%	26.84%	10.99%	16.67%	14.33%
8	66	867	2.022	0.0683	1.415	0.315	0.168	0.278	0.204	69.98%	3.38%	22.26%	11.87%	19.65%	14.42%
8	66	868	2.156	0.0526	1.545	0.383	0.178	0.279	0.220	71.66%	2.44%	24.79%	11.52%	18.06%	14.24%
8	66	869	2.186	0.0335	1.540	0.369	0.181	0.287	0.219	70.45%	1.53%	23.96%	11.75%	18.64%	14.22%
8	66	870	1.926	0.0250	1.400	0.429	0.191	0.296	0.222	72.69%	1.30%	30.64%	13.64%	21.14%	15.86%
Number of Birds		10													
Pen Average			2.196	0.0365	1.563	0.397	0.183	0.283	0.226	71.14%	1.67%	25.47%	11.72%	18.15%	14.46%

Percent chill and fat pad are percent of live weight, percent breast, wings, thighs and drums are percent of chill weight

Treatment	Pen	Bird No.	Live Wt. (kg)	Fat Pad Wt. (kg)	Chill Wt. (kg)	Breast Wt. (kg)	Wings Wt. (kg)	Thighs Wt. (kg)	Drums Wt. (kg)	% Chill	% Fat Pad	Percent of Chill Weight			
												Breast	Wings	Thighs	Drums
4	72	871	1.992	0.0300	1.455	0.418	0.165	0.223	0.181	73.04%	1.51%	28.73%	11.34%	15.33%	12.00%
4	72	872	2.090	0.0365	1.500	0.382	0.177	0.270	0.214	71.77%	1.75%	25.47%	11.80%	18.00%	14.27%
4	72	873	2.130	0.0564	1.505	0.349	0.170	0.258	0.213	70.66%	2.65%	23.19%	11.30%	17.14%	14.15%
4	72	874	2.010	0.0374	1.440	0.365	0.166	0.238	0.188	71.64%	1.86%	25.35%	11.53%	16.53%	13.06%
4	72	875	2.370	0.0562	1.700	0.381	0.167	0.256	0.218	71.73%	2.37%	22.41%	9.82%	15.06%	12.82%
4	72	876	2.516	0.0321	1.790	0.438	0.201	0.295	0.241	71.14%	1.28%	24.47%	11.23%	16.48%	13.46%
4	72	877	2.068	0.0372	1.450	0.383	0.186	0.238	0.207	70.12%	1.80%	26.41%	12.83%	16.41%	14.28%
4	72	878	1.884	0.0569	1.310	0.317	0.153	0.219	0.183	69.53%	3.02%	24.20%	11.68%	16.72%	13.97%
4	72	879	2.168	0.0391	1.585	0.404	0.172	0.273	0.228	73.11%	1.80%	25.49%	10.85%	17.22%	14.38%
4	72	880	2.056	0.0299	1.460	0.369	0.175	0.242	0.189	71.01%	1.45%	25.27%	11.99%	16.58%	12.95%
Number of Birds		10													
Pen Average			2.128	0.0412	1.520	0.381	0.173	0.251	0.206	71.38%	1.95%	25.10%	11.44%	16.55%	13.58%
2	73	381	2.132	0.0413	1.505	0.342	0.174	0.271	0.222	70.59%	1.94%	22.72%	11.56%	18.01%	14.75%
2	73	382	2.110	0.0363	1.510	0.396	0.173	0.276	0.209	71.56%	1.72%	26.23%	11.46%	18.28%	13.84%
2	73	383	2.416	0.0396	1.730	0.479	0.203	0.304	0.257	71.61%	1.64%	27.69%	11.73%	17.57%	14.86%
2	73	384	2.148	0.0505	1.520	0.378	0.176	0.252	0.200	70.76%	2.35%	24.87%	11.58%	16.58%	13.16%
2	73	385	2.126	0.0292	1.525	0.396	0.177	0.268	0.230	71.73%	1.37%	25.97%	11.61%	17.57%	15.08%
2	73	386	2.014	0.0390	1.455	0.383	0.168	0.250	0.210	72.24%	1.94%	26.32%	11.55%	17.18%	14.43%
2	73	387	2.272	0.0462	1.615	0.414	0.184	0.267	0.226	71.08%	2.03%	25.63%	11.39%	16.53%	13.99%
2	73	388	2.164	0.0509	1.510	0.377	0.185	0.241	0.194	69.78%	2.35%	24.97%	12.25%	15.96%	12.85%
2	73	389	2.236	0.0563	1.575	0.374	0.187	0.283	0.227	70.44%	2.52%	23.75%	11.87%	17.97%	14.41%
2	73	390	2.220	0.0315	1.565	0.386	0.184	0.255	0.214	70.50%	1.42%	24.66%	11.76%	16.29%	13.67%
Number of Birds		10													
Pen Average			2.184	0.0421	1.551	0.393	0.181	0.267	0.219	71.03%	1.93%	25.28%	11.68%	17.19%	14.10%
6	74	881	2.178	0.0417	1.545	0.389	0.183	0.243	0.211	70.94%	1.91%	25.18%	11.84%	15.73%	13.66%
6	74	882ss	2.920	0.0211	2.105	0.543	0.236	0.343	0.313	72.09%	0.72%	25.80%	11.21%	16.29%	14.87%
6	74	883	2.072	0.0439	1.460	0.364	0.164	0.259	0.224	70.46%	2.12%	24.93%	11.23%	17.74%	15.34%
6	74	884	2.288	0.0433	1.625	0.357	0.189	0.299	0.245	71.02%	1.89%	21.97%	11.63%	18.40%	15.08%
6	74	885	2.182	0.0504	1.555	0.403	0.198	0.267	0.217	71.26%	2.31%	25.92%	12.73%	17.17%	13.95%
6	74	886	1.944	0.0277	1.405	0.398	0.168	0.225	0.185	72.27%	1.42%	28.33%	11.96%	16.01%	13.17%
6	74	887	1.966	0.0371	1.410	0.350	0.166	0.260	0.207	71.72%	1.89%	24.82%	11.77%	18.44%	14.68%
6	74	888	2.334	0.0498	1.665	0.404	0.195	0.290	0.235	71.34%	2.13%	24.26%	11.71%	17.42%	14.11%
6	74	889	2.264	0.0484	1.630	0.419	0.178	0.294	0.225	72.00%	2.14%	25.71%	10.92%	18.04%	13.80%
6	74	890	1.824	0.0337	1.295	0.326	0.155	0.216	0.186	71.00%	1.85%	25.17%	11.97%	16.68%	14.36%
Number of Birds		10													
Pen Average			2.197	0.0397	1.570	0.395	0.183	0.270	0.225	71.41%	1.84%	25.21%	11.70%	17.19%	14.30%

Percent chill and fat pad are percent of live weight, percent breast, wings, thighs and drums are percent of chill weight

ss = sex-slip (male bird)

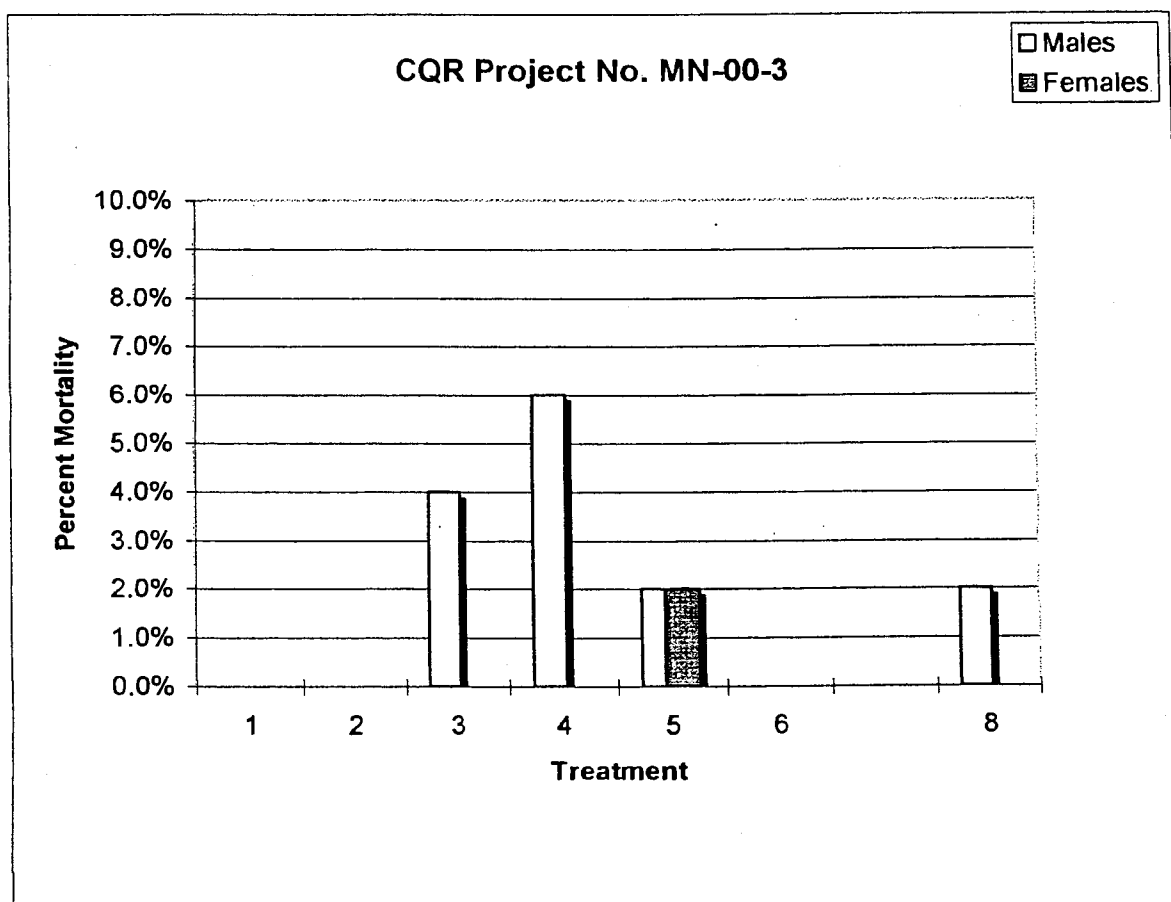
Table P3. Individual female bird processing data at 44 days of age (8/25/00) Project No. MN-00-3 (Monsanto #2000-01-39-02)
(live wt is after ~12 hr feed withdrawal)

			(live wt is after 12 hr feed withdrawal)									Percent of Chill Weight			
Treatment	Pen	Bird No.	Live Wt. (kg)	Fat Pad Wt. (kg)	Chill Wt. (kg)	Breast Wt. (kg)	Wings Wt. (kg)	Thighs Wt. (kg)	Drums Wt. (kg)	% Chill	% Fat Pad	Breast	Wings	Thighs	Drums
1	76	391	2.176	0.0454	1.545	0.401	0.177	0.250	0.216	71.00%	2.09%	25.95%	11.46%	16.18%	13.98%
1	76	392	1.924	0.0358	1.360	0.337	0.158	0.224	0.189	70.69%	1.86%	24.78%	11.62%	16.47%	13.90%
1	76	393	2.298	0.0425	1.610	0.428	0.186	0.277	0.234	70.06%	1.85%	26.58%	11.55%	17.20%	14.53%
1	76	394	2.140	0.0489	1.575	0.445	0.173	0.263	0.218	73.60%	2.29%	28.25%	10.98%	16.70%	13.84%
1	76	395	2.350	0.0283	1.770	0.537	0.199	0.302	0.241	75.32%	1.20%	30.34%	11.24%	17.06%	13.62%
1	76	396	2.192	0.0362	1.535	0.416	0.171	0.264	0.216	70.03%	1.65%	27.10%	11.14%	17.20%	14.07%
1	76	397	2.282	0.0513	1.705	0.509	0.191	0.288	0.205	74.72%	2.25%	29.85%	11.20%	16.89%	12.02%
1	76	398	2.236	0.0311	1.620	0.427	0.190	0.277	0.207	72.45%	1.39%	26.36%	11.73%	17.10%	12.78%
1	76	399	1.884	0.0321	1.350	0.331	0.167	0.232	0.190	71.66%	1.70%	24.52%	12.37%	17.19%	14.07%
1	76	400	2.362	0.0312	1.720	0.468	0.206	0.295	0.230	72.82%	1.32%	27.21%	11.98%	17.15%	13.37%
Number of Birds		10													
Pen Average			2.184	0.0383	1.579	0.430	0.182	0.267	0.215	72.23%	1.76%	27.10%	11.53%	16.91%	13.62%
3	80	891	2.154	0.0389	1.545	0.399	0.185	0.259	0.213	71.73%	1.81%	25.83%	11.97%	16.76%	13.79%
3	80	892ss	2.634	0.0276	1.880	0.482	0.218	0.307	0.281	71.37%	1.05%	25.64%	11.60%	16.33%	14.95%
3	80	893	2.248	0.0500	1.620	0.446	0.186	0.268	0.226	72.06%	2.22%	27.53%	11.48%	16.54%	13.95%
3	80	894	1.972	0.0522	1.370	0.315	0.155	0.225	0.189	69.47%	2.65%	22.99%	11.31%	16.42%	13.80%
3	80	895	2.048	0.0397	1.495	0.374	0.187	0.239	0.199	73.00%	1.94%	25.02%	12.51%	15.99%	13.31%
3	80	896	2.234	0.0287	1.580	0.411	0.185	0.269	0.230	70.73%	1.28%	26.01%	11.71%	17.03%	14.56%
3	80	897	2.120	0.0283	1.510	0.381	0.182	0.248	0.207	71.23%	1.33%	25.23%	12.05%	16.42%	13.71%
3	80	898	2.366	0.0710	1.695	0.440	0.181	0.287	0.212	71.64%	3.00%	25.96%	10.68%	16.93%	12.51%
3	80	899	2.094	0.0716	1.460	0.357	0.157	0.266	0.206	69.72%	3.42%	24.45%	10.75%	18.22%	14.11%
3	80	900	2.238	0.0464	1.620	0.447	0.188	0.263	0.225	72.39%	2.07%	27.59%	11.60%	16.23%	13.89%
Number of Birds		10													
Pen Average			2.211	0.0454	1.578	0.405	0.182	0.263	0.219	71.33%	2.08%	25.63%	11.57%	16.69%	13.86%

Percent chill and fat pad are percent of live weight, percent breast, wings, thighs and drums are percent of chill weight

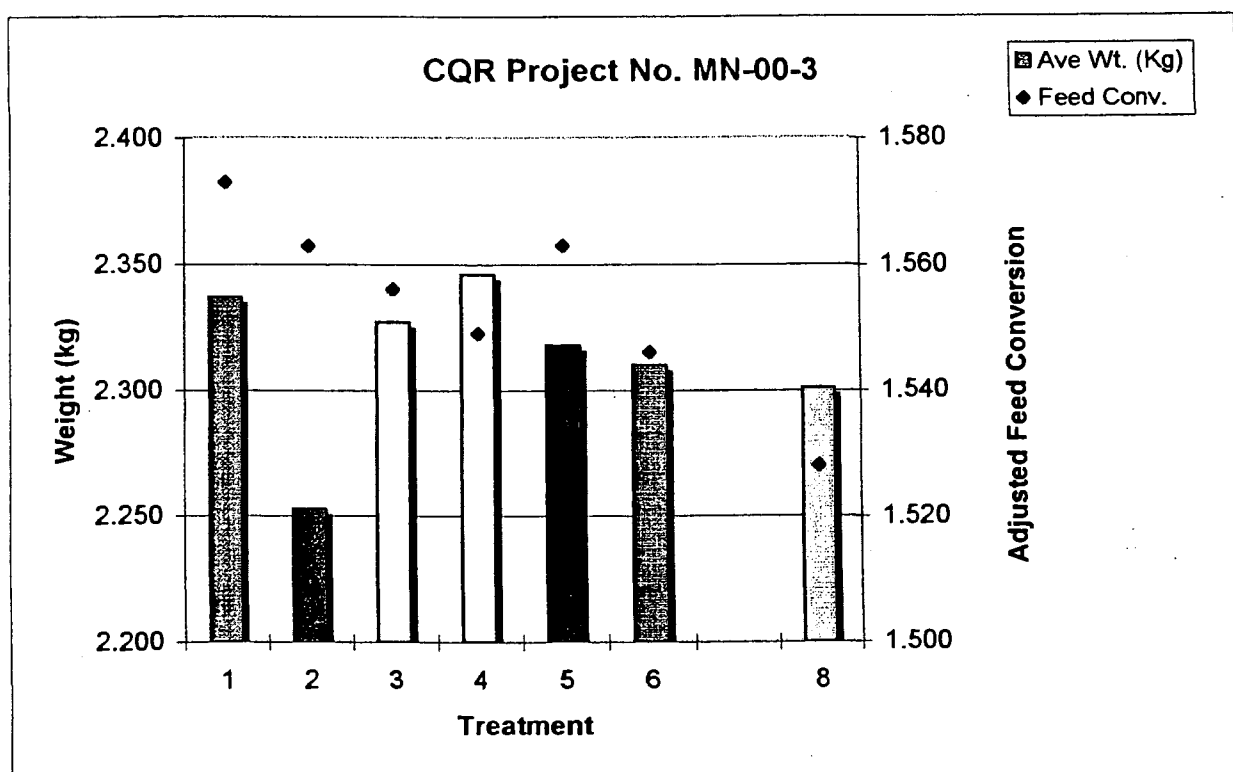
Graph G1. Summary of Day 7-42 mortality, by sex. Project No. MN-00-3
(Monsanto #2000-01-39-02)

Treatment	Percent Mortality		Treatment Description
	Males	Females	
1	0.0%	0.0%	RX826
2	0.0%	0.0%	RX770
3	4.0%	0.0%	DK493
4	6.0%	0.0%	LH235 x LH185
5	2.0%	2.0%	MON847
6	0.0%	0.0%	B73HT x LH82
8	2.0%	0.0%	NK603



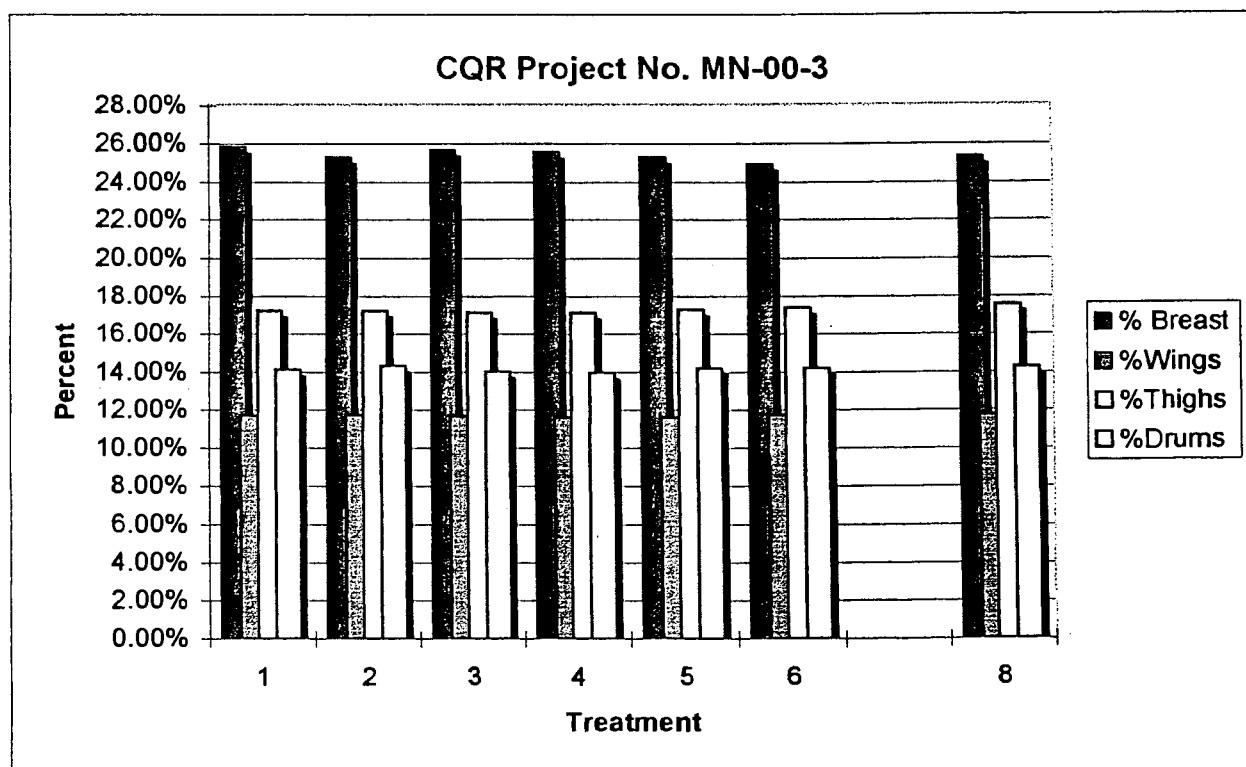
Graph G2. Summary of Day 42 Treatment Average Bird Weight and Adjusted Feed Conversion
Project No. MN-00-3 (Monsanto #2000-01-39-02)

Treatment	Day 42 Ave Wt. (Kg)	Adjusted Feed Conv.	Treatment Description
1	2.337	1.573	RX826
2	2.253	1.563	RX770
3	2.327	1.556	DK493
4	2.346	1.549	LH235 x LH185
5	2.318	1.563	MON847
6	2.310	1.546	B73HT x LH82
8	2.301	1.528	NK603



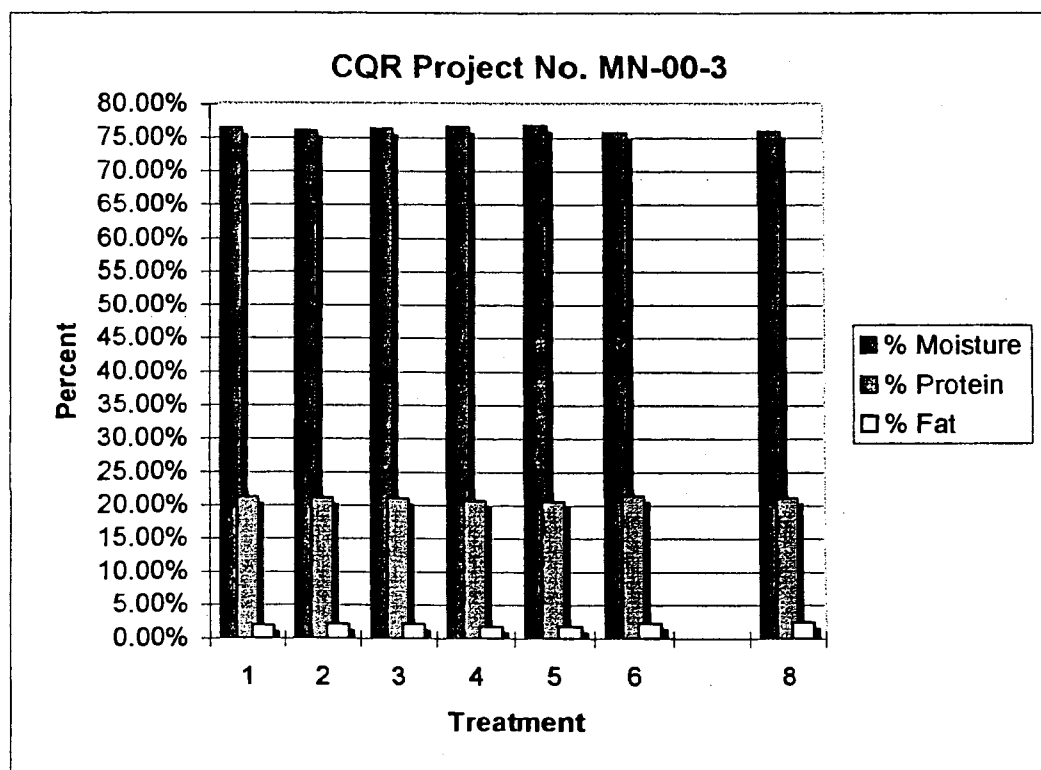
Graph G3. Summary of Day 43 and Day 44 Processing Data - Male & Female combined
Project No. MN-00-3 (Monsanto #2000-01-39-02)

Treatment	% Breast	%Wings	%Thighs	%Drums	Treatment Description
1	25.83%	11.69%	17.19%	14.12%	RX826
2	25.29%	11.73%	17.20%	14.34%	RX770
3	25.68%	11.67%	17.08%	14.03%	DK493
4	25.56%	11.59%	17.08%	13.98%	LH235 x LH185
5	25.29%	11.62%	17.27%	14.19%	MON847
6	24.93%	11.75%	17.37%	14.21%	B73HT x LH82
8	25.33%	11.74%	17.53%	14.27%	NK603



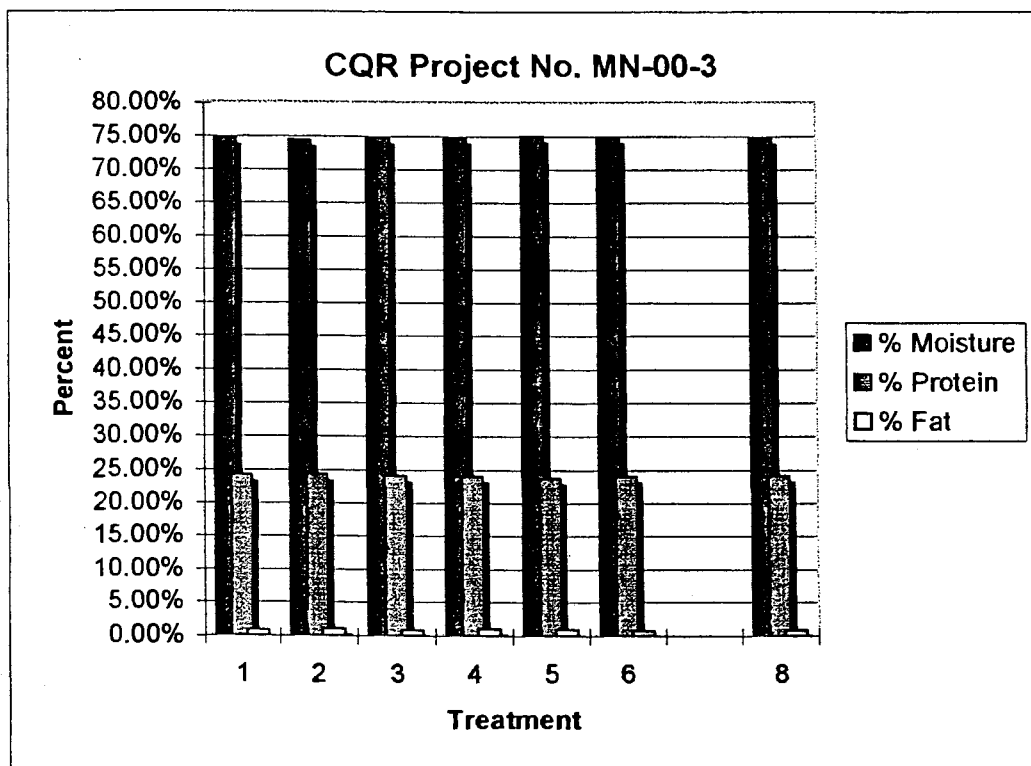
Graph G4. Summary analysis of thigh meat samples - Male & Female combined
Project No. MN-00-3 (Monsanto #2000-01-39-02)

Treatment	% Moisture	% Protein	% Fat	Treatment Description
1	76.36%	21.16%	1.97%	RX826
2	76.04%	21.13%	2.15%	RX770
3	76.29%	21.02%	2.14%	DK493
4	76.61%	20.66%	1.85%	LH235 x LH185
5	76.80%	20.50%	1.83%	MON847
6	75.75%	21.34%	2.31%	B73HT x LH82
8	75.89%	21.06%	2.46%	NK603



Graph G5. Summary analysis of breast meat samples - Male & Female combined
Project No. MN-00-3 (Monsanto #2000-01-39-02)

Treatment	% Moisture	% Protein	% Fat	Treatment Description
1	74.72%	24.24%	0.81%	RX826
2	74.44%	24.35%	1.04%	RX770
3	74.77%	24.16%	0.81%	DK493
4	74.73%	24.01%	1.04%	LH235 x LH185
5	74.99%	23.71%	0.93%	MON847
6	74.88%	24.02%	0.80%	B73HT x LH82
8	74.74%	24.11%	0.87%	NK603



REPORT AMENDMENT

Project No.: MN-00-3 (Monsanto Study No. 2000-01-39-02)
"Comparison of Broiler Performance When Fed Diets Containing Event
NK603, Parental Line or Commercial Corn"

Study Director: Beverly George, Ph.D.
Colorado Quality Research, Inc.
400 East County Road 72
Wellington, Colorado 80549

Sponsor: Monsanto Company
700 Chesterfield Parkway North
St. Louis, Missouri 63198

Amendment No. 1 (one)

Effective Date: February 21, 2001

Report Section: Table 1. Pesticide, nutrient and amino acid assays of corn (as-is basis)

Amendment:

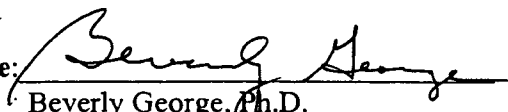
The values for calcium, magnesium, phosphorus, potassium and sodium were off by one decimal place and have been corrected in the attached Table 1.

Reason for Amendment:

The assay lab reported the results in ppm. The values for the above minerals were converted from ppm to percent for the report table. A calculation error was made and the values were off by one decimal place.

Effect on Study:

The changes made in Table 1 will have no effect on the study. The diets were formulated using the correct values because the corn assay results provided to the nutritionist were as reported by the assay lab (i.e. the units were ppm).

Signature: 
Beverly George, Ph.D.
Study Director

Date 2-21-01

Table 1. Pesticide, nutrient and amino acid assays of corn (as-is basis). CQR Project No. MN-00-3 (Monsanto 2000-01-39-02)

CQR Treatment ID	1	2	3	4	5	6	8
Monsanto Corn ID	RX826	RX770	DK 493	LH235 x LH185	MON847	B73HT x LH82	NK603
Covance Lab ID	00105823	00401502	00105818	00600599	00401499	00600602	00600597
Pesticides (ppm)							
Organophosphates	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Organonitrogens	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
Organochlorinated	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200
N-Methylcarbamates	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Nutrients (%)							
Crude protein	7.85	8.45	7.22	7.50	9.11	8.84	8.53
Moisture	12.3	10.30	11.6	9.26	11.5	11.4	10.1
Total fat	2.37	2.80	2.53	2.52	3.50	3.41	3.43
Ash	1.10	1.25	1.06	1.10	1.05	1.03	1.38
Carbohydrates	76.4	77.20	77.6	79.6	74.8	75.3	76.6
Neutral Detergent Fiber (%)	7.94	8.82	9.21	13.00	14.60	10.70	8.97
Acid Detergent Fiber (%)	2.48	3.11	2.34	2.99	4.53	3.00	3.07
Crude Fiber (%)	1.71	1.63	1.67	2.08	2.07	1.73	1.79
Minerals							
Calcium, %	0.00310	0.00441	0.00482	0.00332	0.00403	0.00288	0.00285
Magnesium, %	0.0957	0.1110	0.1080	0.0715	0.1120	0.0851	0.1050
Phosphorus, %	0.2750	0.3040	0.2880	0.1890	0.2970	0.2280	0.3010
Potassium, %	0.3330	0.3300	0.3880	0.3220	0.3100	0.2930	0.3580
Sodium, %	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Sulfur (%)	0.076	0.097	0.069	0.058	0.088	0.073	0.071
Chloride (%)	0.060	0.047	0.056	0.075	0.054	0.058	0.055
Copper, ppm	1.14	1.73	1.31	2.13	1.75	1.49	1.71
Iron, ppm	16.0	31.6	13.8	16.1	51.8	18.9	19.7
Manganese, ppm	4.83	5.80	6.09	6.35	4.54	5.81	6.15
Zinc, ppm	16.2	18.9	20.3	13.7	19.3	17.0	19.3

Table 1. Pesticide, nutrient and amino acid assays of corn (as-is basis). CQR Project No. MN-00-3 (Monsanto 2000-01-39-02)

CQR Treatment ID	1	2	3	4	5	6	8
Monsanto Corn ID	RX826	RX770	DK 493	LH235 x LH185	MON847	B73HT x LH82	NK603
Covance Lab ID	00105823	00401502	00105818	00600599	00401499	00600602	00600597
Amino Acids (mg/g)							
Aspartic Acid	5.30	5.41	5.08	5.20	6.67	5.97	5.86
Threonine	2.72	3.05	2.54	2.66	3.36	3.05	2.96
Serine	3.67	4.15	3.43	3.49	4.53	4.25	4.07
Glutamic Acid	14.5	16.30	13.00	13.80	19.1	17.00	16.20
Proline	7.50	8.56	6.38	7.18	9.52	8.65	8.28
Glycine	3.20	3.24	2.95	2.97	3.59	3.39	3.46
Alanine	5.92	6.51	5.27	5.61	7.43	6.99	6.63
Cystine	1.77	1.98	1.51	1.72	2.01	1.97	1.97
Valine	4.09	4.32	3.63	3.91	4.83	4.44	4.34
Methionine	1.61	2.00	1.30	1.54	1.70	1.73	1.83
Isoleucine	2.82	3.11	2.53	2.77	3.56	3.28	3.22
Leucine	9.72	11.40	8.49	9.11	12.90	11.20	10.80
Tyrosine	2.59	3.09	2.48	2.58	3.46	3.04	2.88
Phenylalanine	3.74	4.25	3.42	3.70	4.93	4.47	4.32
Histidine	2.56	2.73	2.13	2.35	2.94	2.52	2.52
Lysine	2.58	2.49	2.49	2.47	2.90	2.75	2.89
Arginine	3.91	3.86	3.51	3.49	4.21	4.01	4.14
Tryptophan	0.506	0.559	0.509	0.498	0.554	0.529	0.597


mg/g = mg per g of corn

STATEMENT FROM CQR QUALITY ASSURANCE UNIT

Project No. MN-00-3
(Monsanto Study No. 2000-01-39-02)

This study was conducted in compliance with the FDA Good Laboratory Practice Regulations 21CFR 58. Quality Assurance inspections of study phases were carried out on the following dates and results reported to Management and the Study Director.

<u>Study Phase Inspected</u>	<u>Inspected By</u>	<u>Dates Inspected</u>	<u>Date Reported to Study Director/ Management</u>
Draft Protocol	J. Knoll-Brown	6/1/00	8/16/00
Corn grinding & bagging and sampling	J. Knoll-Brown	5/9/00	8/21/00
Diet preparation phase	J. Knoll-Brown	7/6 & 7/7/00	8/17/00
Chick placement	J. Knoll-Brown	7/12/00	8/16/00
Bird and feed weights	J. Knoll-Brown	8/23/00	8/24/00
Processing males & females	J. Knoll-Brown	8/24 & 8/25/00	8/29/00
Data Audit	J. Knoll-Brown	8/25 & 8/28/00	12/13/00
Data Audit	J. Knoll-Brown	10/4 & 10/9/00	11/9/00
Final report review (NK603)	J. Knoll-Brown	1/31/01	1/31/01


Joelyn Knoll-Brown
Quality Assurance Officer

1/31/01
Date

Appendix 2

Trilogy Consulting Corporation Statistical Report (Amended)

pp. 97-165

Amended Statistical Report
CQR Project No. MN-00-3
Monsanto Study No. 2000-01-39-02
Comparison of Broiler Performance When Fed Diets Containing Events NK603
Parental Lines or Commercial Corn
David Mark Carpenter, Ph.D.
9/4/01 (Amendment 1)
9/13/01 (Amendment 2)
9/14/01 (Amendment 3)

Data

The data consist of several responses: live weight, live pen weight on day 1, live bird weight on day 1 (g/bird), fat pad weight, chill weight, breast weight, wing weight, thigh weight, drum weight, percent fat pad, percent chill weight (chill weight/live weight), percent breast weight (breast weight/chill weight), percent wings weight (wings weight/chill weight), percent thighs weight (thighs weight/chill weight), percent drums weight (drums weight/chill weight), final pen weight, R/M weight (final pen weight plus the weight of all removed and dead birds), food consumption, feed intake average weight, feed efficiency, adjusted feed efficiency, and moisture protein, and fat for both breasts and thighs. These responses were measured on chicks fed one of eight corn diets and are listed in Table 1.

Raw data was supplied by CQR in the form of EXCEL spreadsheets. These data were sorted and/or combined and saved in several text files. The text files were read and saved in a form amenable to analysis by Release 8 of the Statistical Analysis System (SAS®).

Statistical Analyses

Pens were set up as a randomized complete block experimental design with 8 diets (treatments) in each of five replicated blocks of pens. Each block contained 16 pens (eight male and eight female) with 10 birds/pen for a total of 80 pens and 800 birds (400 male, 400 female). Note that the data from all eight diets were used to build models 1 and 2, described below, but only 7 diets, the transgenic line NK603 and the 6 commercial lines, were compared in detail via multiple comparisons. The GLM and Mixed procedures in Release 8 of the Statistical Analysis System (SAS®) were used to analyze each experiment.

Two statistical analyses were done. The first analysis used the model:

Model 1:
$$y_{ijk} = \mu + \tau_i + \beta_j + (\tau\beta)_{ij} + \eta_k + \epsilon_{ijk}$$

where

Amendment 1
Amendment 2
Amendment 3

y_{ijk} is the value of the pen response for diet i, sex j, in block k
 μ is the overall mean
 τ_i is the mean effect for diet i, $i=1, \dots, 8$
 β_j is the mean effect for sex j, $j=1,2$.
 $(\tau\beta)_{ij}$ is the diet by sex interaction
 η_k is the effect of block k, $k=1, \dots, 5$.
 ϵ_{ijk} is the random error for the pen corresponding to diet i, sex j, and block k.

The second analysis is similar to Model 1 except that a separate analysis was performed for each sex. The model used in this case is:

Model 2:
$$y_{ik} = \mu + \tau_i + \eta_k + \epsilon_{ik}.$$

The general linear model (GLM) procedure in SAS was used to fit both models. The results of the analyses from the first model are in Tables 2 - 29 while the results of the analyses from the second model are in Tables 30 - 57. The tables contain the means along with 5% LSD values for a comparison of the transgenic (NK603) to its non-transgenic parent and the commercial controls. Means, followed by the same letter, are not significantly different. The convention used is that if the overall ANOVA F-test is not significant, $p > 0.05$, then all pairwise comparisons are also not significant and thus each mean was assigned the same letter in Tables 2-57. In addition, plots of the means, for final pen weight, food consumption, feed efficiency, adjusted feed efficiency, along with error bars, which are \pm one half of the 5% LSD, are in Figures 1 - 4. The overall p-values for blocks, diets, gender and the interaction between diets and gender are also provided at the top of each table. If the overall ANOVA p-value > 0.05 then none of the effects, blocks, diets, etc., are considered significant.

As a further assessment of the diets, Tables 30 - 57 include a comparison of the NK603 transgenic diet to the population of commercial varieties. The hypothesis being tested is: H_0 : the expected response for chicks fed the NK603 diet is consistent with the variation of the response from diets containing different commercial varieties. This analysis uses the following linear mixed model:

Model 3:
$$y_{ijk} = \mu + \beta_i + \tau_j + \delta_{k(j)} + \epsilon_{ijk}$$

where

y_{ijk} is the value of the pen response corresponding to block i,
 treatment j (either NK603 or commercial), and
 diet k within treatment j

μ is overall mean

β_i is i th block effect, $i=1, \dots, 5$

τ_j is j th treatment effect, $j=1,2$

$\delta_{k(j)}$ is the random diet effect.

ϵ_{ijk} is random pen error for block i fed diet k within treatment j .

In most cases of Model 3, block effects were negligible in the overall analyses of variance, i.e., p -value > 0.05 . In these cases, the model was refitted without block effects, i.e., the block effects were pooled in the error term, to get a more powerful test. The mixed procedure in SAS was used to do the actual analysis.

Results/Conclusions

There are only a few responses for which statistical significance between diets was observed (five cases in Model 1, four in Model 2 and three cases in Model 3). In these few cases there are no clear-cut patterns in differences between the NK603 and the non-transgenic diets. In most cases, significant differences between blocks and significant differences between males and females were observed.

1. Model 1, i.e., analysis across sex, there was only one instance, Percent Wing Weight, for which statistical significant diet*sex interaction was observed. In this case the analysis for Percent Wing Weight on a per sex basis, given in number 2, below, is more appropriate. All other diet*sex interactions were not significant. There were only five cases in which statistical significance between diets were observed:
 - a. Fat Pad Weight (overall ANOVA $p < 0.001$ and treatment $p = 0.012$). Closer inspection via the LSD multiple comparisons indicates that NK603 is statistically different from all of the commercial diets except RX826 (and none of the commercial diets are statistically significant from each other).
 - b. Breast Weight (overall ANOVA $p < 0.001$ and treatment $p = 0.033$). Closer inspection via the LSD multiple comparisons indicates that NK603 is not statistically different from any of the commercial lines.
 - c. Adjusted Feed Efficiency (overall ANOVA $p < 0.001$ and treatment $p = 0.013$). Through LSD comparisons, NK603 is statistically different from RX826, DK493, MON847, and RX770 but not statistically different than LH235xLH185 or B73HTxLH82.
 - d. Thigh Moisture (overall ANOVA $p = 0.016$ and treatment $p = 0.002$). Through LSD comparisons, NK603 is statistically different from the LH235xLH185 and MON847 diets only.
 - e. Percent Fat Pad (overall ANOVA $p < 0.001$ and treatment $p = 0.007$). Through LSD comparisons, NK603 is statistically different from all commercial lines except RX826.

2. Model 2, i.e., analysis by sex, statistical differences due to diets were seen in four instances:
- Percent Wing Weight – male, no statistical significance (overall ANOVA $p=0.520$); female, statistical significance (overall ANOVA $p<0.001$ and treatments $p=0.001$), with the LSD test yielding that NK603 is statistically different than LH235xLH185 and MON847, but not statistically different than the other four commercial lines.
 - Feed Efficiency – male, no statistical significance (overall ANOVA $p=0.692$); female, statistical significance (overall ANOVA $p<0.001$ and treatments $p=0.005$) with NK603 testing significantly different than RX826, DK493 and MON847 only.
 - Thigh Moisture – male, statistical significance (overall ANOVA $p=0.048$ and treatments $p=0.038$), with NK603 testing statistically different than LH235xLH185, DK493, and MON847, but it is not statistically different than the other three commercial diets; female, no statistical significance (overall ANOVA $p=0.166$).
 - Thigh Protein – male, no statistical significance (overall ANOVA $p=0.488$); female, statistical significance (overall ANOVA $p=0.036$ and treatments $p=0.025$), with NK603 testing statistically different than MON847 only.
3. Model 3, i.e., direct comparison of NK603 to the population of commercial diets, in three cases:
- Fat Pad Weight – male, statistical significance ($p=0.008$); female, statistical significance ($p=0.024$).
 - Percent Fat Pad – Male, no statistical significance ($p=0.051$); female, statistical significance ($p=0.010$).
 - Percent Thigh Weight – male, no statistical significance ($p=0.659$); female, statistical significance ($p=0.003$).

Table 1: Diets

Type	Code
Test Article	1. MON853* 2. NK603
Control Article	1. B73Ht x LH82 (parental control for NK603)
Commercial controls varieties)	Non-genetically modified corn (commercial 1. RX770 2. LH235 x LH185 3. MON847 4. RX826 5. DK493

*Data from the MON853 line were used to build models 1 and 2, which are described in previous pages, but only 7 diets, the transgenic line NK603 and the 6 commercial lines, were compared in detail via multiple comparisons.

Table 2 - Statistical Analysis Across Sex for Live Weight, kg

ANOVA Summary

p-value, Overall	<0.001
p-value, Blocks	0.018
p-value, Diets	0.067
p-value, Sex	<0.001
p-value, Diets*Sex	0.915
LSD 5%	0.0658

Diet Means

NK603	2.246a
RX826	2.299a
LH235 x LH185	2.287a
DK493	2.263a
MON847	2.254a
B73HTxLH82	2.225a
RX770	2.195a

a,b,c Individual diet means with the same letter are not statistically different at the 5% level.

Table 3 - Statistical Analysis Across Sex for Live Pen Weight, g/pen, Day1

ANOVA Summary

p-value, Overall	0.510
p-value, Blocks	0.021
p-value, Diets	0.977
p-value, Sex	0.480
p-value, Diets*Sex	0.800
LSD 5%	9.5645

Diet Means

NK603	458.200a
RX826	462.000a
LH235 x LH185	457.200a
DK493	460.600a
MON847	460.000a
B73HTxLH82	461.000a
RX770	459.000a

a,b,c Individual diet means with the same letter are not statistically different at the 5% level.

Table 4 - Statistical Analysis Across Sex for Live Weight Day 1, g/bird

ANOVA Summary

p-value, Overall	0.510
p-value, Blocks	0.021
p-value, Diets	0.977
p-value, Sex	0.480
p-value, Diets*Sex	0.800
LSD 5%	0.797

Diet Means

NK603	38.183a
RX826	38.500a
LH235 x LH185	38.100a
DK493	38.383a
MON847	38.333a
B73HTxLH82	38.417a
RX770	38.250a

^{a,b,c} Individual diet means with the same letter are not statistically different at the 5% level.

Table 5- Statistical Analysis Across Sex for Fat Pad Weight, kg

ANOVA Summary

p-value, Overall	<0.001
p-value, Blocks	0.155
p-value, Diets	0.012
p-value, Sex	<0.001
p-value, Diets*Sex	0.943
LSD 5%	0.0028

Diet Means

NK603	0.034b
RX826	0.036ab
LH235 x LH185	0.039a
DK493	0.039a
MON847	0.037a
B73HTxLH82	0.037a
RX770	0.037a

a,b,c Individual diet means with the same letter are not statistically different at the 5% level.

Table 6 - Statistical Analysis Across Sex for Chill Weight, kg

ANOVA Summary

p-value, Overall	<0.001
p-value, Blocks	0.010
p-value, Diets	0.086
p-value, Sex	<0.001
p-value, Diets*Sex	0.964
LSD 5%	0.0515

Diet Means

NK603	1.592a
RX826	1.637a
LH235 x LH185	1.622a
DK493	1.605a
MON847	1.598a
B73HTxLH82	1.580a
RX770	1.556a

a,b,c Individual diet means with the same letter are not statistically different at the 5% level.

Table 7 - Statistical Analysis Across Sex for Breast Weight, kg

ANOVA Summary

p-value, Overall	<0.001
p-value, Blocks	0.091
p-value, Diets	0.033
p-value, Sex	<0.001
p-value, Diets*Sex	0.878
LSD 5%	0.0183

Diet Means

NK603	0.407abcd
RX826	0.423a
LH235 x LH185	0.415ab
DK493	0.413abc
MON847	0.404bcd
B73HTxLH82	0.394d
RX770	0.394cd

a,b,c,d Individual diet means with the same letter are not statistically different at the 5% level.

Table 8 - Statistical Analysis Across Sex for Wings Weight, kg

ANOVA Summary

p-value, Overall	<0.001
p-value, Blocks	0.049
p-value, Diets	0.132
p-value, Sex	<0.001
p-value, Diets*Sex	0.526
LSD 5%	0.0055

Diet Means

NK603	0.186a
RX826	0.191a
LH235 x LH185	0.188a
DK493	0.187a
MON847	0.185a
B73HTxLH82	0.185a
RX770	0.182a

a,b,c Individual diet means with the same letter are not statistically different at the 5% level.

Table 9 - Statistical Analysis Across Sex for Thighs Weight, kg

ANOVA Summary

p-value, Overall	<0.001
p-value, Blocks	0.048
p-value, Diets	0.296
p-value, Sex	<0.001
p-value, Diets*Sex	0.886
LSD 5%	0.0101

Diet Means

NK603	0.279a
RX826	0.282a
LH235 x LH185	0.277a
DK493	0.274a
MON847	0.276a
B73HTxLH82	0.275a
RX770	0.268a

a,b,c Individual diet means with the same letter are not statistically different at the 5% level.

Table 10 - Statistical Analysis Across Sex for Drums Weight, kg

ANOVA Summary

p-value, Overall	<0.001
p-value, Blocks	<0.001
p-value, Diets	0.509
p-value, Sex	<0.001
p-value, Diets*Sex	0.958
LSD 5%	0.0074

Diet Means

NK603	0.227a
RX826	0.231a
LH235 x LH185	0.227a
DK493	0.225a
MON847	0.227a
B73HTxLH82	0.224a
RX770	0.223a

a,b,c Individual diet means with the same letter are not statistically different at the 5% level.

Table 11 - Statistical Analysis Across Sex for % Fat Pad Weight, (FatPad wt / Live Wt),

ANOVA Summary

p-value, Overall	<0.001
p-value, Blocks	0.562
p-value, Diets	0.007
p-value, Sex	<0.001
p-value, Diets*Sex	0.891
LSD 5%	0.0011

Diet Means

NK603	0.015c
RX826	0.016bc
LH235 x LH185	0.017a
DK493	0.017a
MON847	0.017ab
B73HTxLH82	0.017ab
RX770	0.017ab

a,b,c Individual diet means with the same letter are not statistically different at the 5% level.

Table 12 - Statistical Analysis Across Sex for Percent Chill Weight

ANOVA Summary

p-value, Overall	0.104
p-value, Blocks	0.029
p-value, Diets	0.702
p-value, Sex	0.015
p-value, Diets*Sex	0.455
LSD 5%	0.0046

Diet Means

NK603	0.709a
RX826	0.712a
LH235 x LH185	0.709a
DK493	0.709a
MON847	0.709a
B73HTxLH82	0.710a
RX770	0.708a

a,b,c Individual diet means with the same letter are not statistically different at the 5% level.

Table 13 - Statistical Analysis Across Sex for Percent Breast Weight

ANOVA Summary

p-value, Overall	0.033
p-value, Blocks	0.845
p-value, Diets	0.051
p-value, Sex	<0.001
p-value, Diets*Sex	0.560
LSD 5%	0.0054

Diet Means

NK603	0.255a
RX826	0.258a
LH235 x LH185	0.256a
DK493	0.257a
MON847	0.253a
B73HTxLH82	0.249a
RX770	0.253a

a,b,c Individual diet means with the same letter are not statistically different at the 5% level.

Table 14 - Statistical Analysis Across Sex for Percent Wing Weight

ANOVA Summary

p-value, Overall	<0.001
p-value, Blocks	0.026
p-value, Diets	0.185
p-value, Sex	<0.001
p-value, Diets*Sex	0.012
LSD 5%	0.0014

Diet Means

NK603	0.117a
RX826	0.117a
LH235 x LH185	0.116a
DK493	0.117a
MON847	0.116a
B73HTxLH82	0.118a
RX770	0.117a

a,b,c Individual diet means with the same letter are not statistically different at the 5% level.

Table 15 - Statistical Analysis Across Sex for Percent Thigh Weight

ANOVA Summary

p-value, Overall	<0.001
p-value, Blocks	0.268
p-value, Diets	0.052
p-value, Sex	<0.001
p-value, Diets*Sex	0.243
LSD 5%	0.0029

Diet Means

NK603	0.175a
RX826	0.172a
LH235 x LH185	0.171a
DK493	0.171a
MON847	0.173a
B73HTxLH82	0.174a
RX770	0.172a

a,b,c Individual diet means with the same letter are not statistically different at the 5% level.

Table 16 - Statistical Analysis Across Sex for Percent Drum Weight

ANOVA Summary

p-value, Overall	<0.001
p-value, Blocks	0.008
p-value, Diets	0.103
p-value, Sex	<0.001
p-value, Diets*Sex	0.977
LSD 5%	0.0025

Diet Means

NK603	0.143a
RX826	0.141a
LH235 x LH185	0.140a
DK493	0.140a
MON847	0.142a
B73HTxLH82	0.142a
RX770	0.143a

^{a,b,c} Individual diet means with the same letter are not statistically different at the 5% level.

Table 17 - Statistical Analysis Across Sex for Final Pen Weight, kg

ANOVA Summary

p-value, Overall	<0.001
p-value, Blocks	0.069
p-value, Diets	0.849
p-value, Sex	<0.001
p-value, Diets*Sex	0.488
LSD 5%	1.1087

Diet Means

NK603	22.770a
RX826	23.370a
LH235 x LH185	22.720a
DK493	22.760a
MON847	22.480a
B73HTxLH82	22.850a
RX770	22.530a

a,b,c Individual diet means with the same letter are not statistically different at the 5% level.

Table 18 - Statistical Analysis Across Sex for R/M Weight, kg

ANOVA Summary

p-value, Overall	0.294
p-value, Blocks	0.478
p-value, Diets	0.538
p-value, Sex	0.169
p-value, Diets*Sex	0.157
LSD 5%	0.383

Diet Means

NK603	0.224a
RX826	0.170a
LH235 x LH185	0.474a
DK493	0.429a
MON847	0.310a
B73HTxLH82	0.142a
RX770	0.156a

a,b,c Individual diet means with the same letter are not statistically different at the 5% level.

Table 19 - Statistical Analysis Across Sex for Food Consumption, kg

ANOVA Summary

p-value, Overall	<0.001
p-value, Blocks	0.007
p-value, Diets	0.349
p-value, Sex	<0.001
p-value, Diets*Sex	0.535
LSD 5%	1.4846

Diet Means

NK603	35.090a
RX826	36.940a
LH235 x LH185	35.870a
DK493	36.040a
MON847	35.570a
B73HTxLH82	35.470a
RX770	35.430a

a,b,c Individual diet means with the same letter are not statistically different at the 5% level.

Table 20 - Statistical Analysis Across Sex for Average Food Consumption, kg

ANOVA Summary

p-value, Overall	<0.001
p-value, Blocks	0.035
p-value, Diets	0.063
p-value, Sex	<0.001
p-value, Diets*Sex	0.976
LSD 5%	0.1318

Diet Means

NK603	3.547a
RX826	3.694a
LH235 x LH185	3.706a
DK493	3.689a
MON847	3.667a
B73HTxLH82	3.586a
RX770	3.543a

a,b,c Individual diet means with the same letter are not statistically different at the 5% level

Table 21 - Statistical Analysis Across Sex for Average Weight, kg/bird

ANOVA Summary

p-value, Overall	<0.001
p-value, Blocks	0.016
p-value, Diets	0.229
p-value, Sex	<0.001
p-value, Diets*Sex	0.914
LSD 5%	0.0688

Diet Means

NK603	2.301a
RX826	2.337a
LH235 x LH185	2.346a
DK493	2.327a
MON847	2.318a
B73HTxLH82	2.310a
RX770	2.253a

a,b,c Individual diet means with the same letter are not statistically different at the 5% level.

Table 22 - Statistical Analysis Across Sex for Feed Efficiency

ANOVA Summary

p-value, Overall	<0.001
p-value, Blocks	0.187
p-value, Diets	0.059
p-value, Sex	<0.001
p-value, Diets*Sex	0.363
LSD 5%	0.032

Diet Means

NK603	1.543a
RX826	1.585a
LH235 x LH185	1.581a
DK493	1.587a
MON847	1.587a
B73HTxLH82	1.555a
RX770	1.574a

a,b,c Individual diet means with the same letter are not statistically different at the 5% level.

Table 23 - Statistical Analysis Across Sex for Adjusted Feed Efficiency

ANOVA Summary

p-value, Overall	<0.001
p-value, Blocks	0.042
p-value, Diets	0.013
p-value, Sex	<0.001
p-value, Diets*Sex	0.582
LSD 5%	0.024

Diet Means

NK603	1.528c
RX826	1.573a
LH235 x LH185	1.549bc
DK493	1.556ab
MON847	1.563ab
B73HTxLH82	1.546bc
RX770	1.563ab

^{a,b,c} Individual diet means with the same letter are not statistically different at the 5% level.

Table 24 - Statistical Analysis Across Sex for Breast Moisture

ANOVA Summary

p-value, Overall	0.019
p-value, Blocks	0.152
p-value, Diets	0.434
p-value, Sex	0.002
p-value, Diets*Sex	0.074
LSD 5%	0.4669

Diet Means

NK603	74.741a
RX826	74.716a
LH235 x LH185	74.726a
DK493	74.774a
MON847	74.993a
B73HTxLH82	74.879a
RX770	74.439a

a,b,c Individual diet means with the same letter are not statistically different at the 5% level.

Table 25 - Statistical Analysis Across Sex for Breast Protein

ANOVA Summary

p-value, Overall	0.163
p-value, Blocks	0.662
p-value, Diets	0.445
p-value, Sex	0.018
p-value, Diets*Sex	0.151
LSD 5%	0.5355

Diet Means

NK603	24.111a
RX826	24.235a
RX770	24.346a
DK493	24.157a
LH235 x LH185	24.008a
MON847	23.712a
B73HTxLH82	24.019a

a,b,c Individual diet means with the same letter are not statistically different at the 5% level.

Table 26 - Statistical Analysis Across Sex for Breast Fat

ANOVA Summary

p-value, Overall	0.286
p-value, Blocks	0.530
p-value, Diets	0.064
p-value, Sex	0.281
p-value, Diets*Sex	0.756
LSD 5%	0.1987

Diet Means

NK603	0.867a
RX826	0.810a
RX770	1.035a
DK493	0.809a
LH235 x LH185	1.036a
MON847	0.931a
B73HTxLH82	0.798a

a,b,c Individual diet means with the same letter are not statistically different at the 5% level.

Table 27 - Statistical Analysis Across Sex for Thigh Moisture

ANOVA Summary

p-value, Overall	0.016
p-value, Blocks	0.213
p-value, Diets	0.002
p-value, Sex	0.701
p-value, Diets*Sex	0.379
LSD 5%	0.5203

Diet Means

NK603	75.894bc
RX826	76.360ab
LH235 x LH185	76.606a
DK493	76.293ab
MON847	76.804a
B73HTxLH82	75.752c
RX770	76.039bc

a,b,c Individual diet means with the same letter are not statistically different at the 5% level.

Table 28 - Statistical Analysis Across Sex for Thigh Protein

ANOVA Summary

p-value, Overall	0.066
p-value, Blocks	0.203
p-value, Diets	0.064
p-value, Sex	0.857
p-value, Diets*Sex	0.143
LSD 5%	0.5538

Diet Means

NK603	21.061a
RX826	21.161a
RX770	21.133a
DK493	21.025a
LH235 x LH185	20.659a
MON847	20.502a
B73HTxLH82	21.339a

a,b,c Individual diet means with the same letter are not statistically different at the 5% level.

Table 29 - Statistical Analysis Across Sex for Thigh Fat

ANOVA Summary

p-value, Overall	0.669
p-value, Blocks	0.752
p-value, Diets	0.321
p-value, Sex	0.603
p-value, Diets*Sex	0.642
LSD 5%	0.5661

Diet Means

NK603	2.455a
RX826	1.966a
LH235 x LH185	1.847a
DK493	2.139a
MON847	1.833a
B73HTxLH82	2.311a
RX770	2.153a

a,b,c Individual diet means with the same letter are not statistically different at the 5% level.

Table 30 - Statistical Analysis For Each Sex for Live Weight, kg

ANOVA Summary	Male	Female
p-value, Overall	0.052	0.534
p-value, Blocks	0.026	0.442
p-value, Diets	0.214	0.522
LSD 5%	0.0967	0.0935
Diet Means	Male	Female
NK603	2.377a	2.115a
RX826	2.472a	2.127a
LH235 x LH185	2.418a	2.155a
DK493	2.397a	2.129a
MON847	2.402a	2.107a
B73HTxLH82	2.361a	2.088a
RX770	2.338a	2.052a
All Commercial*	2.398	2.110
p-value for NK603 compared to population of commercial diets *	0.690**	0.902
5% LSD for NK603 compared to population of commercial diets	0.1293	0.1002

^{a,b} Individual diet means with the same letter are not statistically different at the 5% level.

* Derived from a mixed linear model accounting for variation among as well as within diets.

**p-value for Blocks is 0.019.

Table 31 - Statistical Analysis For Each Sex for Live Pen Weight Day 1, g/pen

ANOVA Summary	Male	Female
p-value, Overall	0.250	0.765
p-value, Blocks	0.043	0.301
p-value, Diets	0.830	0.948
LSD 5%	12.6690	15.1300
Diet Means	Male	Female
NK603	459.200a	457.200a
RX826	462.000a	462.000a
LH235 x LH185	460.400a	454.000a
DK493	464.000a	457.200a
MON847	458.000a	462.00a
B73HTxLH82	465.200a	456.800a
RX770	457.200a	460.800a
All Commercial*	461.130	458.800
p-value for NK603 compared to population of commercial diets *	0.668**	0.782
5% LSD for NK603 compared to population of commercial diets	9.1149	11.6543

a,b Individual diet means with the same letter are not statistically different at the 5% level.

* Derived from a mixed linear model accounting for variation among as well as within diets.

**p-value for Blocks is 0.024.

Table 32 - Statistical Analysis For Each Sex for Live Weight Day 1, g/bird

ANOVA Summary	Male	Female
p-value, Overall	0.250	0.765
p-value, Blocks	0.043	0.301
p-value, Diets	0.830	0.948
LSD 5%	1.0558	1.2608
Diet Means	Male	Female
NK603	38.267a	38.100a
RX826	38.500a	38.500a
LH235 x LH185	38.367a	37.833a
DK493	38.667a	38.100a
MON847	38.167a	38.500a
B73HTxLH82	38.767a	38.067a
RX770	38.100a	38.400a
All Commercial*	38.428	38.233
p-value for NK603 compared to population of commercial diets *	0.668**	0.782
5% LSD for NK603 compared to population of commercial diets	0.7596	0.9704

^{a,b} Individual diet means with the same letter are not statistically different at the 5% level.

* Derived from a mixed linear model accounting for variation among as well as within diets.

**p-value for Blocks is 0.024.

Table 33 - Statistical Analysis For Each Sex for Fat Pad Weight, kg

ANOVA Summary	Male	Female
p-value, Overall	0.071	0.243
p-value, Blocks	0.131	0.276
p-value, Diets	0.090	0.255
LSD 5%	0.0037	0.0043
Diet Means	Male	Female
NK603	0.032a	0.036a
RX826	0.035a	0.038a
LH235 x LH185	0.037a	0.041a
DK493	0.038a	0.040a
MON847	0.034a	0.040a
B73HTxLH82	0.035a	0.039a
RX770	0.036a	0.038a
All Commercial*	0.036	0.039
p-value for NK603 compared to population of commercial diets *	0.008	0.024
5% LSD for NK603 compared to population of commercial diets	0.0030	0.0032

^{a,b} Individual diet means with the same letter are not statistically different at the 5% level.

* Derived from a mixed linear model accounting for variation among as well as within diets.

Table 34 - Statistical Analysis For Each Sex for Chill Weight, kg

ANOVA Summary	Male	Female
p-value, Overall	0.098	0.398
p-value, Blocks	0.031	0.332
p-value, Diets	0.393	0.427
LSD 5%	0.0785	0.0714
Diet Means	Male	Female
NK603	1.685a	1.499a
RX826	1.754a	1.521a
LH235 x LH185	1.709a	1.536a
DK493	1.697a	1.514a
MON847	1.697a	1.499a
B73HTxLH82	1.673a	1.488a
RX770	1.660a	1.452a
All Commercial*	1.698	1.502
p-value for NK603 compared to population of commercial diets *	0.727**	0.948
5% LSD for NK603 compared to population of commercial diets	0.0908	0.0824

^{a,b} Individual diet means with the same letter are not statistically different at the 5% level.

* Derived from a mixed linear model accounting for variation among as well as within diets.

**p-value for Blocks is 0.023.

Table 35 - Statistical Analysis For Each Sex for Breast Weight, kg

ANOVA Summary	Male	Female
p-value, Overall	0.175	0.386
p-value, Blocks	0.232	0.365
p-value, Diets	0.190	0.383
LSD 5%	0.0288	0.0247
Diet Means	Male	Female
NK603	0.426a	0.388a
RX826	0.452a	0.395a
LH235 x LH185	0.436a	0.393a
DK493	0.431a	0.394a
MON847	0.423a	0.386a
B73HTxLH82	0.411a	0.378a
RX770	0.420a	0.369a
All Commercial*	0.429	0.386
p-value for NK603 compared to population of commercial diets *	0.887	0.854
5% LSD for NK603 compared to population of commercial diets	0.0403	0.0294

^{a,b} Individual diet means with the same letter are not statistically different at the 5% level.

* Derived from a mixed linear model accounting for variation among as well as within diets.

Table 36 - Statistical Analysis For Each Sex for Wings Weight, kg

ANOVA Summary	Male	Female
p-value, Overall	0.113	0.430
p-value, Blocks	0.060	0.607
p-value, Diets	0.297	0.304
LSD 5%	0.0083	0.0077
Diet Means	Male	Female
NK603	0.195a	0.178a
RX826	0.204a	0.178a
LH235 x LH185	0.197a	0.178a
DK493	0.196a	0.178a
MON847	0.198a	0.173a
B73HTxLH82	0.193a	0.177a
RX770	0.194a	0.170a
All Commercial*	0.197	0.176
p-value for NK603 compared to population of commercial diets *	0.662	0.571
5% LSD for NK603 compared to population of commercial diets	0.0105	0.0093

^{a,b} Individual diet means with the same letter are not statistically different at the 5% level.

* Derived from a mixed linear model accounting for variation among as well as within diets.

Table 37 - Statistical Analysis For Each Sex for Thigh Weight, kg

ANOVA Summary	Male	Female
p-value, Overall	0.087	0.550
p-value, Blocks	0.026	0.302
p-value, Diets	0.393	0.681
LSD 5%	0.0133	0.0153
Diet Means	Male	Female
NK603	0.296a	0.262a
RX826	0.306a	0.258a
LH235 x LH185	0.295a	0.259a
DK493	0.295a	0.254a
MON847	0.299a	0.253a
B73HTxLH82	0.297a	0.253a
RX770	0.289a	0.248a
All Commercial*	0.297	0.254
p-value for NK603 compared to population of commercial diets *	0.943	0.217
5% LSD for NK603 compared to population of commercial diets	0.0158	0.0118

^{a,b} Individual diet means with the same letter are not statistically different at the 5% level.

* Derived from a mixed linear model accounting for variation among as well as within diets.

Table 38 - Statistical Analysis For Each Sex for Drum Weight, kg

ANOVA Summary	Male	Female
p-value, Overall	0.007	0.719
p-value, Blocks	<0.001	0.305
p-value, Diets	0.523	0.901
LSD 5%	0.0103	0.0103
Diet Means	Male	Female
NK603	0.243a	0.210a
RX826	0.252a	0.211a
LH235 x LH185	0.244a	0.210a
DK493	0.241a	0.209a
MON847	0.246a	0.208a
B73HTxLH82	0.242a	0.206a
RX770	0.242a	0.204a
All Commercial*	0.244	0.208
p-value for NK603 compared to population of commercial diets *	0.832**	0.544
5% LSD for NK603 compared to population of commercial diets	0.0109	0.0079

a,b Individual diet means with the same letter are not statistically different at the 5% level.

* Derived from a mixed linear model accounting for variation among as well as within diets.

**p-value for Blocks is 0.002.

Table 39 - Statistical Analysis For Each Sex for % Fat Pad Weight (FatPad wt / Live Wt),

ANOVA Summary	Male	Female
p-value, Overall	0.089	0.247
p-value, Blocks	0.261	0.457
p-value, Diets	0.072	0.177
LSD 5%	0.0015	0.0017

Diet Means	Male	Female
NK603	0.013a	0.017a
RX826	0.014a	0.018a
LH235 x LH185	0.015a	0.019a
DK493	0.016a	0.019a
MON847	0.014a	0.019a
B73HTxLH82	0.015a	0.018a
RX770	0.015a	0.018a

All Commercial*	0.015	0.019
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p-value for NK603 compared to population of commercial diets *	0.051	0.010
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5% LSD for NK603 compared to population of commercial diets	0.0016	0.0013
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a,b Individual diet means with the same letter are not statistically different at the 5% level.

* Derived from a mixed linear model accounting for variation among as well as within diets.

Table 40 - Statistical Analysis For Each Sex for Percent Chill Weight

ANOVA Summary	Male	Female
p-value, Overall	0.549	0.074
p-value, Blocks	0.112	0.099
p-value, Diets	0.972	0.118
LSD 5%	0.0073	0.0057
Diet Means	Male	Female
NK603	0.708a	0.709a
RX826	0.709a	0.715a
LH235 x LH185	0.706a	0.713a
DK493	0.708a	0.711a
MON847	0.706a	0.712a
B73HTxLH82	0.708a	0.712a
RX770	0.709a	0.707a
All Commercial*	0.708	0.711
p-value for NK603 compared to population of commercial diets *	0.844	0.436
5% LSD for NK603 compared to population of commercial diets	0.0052	0.0076

^{a,b} Individual diet means with the same letter are not statistically different at the 5% level.

* Derived from a mixed linear model accounting for variation among as well as within diets.

Table 41 - Statistical Analysis For Each Sex for Percent Breast Weight

ANOVA Summary	Male	Female
p-value, Overall	0.200	0.695
p-value, Blocks	0.579	0.838
p-value, Diets	0.110	0.482
LSD 5%	0.0084	0.0074
Diet Means	Male	Female
NK603	0.252a	0.259a
RX826	0.258a	0.259a
LH235 x LH185	0.255a	0.256a
DK493	0.254a	0.260a
MON847	0.249a	0.257a
B73HTxLH82	0.245a	0.254a
RX770	0.253a	0.253a
All Commercial*	0.252	0.257
p-value for NK603 compared to population of commercial diets *	0.946	0.544
5% LSD for NK603 compared to population of commercial diets	0.0129	0.0078

^{a,b} Individual diet means with the same letter are not statistically different at the 5% level.

* Derived from a mixed linear model accounting for variation among as well as within diets.

Table 42 - Statistical Analysis For Each Sex for Percent Wing Weight

ANOVA Summary	Male	Female
p-value, Overall	0.520	<0.001
p-value, Blocks	0.236	0.010
p-value, Diets	0.725	0.001
LSD 5%	0.0021	0.0017
Diet Means	Male	Female
NK603	0.116a	0.119ab
RX826	0.116a	0.117bcd
LH235 x LH185	0.116a	0.116de
DK493	0.116a	0.118abc
MON847	0.117a	0.116e
B73HTxLH82	0.116a	0.119a
RX770	0.117a	0.118abcd
All Commercial*	0.116	0.117
p-value for NK603 compared to population of commercial diets *	0.693	0.312**
5% LSD for NK603 compared to population of commercial diets	0.0016	0.0037

a,b Individual diet means with the same letter are not statistically different at the 5% level.

* Derived from a mixed linear model accounting for variation among as well as within diets.

**p-value for Blocks is 0.008..

Table 43 - Statistical Analysis For Each Sex for Percent Thigh Weight

ANOVA Summary	Male	Female
p-value, Overall	0.277	0.031
p-value, Blocks	0.650	0.039
p-value, Diets	0.154	0.080
LSD 5%	0.0039	0.0041
Diet Means	Male	Female
NK603	0.176a	0.175a
RX826	0.174a	0.169a
LH235 x LH185	0.173a	0.169a
DK493	0.174a	0.168a
MON847	0.177a	0.169a
B73HTxLH82	0.178a	0.170a
RX770	0.174a	0.170a
All Commercial*	0.175	0.169
p-value for NK603 compared to population of commercial diets *	0.659	0.003
5% LSD for NK603 compared to population of commercial diets	0.0054	0.0035

a,b Individual diet means with the same letter are not statistically different at the 5% level.

* Derived from a mixed linear model accounting for variation among as well as within diets.

Table 44 - Statistical Analysis For Each Sex for Percent Drum Weight

ANOVA Summary	Male	Female
p-value, Overall	0.022	0.284
p-value, Blocks	0.002	0.484
p-value, Diets	0.514	0.204
LSD 5%	0.0037	0.003
Diet Means	Male	Female
NK603	0.145a	0.140a
RX826	0.144a	0.139a
LH235 x LH185	0.143a	0.137a
DK493	0.142a	0.138a
MON847	0.145a	0.139a
B73HTxLH82	0.145a	0.139a
RX770	0.146a	0.141a
All Commercial*	0.144	0.139
p-value for NK603 compared to population of commercial diets *	0.651**	0.279
5% LSD for NK603 compared to population of commercial diets	0.0039	0.0037

^{a,b} Individual diet means with the same letter are not statistically different at the 5% level.

* Derived from a mixed linear model accounting for variation among as well as within diets.

**p-value for Blocks is 0.01.

Table 45 - Statistical Analysis For Each Sex for Final Pen Weight, kg

ANOVA Summary	Male	Female
p-value, Overall	0.553	0.239
p-value, Blocks	0.255	0.113
p-value, Diets	0.748	0.463
LSD 5%	1.9771	1.1367

Diet Means	Male	Female
NK603	24.280a	21.260a
RX826	25.380a	21.360a
LH235 x LH185	23.800a	21.640a
DK493	23.860a	21.660a
MON847	24.160a	20.800a
B73HTxLH82	24.220a	21.480a
RX770	24.280a	20.780a

All Commercial*	24.283	21.287
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p-value for NK603 compared to population of commercial diets *	0.997	0.953
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5% LSD for NK603 compared to population of commercial diets	1.5373	0.9182
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^{a,b} Individual diet means with the same letter are not statistically different at the 5% level.

* Derived from a mixed linear model accounting for variation among as well as within diets.

Table 46 - Statistical Analysis For Each Sex for R/M Weight, kg

ANOVA Summary	Male	Female
p-value, Overall	0.546	0.133
p-value, Blocks	0.852	0.046
p-value, Diets	0.318	0.430
LSD 5%	0.7198	0.3332
Diet Means	Male	Female
NK603	0.308a	0.140a
RX826	0.196a	0.145a
LH235 x LH185	0.814a	0.133a
DK493	0.726a	0.132a
MON847	0.194a	0.426a
B73HTxLH82	0.134a	0.150a
RX770	0.180a	0.132a
All Commercial*	0.374	0.186
p-value for NK603 compared to population of commercial diets *	0.852	0.733
5% LSD for NK603 compared to population of commercial diets	0.8581	0.3268

^{a,b} Individual diet means with the same letter are not statistically different at the 5% level.

* Derived from a mixed linear model accounting for variation among as well as within diets.

Table 47 - Statistical Analysis For Each Sex for Food Consumption, kg

ANOVA Summary	Male	Female
p-value, Overall	0.183	0.330
p-value, Blocks	0.073	0.184
p-value, Diets	0.452	0.498
LSD 5%	2.4231	1.9223
Diet Means	Male	Female
NK603	36.820a	33.360a
RX826	39.120a	34.760a
LH235 x LH185	37.160a	34.580a
DK493	37.220a	34.860a
MON847	37.060a	34.080a
B73HTxLH82	36.800a	34.140a
RX770	37.640a	33.220a
All Commercial*	37.500	34.273
p-value for NK603 compared to population of commercial diets *	0.481	0.236
5% LSD for NK603 compared to population of commercial diets	1.9386	1.5404

^{a,b} Individual diet means with the same letter are not statistically different at the 5% level.

* Derived from a mixed linear model accounting for variation among as well as within diets.

Table 48 - Statistical Analysis For Each Sex for Average Food Consumption, g/bird.

ANOVA Summary	Male	Female
p-value, Overall	0.296	0.168
p-value, Blocks	0.231	0.086
p-value, Diets	0.374	0.366
LSD 5%	0.2083	0.1734
Diet Means	Male	Female
NK603	3.757a	3.336a
RX826	3.912a	3.476a
LH235 x LH185	3.955a	3.458a
DK493	3.892a	3.486a
MON847	3.859a	3.476a
B73HTxLH82	3.757a	3.414a
RX770	3.764a	3.322a
All Commercial*	3.856	3.439
p-value for NK603 compared to population of commercial diets *	0.306	0.146
5% LSD for NK603 compared to population of commercial diets	0.2234	0.1403

^{a,b} Individual diet means with the same letter are not statistically different at the 5% level.

* Derived from a mixed linear model accounting for variation among as well as within diets.

Table 49 - Statistical Analysis For Each Sex for Average Weight, kg/bird

ANOVA Summary	Male	Female
p-value, Overall	0.296	0.383
p-value, Blocks	0.140	0.172
p-value, Diets	0.520	0.615
LSD 5%	0.1081	0.0945
Diet Means	Male	Female
NK603	2.477a	2.126a
RX826	2.538a	2.136a
LH235 x LH185	2.529a	2.164a
DK493	2.487a	2.166a
MON847	2.515a	2.120a
B73HTxLH82	2.471a	2.148a
RX770	2.428a	2.078a
All Commercial*	2.495	2.135
p-value for NK603 compared to population of commercial diets *	0.707	0.805
5% LSD for NK603 compared to population of commercial diets	0.1145	0.0770

^{a,b} Individual diet means with the same letter are not statistically different at the 5% level.

* Derived from a mixed linear model accounting for variation among as well as within diets.

Table 50 - Statistical Analysis For Each Sex for Feed Efficiency

ANOVA Summary	Male	Female
p-value, Overall	0.692	<0.001
p-value, Blocks	0.768	0.002
p-value, Diets	0.517	0.005
LSD 5%	0.0539	0.0328
Diet Means	Male	Female
NK603	1.517a	1.570d
RX826	1.542a	1.627ab
LH235 x LH185	1.564a	1.598bcd
DK493	1.564a	1.609abc
MON847	1.535a	1.640a
B73HTxLH82	1.521a	1.590cd
RX770	1.551a	1.597bcd
All Commercial*	1.546	1.610
p-value for NK603 compared to population of commercial diets *	0.153	0.112**
5% LSD for NK603 compared to population of commercial diets	0.0402	0.0542

^{a,b} Individual diet means with the same letter are not statistically different at the 5% level.

* Derived from a mixed linear model accounting for variation among as well as within diets.

**p-value for Blocks is 0.014.

Table 51 - Statistical Analysis For Each Sex for Adjusted Feed Efficiency

ANOVA Summary	Male	Female
p-value, Overall	0.161	0.085
p-value, Blocks	0.237	0.147
p-value, Diets	0.167	0.105
LSD 5%	0.033	0.0361
Diet Means	Male	Female
NK603	1.497a	1.559a
RX826	1.530a	1.616a
LH235 x LH185	1.510a	1.588a
DK493	1.513a	1.600a
MON847	1.522a	1.605a
B73HTxLH82	1.512a	1.579a
RX770	1.540a	1.587a
All Commercial*	1.521	1.596
p-value for NK603 compared to population of commercial diets *	0.116	0.057
5% LSD for NK603 compared to population of commercial diets	0.0324	0.0380

^{a,b} Individual diet means with the same letter are not statistically different at the 5% level.

* Derived from a mixed linear model accounting for variation among as well as within diets.

Table 52 - Statistical Analysis For Each Sex for Breast Moisture

ANOVA Summary	Male	Female
p-value, Overall	0.205	0.371
p-value, Blocks	0.242	0.830
p-value, Diets	0.226	0.182
LSD 5%	0.8740	0.4028
Diet Means	Male	Female
NK603	74.684a	74.798a
RX826	74.388a	75.044a
LH235 x LH185	74.656a	74.796a
DK493	74.604a	74.944a
MON847	74.708a	75.278a
B73HTxLH82	74.774a	74.984a
RX770	73.790a	75.088a
All Commercial*	74.487	75.022
p-value for NK603 compared to population of commercial diets *	0.639	0.253
5% LSD for NK603 compared to population of commercial diets	1.0157	0.4459

^{a,b} Individual diet means with the same letter are not statistically different at the 5% level.

* Derived from a mixed linear model accounting for variation among as well as within diets.

Table 53 - Statistical Analysis For Each Sex for Breast Protein

ANOVA Summary	Male	Female
p-value, Overall	0.557	0.122
p-value, Blocks	0.568	0.845
p-value, Diets	0.466	0.040
LSD 5%	0.9911	0.4913

Diet Means	Male	Female
NK603	24.098a	24.125a
RX826	24.541a	23.929a
LH235 x LH185	24.191a	23.826a
DK493	24.370a	23.944a
MON847	24.060a	23.363a
B73HTxLH82	24.026a	24.012a
RX770	24.856a	23.835a

All Commercial*	24.341	23.818
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p-value for NK603 compared to population of commercial diets *	0.518	0.279
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5% LSD for NK603 compared to population of commercial diets	0.7561	0.6491
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a,b Individual diet means with the same letter are not statistically different at the 5% level.

* Derived from a mixed linear model accounting for variation among as well as within diets.

Table 54 - Statistical Analysis For Each Sex for Breast Fat

ANOVA Summary	Male	Female
p-value, Overall	0.403	0.260
p-value, Blocks	0.209	0.864
p-value, Diets	0.582	0.106
LSD 5%	0.2940	0.2786
Diet Means	Male	Female
NK603	0.862a	0.872a
RX826	0.768a	0.852a
LH235 x LH185	1.000a	1.072a
DK493	0.878a	0.740a
MON847	1.018a	0.844a
B73HTxLH82	0.878a	0.718a
RX770	1.030a	1.040a
All Commercial*	0.929	0.880
p-value for NK603 compared to population of commercial diets *	0.579	0.973
5% LSD for NK603 compared to population of commercial diets	0.2893	0.4125

^{a,b} Individual diet means with the same letter are not statistically different at the 5% level.

* Derived from a mixed linear model accounting for variation among as well as within diets.

Table 55 - Statistical Analysis For Each Sex for Thigh Moisture

ANOVA Summary	Male	Female
p-value, Overall	0.048	0.166
p-value, Blocks	0.216	0.742
p-value, Diets	0.038	0.069
LSD 5%	0.5603	0.9446

Diet Means	Male	Female
NK603	75.790c	75.998a
RX826	76.350abc	76.370a
LH235 x LH185	76.808a	76.404a
DK493	76.360ab	76.226a
MON847	76.544ab	77.064a
B73HTxLH82	76.106bc	75.398a
RX770	76.098bc	75.980a

All Commercial*	76.378	76.240
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p-value for NK603 compared to population of commercial diets *	0.101	0.699
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5% LSD for NK603 compared to population of commercial diets	0.7512	1.5205
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^{a,b} Individual diet means with the same letter are not statistically different at the 5% level.

* Derived from a mixed linear model accounting for variation among as well as within diets.

Table 56 - Statistical Analysis For Each Sex for Thigh Protein

ANOVA Summary	Male	Female
p-value, Overall	0.488	0.036
p-value, Blocks	0.374	0.235
p-value, Diets	0.516	0.025
LSD 5%	0.8035	0.7985
Diet Means	Male	Female
NK603	20.927a	21.196ab
RX826	21.434a	20.887bc
LH235 x LH185	20.525a	20.793bc
DK493	20.990a	21.059ab
MON847	20.817a	20.187c
B73HTxLH82	20.866a	21.812a
RX770	21.155a	21.111ab
All Commercial*	20.965	20.975
p-value for NK603 compared to population of commercial diets *	0.915	0.714
5% LSD for NK603 compared to population of commercial diets	0.8622	1.4628

^{a,b} Individual diet means with the same letter are not statistically different at the 5% level.

* Derived from a mixed linear model accounting for variation among as well as within diets.

Table 57 - Statistical Analysis For Each Sex for Thigh Fat

ANOVA Summary	Male	Female
p-value, Overall	0.268	0.745
p-value, Blocks	0.332	0.410
p-value, Diets	0.253	0.839
LSD 5%	0.8707	0.7219
Diet Means	Male	Female
NK603	2.672a	2.238a
RX826	2.202a	1.730a
LH235 x LH185	1.598a	2.096a
DK493	2.212a	2.066a
MON847	1.694a	1.972a
B73HTxLH82	2.328a	2.294a
RX770	2.318a	1.988a
All Commercial*	2.059	2.024
p-value for NK603 compared to population of commercial diets *	0.141	0.427
5% LSD for NK603 compared to population of commercial diets	0.9032	0.5404

^{a,b} Individual diet means with the same letter are not statistically different at the 5% level.

* Derived from a mixed linear model accounting for variation among as well as within diets.

Figure 1. Average Weight (expressed as kg/bird) for broilers fed each variety. Error bars are \pm one half the 5% Least Significant Difference (LSD). Therefore any two non-overlapping varieties are statistically different at the 5% level of significance.

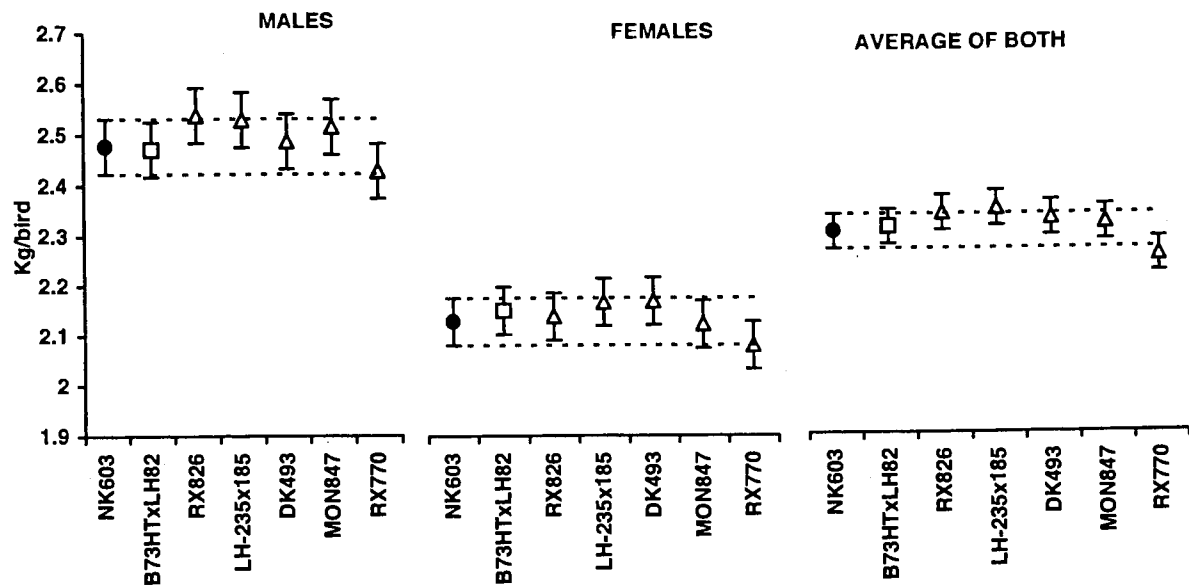


Figure 2. Average Food Consumption for broilers fed each variety. Error bars are \pm one half the 5% Least Significant Difference (LSD). Therefore any two non-overlapping varieties are statistically different at the 5% level of significance.

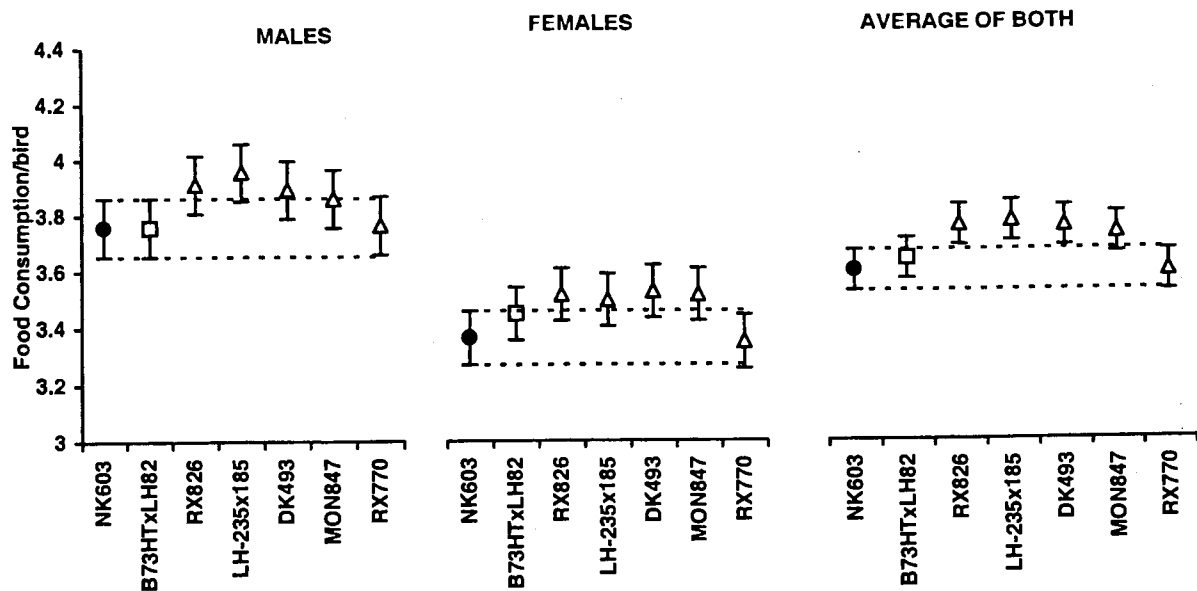


Figure 3. Mean feed efficiency for broilers fed each variety. Error bars are \pm one half the 5% Least Significant Difference (LSD). Therefore any two non-overlapping varieties are statistically different at the 5% level of significance.

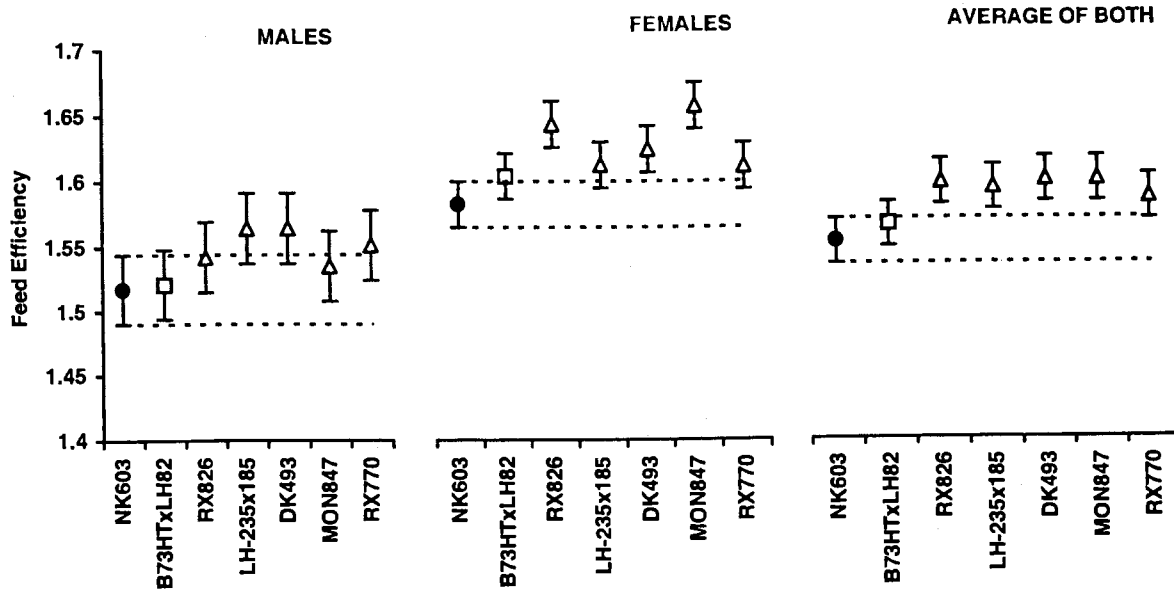
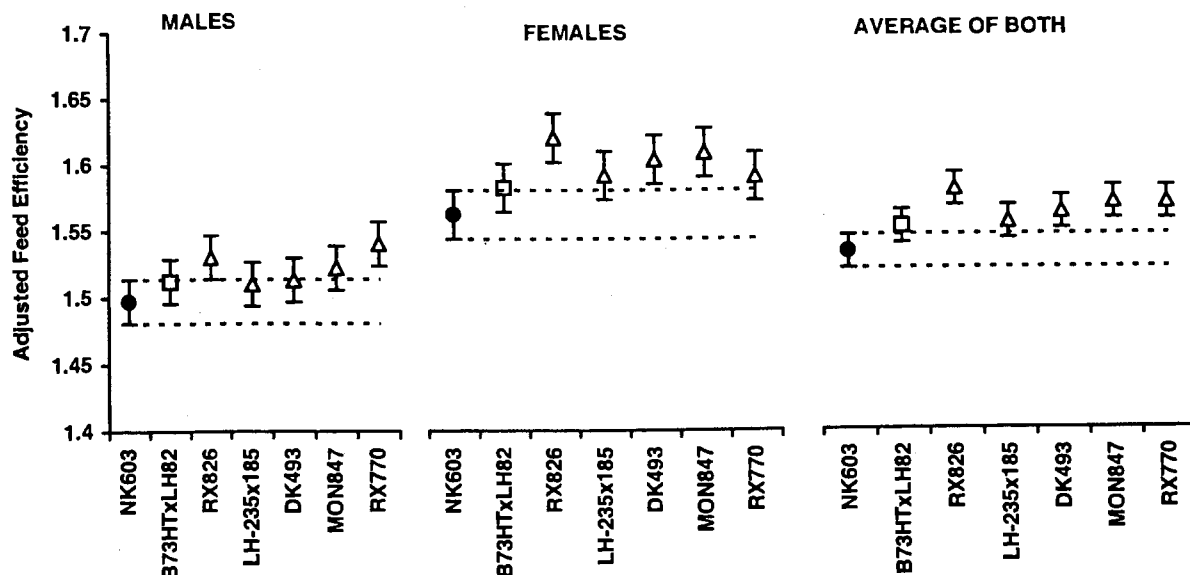


Figure 4. Adjusted feed efficiency for broilers fed each variety. Error bars are \pm one half the 5% Least Significant Difference (LSD). Therefore any two non-overlapping varieties are statistically different at the 5% level of significance.



This amendment modifies the statistical report. The following changes do not affect the quality or integrity of the data.

1. Title, page 1	Added 'Amended' in front of study title, 'Statistical Report'.
2. Title, page 1	Added '(Amendment 1)' after new report completion date.
3. Lines 27-29, page 1	<p>The lines (a) were replaced by those in (b) below:</p> <p>(a). Note that the data from all eight diets were used to build the models described below. However, only 7 diets, one transgenic line NK603 and the 6 commercial lines, were compared in detail.</p> <p>(b) Note that the data from all eight diets were used to build models 1 and 2, described below, but only 7 diets, the transgenic line NK603 and the 6 commercial lines, were compared in detail via multiple comparisons.</p>
4. Table 1, page 5	<p>Added the following footnote to the diets table:</p> <p>* Data from the MON853 line were used to build models 1 and 2, which are described in previous pages, but only 7 diets, the transgenic line NK603 and the 6 commercial lines, were compared in detail via multiple comparisons.</p>
5. Table 3, page 7	Changed Live Pen Weight, Day 1 unit label from "kg/pen" to "g/pen". Numeric values were not changed.

David Mark Carpenter
David Mark Carpenter, Ph.D.
Trilogy Consulting Company

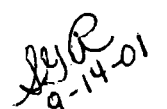
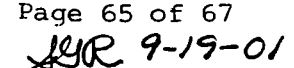
9/4/01
Date

This amendment, number 2, modifies the statistical report. The following changes do not affect the quality or integrity of the data. For clarification, amendment dated 9/4/01 is amendment number 1.

1. Page 1, Title Page.	Add: Amendment 2 and date to title Reason for change: to indicate this report contains 2 amendments. Add: Amendment 2 to the footer Reason for change: to identify this page as being affected by amendment 2.
2. Page 64, items 1 and 2	"Reason for change: This change is to identify the report as being amended." Because amendment 1 did not include reason for change, the reason is being added by amendment 2.
3. Page 64, items 3 and 4	"Reason for change: This change is to clarify the statistical analysis being performed." Because amendment 1 did not include reason for change, the reason is being added by amendment 2.
4. Page 64, item 5	"Reason for change: The change is to correct the units label in the report". Because amendment 1 did not include reason for change, the reason is being added by amendment 2.
5. Page 66, QA Statement	Add : Amendment 1 and Amendment 2 to footer of QA Statement page. Reason for change: To identify the page as being affected by amendments 1 and 2.


David Mark Carpenter, Ph.D.
Trilogy Consulting Company

9/13/01
Date


~~Page 65 of 67~~ 66
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This amendment, number 3, modifies the statistical report. The following changes do not affect the quality or integrity of the data.

1. Page 1, Title Page.	Add: Amendment 3 and date to title Reason for change: to indicate this report contains 3 amendments. Add: Amendment 3 to the footer Reason for change: to identify this page as being affected by amendment 3.
2. Table 31, page 35	"Reason for change: The change is to correct the units label in the report". Changed Live Pen Weight, Day 1 unit label from "kg/pen" to "g/pen". Numeric values were not changed.
3. Page 67, QA Statement	Add : Amendment 3 to footer of QA Statement page. Reason for change: To identify the page as being affected by amendment 3. Change: Page 66 (page change was because of amendment 2) to page 67 for amendment 3. Reason for change: To clarify and identify page number for QA statement.

David Mark Carpenter

David Mark Carpenter, Ph.D.
Trilogy Consulting Company

9/18/01

Date

QA Statement

Study Title: Comparison of Broiler Performance When Fed Diets Containing Events
MON853 and NK603, Parental Lines or Commercial Corn

Unique Identifier for the Portion of the Study: Statistical Analysis Report

Study Number: 2000-01-39-02 (MN-00-3)

Reviews conducted by the QAU confirm the sub-report reflects the raw data.

Following is a list of reviews conducted by the Monsanto Regulatory QAU on the portion of the study reported herein.

Dates of Inspection/Audit	Phase	Date Reported to Study Director	Date Reported to Management
01/04/2001	Draft Report Audit	01/04/2001	01/04/2001
09/11/2001	Report Amendment Review	09/13/2001	09/13/2001
09/13/2001	Report Amendment Review	09/13/2001	09/13/2001
09/17/2001	Report Amendment Review	09/17/2001	09/17/2001

Paula L. Price

Quality Assurance Unit
Monsanto Regulatory, Monsanto Company

September 18, 2001
Date

Amendment 1
Amendment 2
Amendment 3