

Study Title

Compositional Analyses of Forage and Seed Collected from Stearidonic Acid-Containing Soybeans, MON 87769, Grown in the United States during 2006

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Study Completed On

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Laboratory Project ID

**MSL0020866
Monsanto Study No. 07-01-83-39
Covance Study No. 6103-693**

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Monsanto Company

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This study meets the U.S. EPA Good Laboratory Practice requirements as specified in 40 CFR Part 160 with the following exceptions:

- The reference standards used for compositional analysis were not characterized according to GLP standards and reserve samples from each batch of the reference standards were not retained. These exceptions had no effect on the integrity or quality of the study because the reference standards were accompanied by Certificates of Analysis.
- Stability of the compositional analytes in the test, control, and reference substances was not determined. This exception had no effect on the integrity or quality of the study because the samples were maintained at approximately -20°C throughout the duration of the study.

Submitter

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10-23-2008

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23 October 2008
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Quality Assurance Statement

Study Title: Compositional Analyses of Forage and Seed Collected from
Stearidonic Acid-Containing Soybeans, MON 87769, Grown in the
United States during 2006

Study Number: 07-01-83-39

Reviews conducted by the Quality Assurance Unit (QAU) confirm that the final report reflects the raw data for the portion of the study conducted by Monsanto Company, Biotechnology Regulatory Sciences.

Reviews which have been conducted by the Covance Laboratories Inc., are enclosed within the Covance sub-report and are specified on their individual QA Statement (see Appendix 1).

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

Dates of Inspection / Audit	Phase	Date Reported To:	
		Study Director	Management
10/17/2008	Raw Data and Draft Report Review	10/21/2008	10/21/2008
10/17/2008	Statistical Data and Draft Report Review	10/21/2008	10/21/2008



Quality Assurance Specialist
Monsanto Regulatory

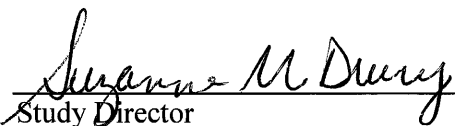
10/23/08


Date

Study Certification

This report is an accurate and complete representation of the study/project activities.

Signature of Final Report Approval:


Study Director


Date

Study Information

Study Number:	07-01-83-39	
Study Title:	Compositional Analyses of Forage and Seed Collected from Stearidonic Acid-Containing Soybeans, MON 87769, Grown in the United States during 2006	
Primary Testing Facility:	Monsanto Company Product Safety Center 800 North Lindbergh Blvd. St. Louis, Missouri 63167	
Performing Laboratories:	Covance Laboratories Inc. 3301 Kinsman Blvd. Madison, WI 53704	Certus International, Inc. 1422 Elbridge Payne Road, Suite 200 Chesterfield, MO 63017
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Principal Investigators:	Kathleen D. Miller	(Covance Laboratories Inc)
	Roy Sorbet	(Certus International, Inc)
Contributors:	Susan G. Riordan	
Study Initiation Date:	July 5, 2007	
Study Completion Date:	October 23, 2008	
Records Retention:	All study specific raw data, protocols, final reports and facility records will be retained at Monsanto, St. Louis except for analytical raw data and facility records maintained at Covance Laboratories Inc., Madison facility.	
Sample Storage:	Any unused study samples will be stored at Covance Laboratories Inc. until their final disposition is directed by the Study Director at a future date.	

Study Information (continued)

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Table of Contents

Study Title.....	1
Statement of No Data Confidentiality Claim.....	2
Statement of Compliance.....	3
Quality Assurance Statement.....	4
Study Certification.....	5
Study Information.....	6
Table of Contents.....	8
Abbreviations.....	9
1.0 Summary.....	10
2.0 Introduction.....	12
3.0 Purpose.....	12
4.0 Test, Control, and Reference (T/C/R) Substances.....	12
4.1 Test Substance.....	12
4.2 Control Substance.....	12
4.3 Reference Substances.....	13
4.4 T/C/R Substance Characterization.....	13
5.0 Field Trial Description.....	14
6.0 Analytical Methods.....	14
7.0 Control of Bias.....	14
8.0 Statistical Analysis.....	15
8.1 Data Processing.....	15
8.2 Statistical Methodology.....	16
9.0 Results and Discussion.....	17
9.1 Compositional Comparisons of Forage from MON 87769 and Conventional Control for Proximates and Fiber.....	18
9.2 Compositional Comparisons of Seed from MON 87769 and Conventional Control for Proximates, Fiber, Amino Acids, Vitamins, Isoflavones, and Anti-Nutrient.....	18
9.3 Compositional Comparisons of Seed from MON 87769 and Conventional Control for Fatty Acids.....	20
10.0 Conclusions.....	21
11.0 References.....	22
12.0 Protocol Amendments/Deviations.....	22
Table 1. Summary of Differences ($p < 0.05$) for the Comparison of Soybean Component Levels for Test (MON 87769) vs. the Conventional Control (A3525) and Commercial Reference Substances.....	23
Table 2. Statistical Summary of Combined Site Soybean 18:3 9c,12c,15t (Trans ALA), 18:3 Gamma Linolenic, 18:4 6c,9c,12c,15t (Trans SDA) and 18:4 Stearidonic Fatty Acid Content for Test (MON 87769).....	31
Table 3. Literature and ILSI Database Values for Components in Conventional Soybean Seed and Forage.....	32
Appendix 1: Covance Analytical Sub-Report.....	34
Appendix 2: Certus Statistical Sub-Report.....	100

Abbreviations

AA	amino acid
ADF	acid detergent fiber
ALA	alpha linolenic acid
DW or dw	dry weight
FA	fatty acid
FW or fw	fresh weight
GLA	gamma linolenic acid
g, µg, mg, kg	gram, microgram, milligram, kilogram
LOQ	limit of quantitation
NDF	neutral detergent fiber
ppm	parts per million
PRESS	predicted residual sums of squares
SDA	stearidonic acid
SOP	standard operating procedure
T/C/R	test/control/reference
TDF	total dietary fiber
U.S.	United States

1.0 Summary

Monsanto Company has developed soybean, MON 87769, which produces stearidonic acid (SDA), an omega-3 fatty acid. Production of SDA in soybean seed was achieved through the introduction of genes encoding the production of delta-6 ($\Delta 6$) and delta-15 ($\Delta 15$) desaturases from *Primula juliae* and *Neurospora crassa*, respectively. These two genes were driven by seed-specific promoters, resulting in the production of SDA only in soybean seeds.

The purpose of this study was to compare the composition of the SDA-producing soybean, MON 87769, to the conventional control, A3525, which has background genetics similar to that of MON 87769. The test (MON 87769), control, and reference substances in this study were grown at five replicated field sites across the United States during the 2006 growing season under the Production Plan 06-01-83-06 (Colyer, 2008). Fifteen commercially available soybean varieties were included as references to provide data for the development of a 99% tolerance interval for each component analyzed. Forage and seed samples were harvested from all plots and analyzed for compositional components. Compositional analyses of the forage samples included proximates (protein, fat, ash, moisture, and carbohydrate by calculation), acid detergent fiber (ADF), and neutral detergent fiber (NDF). Compositional analyses of the seed samples included proximates (protein, fat, ash, moisture, and carbohydrate by calculation), acid detergent fiber (ADF), neutral detergent fiber (NDF), amino acids, fatty acids¹ (C8-C24), trypsin inhibitors, phytic acid, lectin, isoflavones (daidzein, glycitein, and genistein), vitamin E, raffinose, and stachyose. In all, 75 different analytical components (seven in forage and 68 in seed) were measured. Of the evaluated components, 26 had more than 50% of the observations below the assay limit of quantitation (LOQ) and, as a result, were excluded from the statistical analysis. Therefore, statistics were provided for 49 components (seven in forage and 42 in seed).

SDA soybeans are expected to be compositionally equivalent to conventional soybeans, except for the intended change in their fatty acid composition brought about by the introduction of the two desaturase enzymes. MON 87769 contains four additional fatty acids not found present at detectable levels in the control substance: 18:3 gamma linolenic acid (GLA); 18:3 9c,12c,15t trans-alpha linolenic acid (trans-ALA); 18:4 stearidonic acid (SDA); and 18:4 6c,9c,12c,15t (trans-SDA), which were evaluated in this study. Since statistical comparisons could not be made between the test and control for these four additional fatty acids, they are presented as % dry weight and % total fatty acid.

The overall data set was examined for evidence of biologically meaningful changes using a mixed model of variance. Six sets of statistical analyses were conducted, five based on

¹All unsaturated fatty acids are in the cis form unless otherwise indicated.

the data from each of the replicated field trials and the sixth analysis based on data from a combination of all five field trials, referred to as the combined site in this report. Statistical evaluation of the composition data involved a comparison of the forage and seed from MON 87769 to a conventional control soybean substance. Statistically significant differences were determined at the 5% level of significance ($p < 0.05$). There were 294 statistical comparisons conducted between each test substance and the conventional control (49 comparisons in the combined site and 245 comparisons in the individual sites). Using the data for each component obtained from the reference substances, a 99% tolerance interval was calculated to contain, with 95% confidence, 99% of the values contained in the population of commercial soybean varieties. For those comparisons in which the test was significantly different ($p < 0.05$) from the control, the test range was compared to the 99% tolerance interval in order to determine if the test range was within the tolerance interval and, therefore, considered to be part of the population of commercial soybean.

Statistical analyses for forage from MON 87769 from the combined site showed no significant differences ($p > 0.05$).

MON 87769 is intended to have an altered seed fatty acid composition. Six fatty acids (16:0, 18:1, 18:2, 18:3, 20:0 and 22:0) showed significant differences ($p < 0.05$) between the test and control substances. These differences were observed in the combined site analysis and also were consistently observed to be significantly different in more than one of the individual sites. For these six fatty acids, the mean and range of values from the test substance, with the exception of 18:2 linoleic acid, were all within the 99% tolerance interval. Based on the use of linoleic acid as a substrate, it was anticipated that the addition of a $\Delta 15$ desaturase would result in lower linoleic acid levels, thus this is an expected change in the fatty acid composition of MON 87769 when compared to conventional soybean.

For the non-fatty acid components, statistical analyses for MON 87769 from the combined site showed statistical differences for 22 analytes in the seed. For seven of these analytes, there were also statistically significant differences ($p < 0.05$) in more than one of the individual sites, and for nine of these analytes there were significant differences in only one of the individual sites. For the remaining six analytes in the seed, significant differences were only found in the combined site analysis. Statistical analyses for MON 87769 from the five individual sites showed that seven analytes in the seed were observed to be statistically significantly different ($p < 0.05$) from the control in more than one of the individual sites and 14 analytes in the seed were observed to be significantly different from the control in only one of the individual sites. The mean and range of non-fatty acid values from the test substance were all within the 99% tolerance interval for the population of conventional reference substances, and for all analytes, besides the isoflavones, the magnitude of the differences observed at more than one site were generally small (1.9 – 10%), therefore these significant differences were not considered to be biologically meaningful from a food/feed safety or nutritional perspective.

As a result of the addition of $\Delta 6$ and $\Delta 15$ desaturases, MON 87769 soybean produces 18:4 stearidonic acid (SDA), an omega-3 fatty acid. As intended, SDA was found in MON 87769 seed, with levels ranging from 16.83 - 33.92 % of the total fatty acid content, with a mean of 26.13%. In addition to the increased levels of SDA in MON 87769, three additional fatty acids were also found in MON 87769 seed and not in the control soybean seed: gamma linolenic acid (GLA), trans-alpha linolenic acid (trans-ALA), and trans-stearidonic acid (trans- SDA).

2.0 Introduction

Monsanto Company has developed soybean, MON 87769, which produces stearidonic acid (SDA), an omega-3 fatty acid. Production of SDA in soybean seed was achieved through the introduction of genes encoding the production of $\Delta 6$ and $\Delta 15$ desaturases from *Primula juliae* and *Neurospora crassa*, respectively, via *Agrobacterium*- mediated transformation. These two genes were driven by seed-specific promoters, resulting in the production of SDA only in soybean seeds.

3.0 Purpose

The purpose of this study was to evaluate the composition of the SDA producing soybean, MON 87769, to the conventional control, A3525, which has background genetics similar to that of MON 87769. Fifteen commercially available soybean varieties were included as references to provide data for the development of a 99% tolerance interval for each component analyzed. The test, control, and reference substances in this study were grown at five replicated field sites across the United States during the 2006 growing season under the Production Plan 06-01-83-06 (Colyer, 2008). Forage and seed samples were harvested from all plots and analyzed for compositional components.

4.0 Test, Control, and Reference (T/C/R) Substances

4.1 Test Substance

The test substance is described below. Forage and seed tissues of the test substance were evaluated in this study.

Description	Starting Seed Lot No.
MON 87769	GLP-0604-17267-S

4.2 Control Substance

The control substance was a conventional soybean variety with genetic background representative of the test substance, MON 87769, and is described below. Forage and seed tissues of the control substance were evaluated in this study.

Description	Starting Seed Lot No.
A3525	GLP-0604-17278-S

4.3 Reference Substances

The reference substances were commercially available soybean varieties grown at the same locations as the test and control substances and are described below. A single replicate of the forage and seed tissues from each reference substance was evaluated in this study.

Vendor/Variety	Starting Seed Lot No.	Field Site
Stine/ST3300	GLP-0605-17335-S	IA-1
Asgrow/A3244	GLP-0604-17273-S	IA-1
Asgrow/A2869	GLP-0604-17264-S	IA-1
Stine/ST2788	GLP-0605-17334-S	IA-2
Lewis 372	GLP-0604-17261-S	IA-2
Stine/ST3300	GLP-0605-17335-S	IA-2
Stine/ST3600	GLP-0605-17336-S	IL
P-93B82	GLP-0604-17260-S	IL
Lewis 392	GLP-0604-17262-S	IL
Asgrow/A2553	GLP-0604-17263-S	MI
Asgrow/A2804	REF-0506-16373-S	MI
Lewis 372	GLP-0604-17261-S	MI
Lewis 372	GLP-0604-17261-S	OH
Asgrow/A3244	GLP-0604-17273-S	OH
Stine/ST3300	GLP-0605-17335-S	OH

4.4 T/C/R Substance Characterization

The identities of the test, control, and reference substances were verified by the Study Director prior to their use in the study by confirming the chain-of-custody documentation of the samples from the field cooperators. The seed samples from the test, control, and reference substances were further characterized by an event-specific PCR analysis of DNA extracted from the seed to confirm the presence or absence of the event. The

presence and absence of the MON 87769 event in test and control samples respectively were confirmed. Characterization data were archived in the Monsanto Archives.

5.0 Field Trial Description

Soybean forage and seed of the test and control substances collected from each of three replicate plots and reference substances collected from one replicate plot at each of five field sites in the United States as detailed in Production Plan 06-01-83-06 (Colyer, 2008) were analyzed in this study. Seeds were planted in a randomized complete block design with three replicates per block of each test, control, and reference substance. All the samples at the field sites were grown under normal agronomic field conditions for their respective geographic regions. The five U.S. sites were: Site IA-1, Richland, IA; Site IA-2, Bagley, IA; Site IL, Carlyle, IL; Site MI, Conklin, MI; Site OH, New Holland, OH. Forage and seed samples were harvested from all plots and shipped on dry ice (forage) or ambient temperature (seed) to Monsanto Company, St. Louis, MO, USA. A subsample for use in compositional analyses was prepared from each bulk forage and seed sample generated in the field. Each sub-sample was ground, stored in a -20°C freezer located at Monsanto Company (St. Louis, MO), and then shipped, overnight, on dry ice to Covance Laboratories Inc. (Madison, WI) for analyses. The labels on the samples shipped to Covance Laboratories Inc. listed the composition study number, tissue type, material name, storage conditions, and a unique sample ID number.

6.0 Analytical Methods

A total of 90 ground forage and seed samples were analyzed by Covance Laboratories Inc. Compositional analyses of the forage samples included proximates (protein, fat, ash, moisture, and carbohydrate by calculation), acid detergent fiber (ADF), and neutral detergent fiber (NDF). Compositional analyses of the seed samples included proximates (protein, fat, ash, moisture, and carbohydrate by calculation), acid detergent fiber (ADF), neutral detergent fiber (NDF), amino acids, fatty acids (C8-C24), trypsin inhibitors, phytic acid, lectin, isoflavones (daidzein, glycitein, and genistein), vitamin E, raffinose, and stachyose. The analytical data generated by Covance Laboratories Inc., including a summary of the methods used, Covance SOP or method mnemonics, literature references, limits of quantitation, and the reference standards used, can be found in the analytical sub-report (Covance study number 6103-693) in Appendix 1 of this report. The Study Director approved all methods utilized in this study, prior to the start of the study.

7.0 Control of Bias

To control and/or minimize bias, the samples were analyzed in the order specified by a computer-generated randomized sample list. The Study Director generated the randomized sample list and forwarded it to Covance Laboratories Inc. prior to analysis.

8.0 Statistical Analysis

8.1 Data Processing

After compositional analyses were performed at Covance Laboratories Inc., data spreadsheets were forwarded to Monsanto Company. The data were reviewed, formatted, and sent to Certus International, Inc. for statistical analysis. A statistical sub-report was generated by Certus and sent to Monsanto Company (see Appendix 2). The following formulae were used for re-expression of the data for statistical analysis:

Component	From (X)	To	Formula ¹
Proximates (excluding Moisture), Fiber, Phytic Acid, Raffinose, Stachyose	% FW	% DW	X/d
Isoflavones	µg/g FW	µg/g DW	X/d
Lectin (H.U./mg DW)	H.U./mg FW	H.U./mg DW	X/d
Trypsin Inhibitor	TIU/mg FW	TIU/mg DW	X/d
Vitamin E	mg/100g FW	mg/100g DW	X/d
Amino Acids (AA)	mg/g FW	% DW	X/(10*d)
Fatty Acids (FA)	% FW	% Total FA	(100)X _j /ΣX, for each FA _j where ΣX is over all the FA
¹ 'X' is the individual sample value; 'd' is the fraction of the sample that is dry matter.			

In all, 75 different analytical components were measured. Of these evaluated components, 26 had more than 50% of observations below the assay limit of quantitation (LOQ) and, as a result, were excluded from the statistical analysis. The following analytes were excluded from statistical analysis: 8:0 caprylic acid, 10:0 capric acid, 12:0 lauric acid, 14:0 myristic acid, 14:1 myristoleic acid, 15:0 pentadecanoic acid, 15:1 pentadecenoic acid, 16:1 palmitoleic acid, 17:0 heptadecanoic acid, 17:1 heptadecenoic acid, 18:1 total trans octadecenoic acid, 18:2 isolinoleic acid, 18:2 total trans linoleic acid, 18:3 9c,12c,15t trans ALA, 18:3 gamma linolenic acid, 18:3 other 18:3 trans, 18:4 6c,9c,12c,15t trans SDA, 18:4 stearidonic acid, 20:2 eicosadienoic acid, 20:3 eicosatrienoic acid, 20:4 arachidonic acid, 20:5 eicosapentaenoic acid, 22:1 erucic acid, 22:5 docosapentaenoic acid, 22:6 docosehexaenoic acid, and 24:0 lignoceric acid. The LOQ for the fatty acid method used in this study was 0.0200% fresh weight (Appendix 1).

For four of the seed fatty acids excluded from statistical analysis (GLA, trans-ALA, SDA, and trans- SDA), the majority of values below the LOQ were from the control and commercial reference materials, but were measured in the test substance, and are detailed in the table below. Because of their presence in quantities higher than the LOQ in MON 87769, data for the above four fatty acids were retained for inclusion in the calculation of

total fatty acids for use in the fatty acid composition data re-expression formula. These four fatty acids are reported as % dry weight and % total fatty acid in Table 2.

Fatty Acid	Material	(N) Below LOQ	(N) Total	(%) Below LOQ
18:3 9c,12c,15t (Trans ALA)	MON 87769	0	15	0.0
	Other*	30	30	100.0
18:3 Gamma Linolenic	MON 87769	0	15	0.0
	Other*	30	30	100.0
18:4 6c,9c,12c,15t (Trans SDA)	MON 87769	3	15	20.0
	Other*	30	30	100.0
18:4 Stearidonic	MON 87769	0	15	0.0
	Other*	27	30	90.0

*Other = control and commercial references

The following 21 observations for seed tissue samples were below the LOQ: 18:4 6c,9c,12c,15t trans SDA (three values), 20:1 eicosenoic acid (17 values), and vitamin E (one value). To include a complete data set for these analytes in the statistical analysis, observations below the limit of quantitation were assigned a value equal to half the limit of quantitation (LOQ) for these 21 data points.

The data were assessed for potential outliers using a studentized PRESS residuals calculation. No outliers were identified in the data set.

8.2 Statistical Methodology

At the field sites, the test, control, and reference substances were grown in single plots randomly assigned within each of three replication blocks. The compositional components for the test and control substances were statistically analyzed using a mixed model analysis of variance. The data from the five replicated sites were analyzed separately and as a combined data set. Individual replicated site analyses used the model:

$$Y_{ij} = U + T_i + B_j + e_{ij} ,$$

where Y_{ij} = unique individual observation, U = overall mean, T_i = variety effect, B_j = random block effect, and e_{ij} = residual error.

Combined site analyses used the model:

$$Y_{ijk} = U + T_i + L_j + B(L)_{jk} + LT_{ij} + e_{ijk},$$

where Y_{ijk} = unique individual observation, U = overall mean, T_i = variety effect, L_j = random location effect, $B(L)_{jk}$ = random block within location effect, LT_{ij} = random location by variety interaction effect, and e_{ijk} = residual error. For each compositional component, the forage and grain from the test substance was compared to the conventional control.

A range of observed values from the reference substances was determined for each analytical component. Additionally, the reference substances data were used to develop population tolerance intervals. A tolerance interval is an interval that one can claim, with a specified degree of confidence, contains at least a specified proportion, p , of an entire sampled population for the parameter measured. For each compositional component, 99% tolerance intervals were calculated that are expected to contain, with 95% confidence, 99% of the quantities expressed in the population of conventional references (George et al., 2004; Ridley et al., 2002). Each tolerance interval estimate was based upon one observation per unique reference substance. Since individual substances with multiple observations would first be summarized across replicates within each site and then summarized across sites to obtain a single value for inclusion in tolerance interval calculations, a single replicate from each unique reference substance was analyzed in this study for inclusion in tolerance interval calculations. Because negative quantities are not possible, calculated negative lower tolerance bounds were set to zero. SAS[®] programming was used to generate all summary statistics and perform all analyses (SAS Software Release 9.1, 2002-2003). Report tables present p-values from SAS as either <0.001 or the actual value truncated to three decimals.

9.0 Results and Discussion

The composition of forage and seed from the test substance, MON 87769, was analyzed and compared to a conventional control soybean variety, A3525. The compositional profile of each test, control, and reference substance was determined by statistically evaluating 49 different analytes (seven in forage and 42 in seed). A summary of the significant differences ($p < 0.05$) can be found in Table 1. Table 2 presents means, standard errors (S.E.), and the range of observed values of the four additional MON 87769 fatty acids: GLA, trans-ALA, SDA, and trans-SDA. Table 3 presents the range of values obtained from the scientific literature and the ILSI (International Life Sciences Institute) Crop Composition Database (ILSI, 2008). The compositional analysis data from Covance Laboratories Inc. for the test, control, and reference substances are presented in Appendix 1. The statistical evaluation of the data from Certus International, Inc. is presented in Appendix 2. For each component, least-square means, standard

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errors, and the range of observed values are presented for the test and control substances. In addition, mean differences between the test and control, standard errors for the mean differences, the range of observed differences, 95% confidence intervals of the differences and the significance probabilities are presented for each comparison. The overall data set was also examined for evidence of biologically meaningful changes. Each test value that had a significant difference from the control comparator ($p < 0.05$) was compared to the 99% tolerance interval generated from the reference substances in this study.

Given that MON 87769 was modified to have an altered fatty acid composition compared to conventional soybeans, for clarity in this report, the fatty acid composition results will be presented separately from the compositional examination of other components including proximate, fiber, amino acids, vitamins, isoflavones, and antinutrients.

9.1 Compositional Comparisons of Forage from MON 87769 and Conventional Control for Proximates and Fiber

Statistical analyses for MON 87769 from the combined site showed no statistically significant differences between the test and the control for the forage. Two comparisons for MON 87769 were found to be statistically different from the control in only one of the five individual sites. All mean and range of values obtained from MON 87769 in the five individual sites were within the calculated 99% tolerance interval for the population of conventional reference substances, therefore these differences were not considered to be biologically meaningful from a food/feed safety and/or nutritional perspective.

9.2 Compositional Comparisons of Seed from MON 87769 and Conventional Control for Proximates, Fiber, Amino Acids, Vitamins, Isoflavones, and Anti-Nutrients

Statistical analyses for MON 87769 from the combined site showed significant differences for 22 of the non fatty acid analytes in the seed. For seven of these analytes, there were also statistically significant differences in more than one of the individual sites, and for nine of these analytes, there were statistical differences in only one of the individual sites. For the remaining six analytes in the seed, statistical differences were only found in the combined site analysis. Statistical analyses for MON 87769 from the five individual sites showed that seven analytes were observed to be statistically different from the control in more than one of the individual sites and 14 analytes were observed to be statistically different from the control in only one of the individual sites (Table 1). Details of the statistical observations are as follows: In the seed of the test substance, daidzein, and genistein were found to be statistically significantly different ($p < 0.05$) from the control in the combined site and in four of the five individual sites. For these two isoflavones, the mean and range of values obtained from MON 87769 in the combined site and in each of the four individual sites were consistently lower than the values in the

control, yet all were within the 99% tolerance interval for the population of conventional reference substances. The mean values obtained from MON 87769 in the combined site and in the individual sites were also within the range of values found in the published literature and/or the ILSI Crop Composition Database (Table 3). Therefore, these differences were not considered to be biologically meaningful from a food/feed safety and/or nutritional perspective.

Proline was found to be statistically significantly different ($p < 0.05$) from the control in the combined site and in three of the five individual sites. The mean and range of values obtained from MON 87769 in the combined site and in each of the three individual sites were all within the 99% tolerance interval for the population of conventional reference substances as well as being within the range of values found in the published literature and the ILSI Crop Composition Database. The magnitude of differences of the test substance versus the control substance from the combined site and individual site analyses were very small, ranging from 2.94 – 5.77%. Therefore, these differences were not considered to be biologically meaningful from a food/feed safety and/or nutritional perspective. Significant differences for arginine, cystine, glycine, and phenylalanine were observed in the combined site and in two individual sites. The mean and range of values obtained from MON 87769 in the combined site and in each of the two individual sites were all within the 99% tolerance interval for the population of conventional reference substances as well as being within the range of values found in the published literature and/or the ILSI Crop Composition Database. The magnitude of differences of the test substance versus the control substance for arginine, cystine, glycine, and phenylalanine from the combined site and individual site analyses were very small, all approximately 10% or less. Therefore, these differences were not considered to be biologically meaningful from a food/feed safety and/or nutritional perspective. Additionally, statistically significant differences ($p < 0.05$) for seven amino acids, protein, and glycitein were also observed in the combined site and one of the individual sites. The mean and range of values obtained from MON 87769 in the combined site and in each of the individual sites were all within the 99% tolerance interval for the population of conventional reference substances as well as being within the range of values found in the published literature and/or the ILSI Crop Composition Database. Therefore, these differences were not considered to be biologically meaningful from a food/feed safety and/or nutritional perspective. The increased levels of amino acids measured in MON 87769 seed may be directly correlated to the increased percentage of total protein measured in the seed of the test substance.

Of the 14 comparisons in MON 87769 seed that were found to be statistically different from the control in only one of the five individual sites, five of these comparisons were not found to be statistically different in the combined site. All mean and range of values obtained from MON 87769 in the five individual sites were within the calculated 99% tolerance interval for the population of conventional reference substances as well as being within the range of values found in the published literature and/or the ILSI Crop Composition Database. Therefore, these differences were not considered to be biologically meaningful from a food/feed safety and/or nutritional perspective.

9.3 Compositional Comparisons of Seed from MON 87769 and Conventional Control for Fatty Acids

Statistical analyses for MON 87769 from the combined site showed significant differences for six of the eight fatty acids measured in the seed in which statistical comparisons could be made. Statistical analyses for MON 87769 from the five individual sites showed that six fatty acids were observed to be significantly different ($p < 0.05$) from the control in more than one of the individual sites (Table 1). Details of the statistical observations are as follows: In the seed of the test substance, 18:1 oleic acid, 18:2 linoleic acid, and 18:3 linolenic acid were found to be significantly different ($p < 0.05$) from the control in the combined site and also in the five individual sites. Arachidic acid (20:0) was found to be significantly different ($p < 0.05$) from the control in the combined site and in four of the five individual sites. Significant differences ($p < 0.05$) for 16:0 palmitic acid and 22:0 behenic acid were observed in the combined site and in two individual sites. Given the shift in the fatty acid metabolism, these differences in fatty acid levels are expected and, with the exception of 18:2 linoleic acid, are relatively small in absolute magnitude. As a result, except for 18:2 linoleic acid, the mean and range of the fatty acid values obtained from MON 87769 fell within the 99% tolerance interval for the population of the conventional reference substances. Therefore, these differences were not considered to be biologically meaningful from a food/feed safety and/or nutritional perspective.

Of the 23 comparisons (six fatty acid analytes) in the seed of MON 87769 that were found to be statistically significantly different ($p < 0.05$) from the control in more than one individual site, all analytes were also found to be significantly different from the control in the combined site. There were no significant differences ($p < 0.05$) for MON 87769 that were found in more than one individual site and not in the combined site. As with the combined site analysis, all mean and range of values, with the exception of 18:2 linoleic acid, obtained from MON 87769 in the five individual sites were within the calculated 99% tolerance interval for the population of conventional reference substances, therefore these differences were not considered to be biologically meaningful from a food/feed safety and/or nutritional perspective.

As a result of the addition of $\Delta 6$ and $\Delta 15$ desaturases, MON 87769 soybean produces stearidonic acid (SDA), an omega-3 fatty acid. Stearidonic acid was found in the seed of MON 87769, with levels ranging from 16.83 - 33.92% of the total fatty acid content. In addition to the increased levels of SDA in MON 87769 brought about by the two desaturases, three additional fatty acids were also produced in MON 87769 seed that were not in the control seed (GLA, trans-ALA, and trans-SDA). The range of levels of GLA, trans-ALA, and trans-SDA measured in MON 87769 were 6.07 – 8.03, 0.38 – 0.48, and 0.058 – 0.26 % of total fatty acids, respectively. Since these four fatty acids were not detected in the control substance, statistical analysis between the test and control was not possible, thus the means, standard errors, and the range of values for these fatty acids observed in MON 87769 are presented as % dry weight and % total fatty acid in Table 2.

The fatty acid composition of MON 87769 has been altered to result in an average of 26% SDA. As a result, changes in the fatty acid profile are expected. These data support that MON 87769 SDA soybeans, with the exception of the intended changes in their fatty acid composition, do not have biologically meaningful differences from conventional soybean from a food/feed safety and/or nutritional perspective.

10.0 Conclusions

In conclusion, data were generated and statistical analyses performed on the forage and seed from MON 87769, a conventional control, and 15 commercially available soybean reference substances. There were no biologically meaningful differences noted for proximates, fiber, amino acids, vitamins, isoflavones and antinutrients when the test substance, MON 87769, was compared to the conventional control soybean substance, A3525. Although, for some of these comparisons, a statistically significant difference ($p < 0.05$) was noted, in those instances the composition values for the test substance were within the calculated 99% tolerance interval for the population of conventional reference substances produced at the same time and from the same fields as the test substance. Also, the values for the test substance were within the range of values found in the published scientific literature and/or the ILSI Crop Composition Database, further supporting the conclusion that any statistically significant differences should not be considered to be biologically meaningful from a food/feed safety and/or nutritional perspective.

Through the introduction of two desaturase enzymes, the fatty acid composition of MON 87769 has been altered to produce the omega-3 fatty acid, SDA. Given this shift in fatty acid metabolism, the fatty acid profile in MON 87769 seed was expected to differ significantly from conventional soybean. There were no biologically relevant differences noted for all but one of the fatty acids when the test substance, MON 87769, was compared to the conventional control soybean substance, A3525, although, for some of these comparisons, a statistically significant difference ($p < 0.05$) was noted. However, in the instances in which a significant difference was noted, the composition values for the test substance were within the calculated 99% tolerance interval for the population of conventional reference substances produced at the same time and from the same fields as the test substance and, therefore, should not be considered to be biologically meaningful from a food/feed safety and/or nutritional perspective. The one statistically significant difference ($p < 0.05$) that fell outside of the calculated 99% tolerance interval for the population of conventional reference substances was a result of the addition of a $\Delta 15$ desaturase, which lowered the linoleic acid levels. This significant difference in the level of linoleic acid was expected due to the intended production of 20 – 30 % of the total fatty acid content being 18:4 stearidonic acid (SDA) in MON 87769 seed. Consistent with this level of production of SDA in MON 87769, three additional fatty acids (GLA, trans-ALA, and trans-SDA) were also present in MON 87769 seed that were not detectable in the control soybean seed.

The fatty acid composition of MON 87769 has been altered to result in an average of 26% SDA. As a result, changes in the fatty acid profile are expected. There were no

biologically relevant differences noted for proximate, fiber, amino acids, vitamins, isoflavones, and antinutrients when the test substance was compared to the conventional control substance. Although, for some of these comparisons, a statistically significant difference was noted, in those instances, the composition values for MON 87769 were within the calculated 99% tolerance interval for the population of conventional reference substances produced along side the test substance. The values from MON 87769 were also within the range of values found in the published scientific literature and/or the ILSI Crop Composition Database. These data support the conclusion that any statistically significant differences should not be considered to be biologically meaningful from a food/feed safety and/or nutritional perspective.

11.0 References

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12.0 Protocol Amendments/Deviations

The following amendment was added to the study protocol and had no impact on the study:

Amendment 1. Corrected the spelling of the word “containing” in the original title and corrected the mnemonic for the fatty acid method from FPT to FALT.

Table 1. Summary of Differences (p<0.05) for the Comparison of Soybean Component Levels for Test (MON 87769) vs. the Conventional Control (A3525) and Commercial Reference Substances

Component (Units) ¹	Site	MON 87769 Mean	A3525 Mean	Mean Difference (Test minus Control)		Test Range	Commercial Tolerance Interval ²
				Mean Difference (% of A3525)	Signif. (p-Value)		
Statistical Differences Observed in Combined-Site Analysis							
Seed Amino Acid (% DW)							
Alanine (% DW)	Combined Site	1.78	1.74	2.51	0.001	[1.76 - 1.84]	[1.45, 2.02]
Arginine (% DW)	Combined Site	3.23	2.95	9.35	<0.001	[3.00 - 3.61]	[2.13, 3.62]
Aspartic Acid (% DW)	Combined Site	4.54	4.36	4.04	0.007	[4.41 - 4.73]	[3.45, 5.29]
Cystine (% DW)	Combined Site	0.62	0.60	3.23	<0.001	[0.56 - 0.65]	[0.49, 0.68]
Glutamic Acid (% DW)	Combined Site	7.63	7.29	4.70	<0.001	[7.42 - 7.90]	[5.51, 9.04]
Glycine (% DW)	Combined Site	1.79	1.73	3.60	0.003	[1.76 - 1.87]	[1.39, 2.05]
Histidine (% DW)	Combined Site	1.09	1.05	3.42	<0.001	[1.06 - 1.14]	[0.86, 1.27]
Isoleucine (% DW)	Combined Site	1.87	1.78	4.95	<0.001	[1.75 - 1.97]	[1.34, 2.28]
Leucine (% DW)	Combined Site	3.19	3.09	3.28	<0.001	[3.13 - 3.32]	[2.45, 3.76]
Lysine (% DW)	Combined Site	2.67	2.60	2.69	<0.001	[2.61 - 2.75]	[2.13, 3.06]
Methionine (% DW)	Combined Site	0.60	0.58	2.99	0.038	[0.54 - 0.62]	[0.48, 0.66]
Phenylalanine (% DW)	Combined Site	2.14	2.06	3.63	0.002	[2.08 - 2.24]	[1.61, 2.55]

Table 1. Summary of Differences (p<0.05) for the Comparison of Soybean Component Levels for Test (MON 87769) vs. the Conventional Control (A3525) and Commercial Reference Substances (cont.)

Conventional Control (MON 87769) and Commercial Reference Substances (CONV)							
Component (Units) ¹	Site	MON 87769 Mean	A3525 Mean	Mean Difference (Test minus Control)		Test Range	Commercial Tolerance Interval ²
				Mean Difference (% of A3525)	Signif. (p-Value)		
Statistical Differences Observed in Combined-Site Analysis							
Seed Amino Acid (% DW)							
Proline (% DW)	Combined Site	2.09	1.99	5.13	<0.001	[2.03 - 2.19]	[1.53, 2.45]
Serine (% DW)	Combined Site	2.20	2.14	2.55	0.043	[2.08 - 2.25]	[1.75, 2.51]
Threonine (% DW)	Combined Site	1.60	1.57	1.90	0.035	[1.54 - 1.65]	[1.30, 1.82]
Tyrosine (% DW)	Combined Site	1.40	1.34	4.43	0.013	[1.27 - 1.50]	[1.03, 1.67]
Valine (% DW)	Combined Site	1.98	1.88	5.08	<0.001	[1.84 - 2.08]	[1.42, 2.41]
Seed Fatty Acid (% Total FA)							
16:0 Palmitic (% Total FA)	Combined Site	12.06	11.77	2.50	<0.001	[11.53 - 12.54]	[7.28, 14.20]
18:1 Total 18:1 Cis (% Total FA)	Combined Site	15.18	19.19	-20.92	0.001	[12.66 - 18.80]	[12.56, 27.98]
18:2 9c,12c Linoleic (% Total FA)	Combined Site	22.78	54.93	-58.53	<0.001	[16.46 - 30.81]	[50.46, 59.96]
18:3 Linolenic (% Total FA)	Combined Site	11.18	9.20	21.51	0.016	[10.20 - 11.80]	[3.72, 13.46]
20:0 Arachidic (% Total FA)	Combined Site	0.34	0.31	9.88	<0.001	[0.31 - 0.37]	[0.20, 0.45]
22:0 Behenic (% Total FA)	Combined Site	0.29	0.32	-8.30	0.023	[0.26 - 0.31]	[0.22, 0.49]
Seed Proximate							
Carbohydrates (% DW)	Combined Site	36.45	38.68	-5.78	<0.001	[33.23 - 39.93]	[26.76, 45.99]

Table 1. Summary of Differences (p<0.05) for the Comparison of Soybean Component Levels for Test (MON 87769) vs. the Conventional Control (A3525) and Commercial Reference Substances (cont.)

Conventional Control (MON 87769) and Commercial Reference Substances (CONV)							
Component (Units) ¹	Site	MON 87769 Mean	A3525 Mean	Mean Difference (Test minus Control)		Test Range	Commercial Tolerance Interval ²
				Mean Difference (% of A3525)	Signif. (p-Value)		
Statistical Differences Observed in Combined-Site Analysis							
Seed Proximate							
Protein (% DW)	Combined Site	41.92	39.75	5.47	<0.001	[40.92 - 43.36]	[33.37, 46.00]
Seed Isoflavone							
Daidzein (µg/g DW)	Combined Site	1187.81	1807.36	-34.28	0.006	[957.23 - 1838.91]	[0, 2594.50]
Genistein (µg/g DW)	Combined Site	733.64	1136.52	-35.45	0.007	[576.70 - 1118.40]	[254.31, 1976.30]
Glycitein (µg/g DW)	Combined Site	82.73	102.18	-19.04	0.004	[65.37 - 106.72]	[0, 243.40]
Statistical Differences Observed in More than One Individual Site							
Seed Amino Acid (% DW)							
Arginine (% DW)	Site IA-2	3.42	3.11	10.03	0.003	[3.36 - 3.50]	[2.13, 3.62]
	Site OH	3.11	2.86	8.67	0.012	[3.07 - 3.15]	
Cystine (% DW)	Site IA-2	0.62	0.60	4.05	0.005	[0.62 - 0.63]	[0.49, 0.68]
	Site IL	0.63	0.61	3.21	0.010	[0.62 - 0.64]	
Glycine (% DW)	Site IA-1	1.80	1.72	4.38	0.046	[1.79 - 1.80]	[1.39, 2.05]
	Site OH	1.76	1.71	2.87	0.024	[1.76 - 1.77]	
Phenylalanine (% DW)	Site IA-1	2.13	2.03	5.18	0.024	[2.08 - 2.16]	[1.61, 2.55]
	Site OH	2.12	2.05	3.69	0.015	[2.12 - 2.13]	

Table 1. Summary of Differences (p<0.05) for the Comparison of Soybean Component Levels for Test (MON 87769) vs. the Conventional Control (A3525) and Commercial Reference Substances (cont.)

Conventional Control (MON87769) and Commercial Reference Substances (CONV)							
Component (Units) ¹	Site	MON 87769 Mean	A3525 Mean	Mean Difference (Test minus Control)		Test Range	Commercial Tolerance Interval ²
				Mean Difference (% of A3525)	Signif. (p-Value)		
Statistical Differences Observed in More than One Individual Site							
Seed Amino Acid (% DW)							
Proline (% DW)	Site IA-1	2.12	2.00	5.77	0.039	[2.11 - 2.13]	[1.53, 2.45]
	Site IA-2	2.12	2.06	2.94	0.014	[2.09 - 2.15]	
	Site OH	2.05	1.95	4.98	0.011	[2.03 - 2.06]	
Seed Fatty Acid (% Total FA)							
16:0 Palmitic (% Total FA)	Site IL	12.31	12.00	2.51	0.024	[12.24 - 12.39]	[7.28, 14.20]
	Site MI	12.11	11.79	2.66	0.019	[12.03 - 12.19]	
18:1 Total 18:1 Cis (% Total FA)	Site IA-1	13.42	18.45	-27.29	0.001	[13.14 - 13.80]	[12.56, 27.98]
	Site IA-2	13.56	18.53	-26.84	0.003	[12.93 - 14.36]	
	Site IL	17.89	20.89	-14.35	0.010	[17.52 - 18.18]	
	Site MI	12.92	17.44	-25.95	<0.001	[12.66 - 13.16]	
	Site OH	18.10	20.65	-12.31	0.046	[16.73 - 18.80]	
18:2 9c,12c Linoleic (% Total FA)	Site IA-1	18.46	54.90	-66.39	<0.001	[18.24 - 18.68]	[50.46, 59.96]
	Site IA-2	21.19	55.33	-61.70	<0.001	[20.36 - 22.78]	

Table 1. Summary of Differences (p<0.05) for the Comparison of Soybean Component Levels for Test (MON 87769) vs. the Conventional Control (A3525) and Commercial Reference Substances (cont.)

Conventional Control (MON 87769) and Commercial Reference Substances (Control)							
Component (Units) ¹	Site	MON 87769 Mean	A3525 Mean	Mean Difference (Test minus Control)		Test Range	Commercial Tolerance Interval ²
				Mean Difference (% of A3525)	Signif. (p-Value)		
Statistical Differences Observed in More than One Individual Site							
Seed Fatty Acid (% Total FA)							
18:2 9c,12c Linoleic (% Total FA)	Site IL	30.48	54.33	-43.90	<0.001	[30.26 - 30.81]	
	Site MI	18.40	55.60	-66.92	<0.001	[16.46 - 19.58]	
	Site OH	25.37	54.50	-53.45	<0.001	[25.06 - 25.75]	
18:3 Linolenic (% Total FA)	Site IA-1	11.11	9.85	12.85	<0.001	[11.08 - 11.13]	[3.72, 13.46]
	Site IA-2	11.14	9.96	11.84	0.018	[11.10 - 11.18]	
	Site IL	10.27	7.59	35.25	0.002	[10.20 - 10.38]	
	Site MI	11.76	10.59	10.99	0.001	[11.72 - 11.80]	
	Site OH	11.63	8.02	45.05	0.001	[11.41 - 11.75]	
20:0 Arachidic (% Total FA)	Site IA-1	0.33	0.30	10.66	0.005	[0.32 - 0.34]	[0.20, 0.45]
	Site IL	0.36	0.34	8.18	0.025	[0.36 - 0.37]	
	Site MI	0.32	0.29	10.39	0.029	[0.31 - 0.32]	
	Site OH	0.36	0.33	8.57	0.011	[0.35 - 0.36]	

Table 1. Summary of Differences (p<0.05) for the Comparison of Soybean Component Levels for Test (MON 87769) vs. the Conventional Control (A3525) and Commercial Reference Substances (cont.)

Component (Units) ¹	Site	MON 87769 Mean	A3525 Mean	Mean Difference (Test minus Control)		Test Range	Commercial Tolerance Interval ²
				Mean Difference (% of A3525)	Signif. (p-Value)		
Statistical Differences Observed in More than One Individual Site							
Seed Fatty Acid (% Total FA)							
22:0 Behenic (% Total FA)	Site IA-1	0.29	0.31	-8.90	0.018	[0.26 - 0.31]	[0.22, 0.49]
	Site IL	0.31	0.33	-6.71	0.046	[0.30 - 0.31]	
Seed Isoflavone							
Daidzein (µg/g DW)	Site IA-1	995.39	1550.96	-35.82	0.001	[978.37 - 1026.28]	[0, 2594.50]
	Site IA-2	1076.04	1583.00	-32.03	0.002	[999.02 - 1130.31]	
	Site MI	1662.22	2750.13	-39.56	0.016	[1389.19 - 1838.91]	
	Site OH	1125.54	1668.07	-32.52	0.002	[1094.38 - 1183.11]	
Genistein (µg/g DW)	Site IA-1	594.53	973.04	-38.90	<0.001	[584.75 - 612.91]	[254.31, 1976.30]
	Site IA-2	656.80	1044.68	-37.13	0.001	[612.27 - 687.55]	
	Site MI	1000.90	1683.74	-40.55	0.010	[841.05 - 1118.40]	
	Site OH	760.07	1143.19	-33.51	0.003	[750.00 - 773.91]	
Statistical Differences Observed in One Site							
Forage Fiber							
Acid Detergent Fiber (% DW)	Site OH	32.29	28.31	14.09	0.009	[30.74 - 33.95]	[19.24, 38.36]
Forage Proximate							
Total Fat (% DW)	Site IA-2	4.87	6.27	-22.39	0.037	[4.40 - 5.28]	[1.46, 9.88]

Table 1. Summary of Differences (p<0.05) for the Comparison of Soybean Component Levels for Test (MON 87769) vs. the Conventional Control (A3525) and Commercial Reference Substances (cont.)

Conventional Control (P222) and Commercial Reference Substances (Cont.)							
Component (Units) ¹	Site	MON 87769 Mean	A3525 Mean	Mean Difference (Test minus Control)		Test Range	Commercial Tolerance Interval ²
				Mean Difference (% of A3525)	Signif. (p-Value)		
Statistical Differences Observed in One Site							
Seed Amino Acid (% DW)							
Aspartic Acid (% DW)	Site OH	4.43	4.27	3.72	0.021	[4.41 - 4.47]	[3.45, 5.29]
Glutamic Acid (% DW)	Site OH	7.51	7.17	4.67	0.020	[7.42 - 7.59]	[5.51, 9.04]
Histidine (% DW)	Site OH	1.07	1.03	3.20	0.003	[1.06 - 1.07]	[0.86, 1.27]
Isoleucine (% DW)	Site OH	1.87	1.75	6.53	0.025	[1.84 - 1.90]	[1.34, 2.28]
Leucine (% DW)	Site OH	3.16	3.05	3.42	0.016	[3.14 - 3.18]	[2.45, 3.76]
Lysine (% DW)	Site OH	2.62	2.56	2.46	0.020	[2.61 - 2.63]	[2.13, 3.06]
Valine (% DW)	Site OH	1.96	1.84	6.62	0.027	[1.94 - 2.01]	[1.42, 2.41]
Seed Fiber							
Acid Detergent Fiber (% DW)	Site IL	16.16	17.76	-9.00	0.005	[15.91 - 16.61]	[10.36, 22.77]
Neutral Detergent Fiber (% DW)	Site IL	17.06	17.87	-4.52	0.043	[16.72 - 17.25]	[10.91, 22.59]
Seed Proximate							
Ash (% DW)	Site OH	5.83	5.71	2.12	0.022	[5.78 - 5.93]	[5.16, 6.64]
Protein (% DW)	Site OH	41.37	39.54	4.63	0.008	[40.92 - 41.70]	[33.37, 46.00]
Seed Antinutrient							
Lectin (H.U./mg DW)	Site MI	1.49	3.44	-56.79	0.019	[0.55 - 2.14]	[0, 16.00]

Table 1. Summary of Differences (p<0.05) for the Comparison of Soybean Component Levels for Test (MON 87769) vs. the Conventional Control (A3525) and Commercial Reference Substances (cont.)

		Mean Difference (Test minus Control)					
		MON 87769 Mean	A3525 Mean	Mean Difference (% of A3525)	Signif. (p-Value)	Test Range	Commercial Tolerance Interval ²
Component (Units) ¹	Site						
Statistical Differences Observed in One Site							
Seed Antinutrient							
Phytic Acid (% DW)	Site IA-1	1.28	1.17	9.49	0.041	[1.22 - 1.34]	[0.51, 1.59]
Seed Isoflavone							
Glycitein (µg/g DW)	Site IL	84.86	120.49	-29.57	0.044	[83.23 - 87.74]	[0, 243.40]

¹DW = dry weight; FA = fatty acid.

²With 95% confidence, interval contains 99% of the values expressed in the population of commercial substances. Negative limits were set to zero.

Table 2. Statistical Summary of Combined Site Soybean 18:3 9c,12c,15t (Trans ALA),18:3 Gamma Linolenic, 18:4 6c,9c,12c,15t (Trans SDA) and 18:4 Stearidonic Fatty Acid Content for Test (MON 87769)

Analytical Component (Units) ¹	MON 87769 Mean (S.E.)	MON 87769 (Range)
Combined Site Seed Fatty Acid (% DW)		
18:3 9c,12c,15t (Trans ALA) (% DW)	0.068 (0.0018)	[0.055 - 0.081]
18:3 Gamma Linolenic (% DW)	1.09 (0.023)	[0.93 - 1.22]
18:4 6c,9c,12c,15t (Trans SDA) (% DW)	0.027 (0.0023)	[0.011 - 0.036]
18:4 Stearidonic (% DW)	3.94 (0.15)	[2.77 - 4.91]
Combined Site Seed Fatty Acid (% Total FA)		
18:3 9c,12c,15t (Trans ALA) (% Total FA)	0.44 (0.0091)	[0.38 - 0.48]
18:3 Gamma Linolenic (% Total FA)	7.09 (0.19)	[6.07 – 8.03]
18:4 6c,9c,12c,15t (Trans SDA) (% Total FA)	0.18 (0.019)	[0.058 - 0.26]
18:4 Stearidonic (% Total FA)	26.13 (1.64)	[16.83 - 33.92]

¹DW = dry weight; S.E. = standard error.

Table 3. Literature and ILSI Database Values for Components in Conventional Soybean Seed and Forage

Analytical Component (Units) ¹	Literature Range	ILSI Range
SEED		
Fiber		
Acid Detergent Fiber (% DW)	9.0 – 11.1 ⁱ	7.81 – 18.61
Neutral Detergent Fiber (% DW)	10.0 – 14.9 ⁱ	8.53 – 21.25
Proximate		
Ash (% DW)	4.61 – 5.94 ^b	3.89 – 6.99
Carbohydrates (% DW)	29.3 – 41.3 ^c	29.6 – 50.2
Moisture (% FW)	5.18 – 14.3 ^c	4.7 – 34.4
Protein (% DW)	32.9 – 43.6 ^e	33.19 – 45.48
Total Fat (% DW)	16.0 – 23.1 ^e	8.10 – 23.56
	19.8 – 27.7 ^d	
Amino Acids		
Alanine (% DW)	1.60 – 1.86 ^c	1.513 – 2.104
Arginine (% DW)	2.56 – 3.46 ^c	2.285 – 3.400
Aspartic acid (% DW)	4.18 – 4.99 ^c	3.808 – 5.122
Cystine (% DW)	0.54 – 0.66 ^c	0.370 – 0.808
Glutamic acid (% DW)	6.64 – 8.16 ^c	5.843 – 8.201
Glycine (% DW)	1.60 – 1.87 ^c	1.458 – 1.997
Histidine (% DW)	0.98 – 1.16 ^c	0.878 – 1.175
Isoleucine (% DW)	1.65 – 1.95 ^c	1.539 – 2.077
Leucine (% DW)	2.81 – 3.37 ^c	2.590 – 3.622
Lysine (% DW)	2.47 – 2.84 ^c	2.285 – 2.839
Methionine (% DW)	0.51 – 0.59 ^c	0.431 – 0.681
Phenylalanine (% DW)	1.78 – 2.19 ^c	1.632 – 2.346
Proline (% DW)	1.86 – 2.23 ^c	1.687 – 2.284
Serine (% DW)	1.96 – 2.28 ^c	1.106 – 2.484
Threonine (% DW)	1.51 – 1.73 ^c	1.139 – 1.862
Tryptophan (% DW)	0.56 – 0.63 ^c	0.356 – 0.502
Tyrosine (% DW)	1.35 – 1.59 ^c	1.016 – 1.613
Valine (% DW)	1.71 – 2.02 ^c	1.597 – 2.204
Isoflavones		
Daidzein (ug/g DW)	219 – 1190 ^c	60.0 – 2453.5
Genistein (ug/g DW)	286 – 1380 ^c	144.3 – 2837.2
Glycitein (ug/g DW)	42.2 – 204 ^a	15.3 – 310.4
Vitamin		
Vitamin E (mg/100g DW)	1.09 – 2.84 ^g	0.19 – 6.17
Fatty Acid		
16:0 Palmitic (% Total FA)	10.63 – 11.69 ^c	9.55 – 15.77
18:0 Stearic (% Total FA)	3.85 – 4.55 ^c	2.70 – 5.88
18:1 Oleic (% Total FA)	15.02 – 31.19 ^c	14.3 – 32.2
18:2 Linoleic (% Total FA)	44.03 – 54.96 ^c	42.3 – 58.8
18:3 Linolenic (% Total FA)	5.08 – 10.26 ^c	3.00 – 12.52
20:0 Arachidic (% Total FA)	0.31 – 0.43 ^c	0.163 – 0.482

Table 3. Literature and ILSI Database Values for Components in Conventional Soybean Seed and Forage

22:0 Behenic (% Total FA)	0.46 – 0.59 ^c	0.277 – 0.595
Anti-Nutrient		
Phytic acid (%DW)	1 – 2.74 ⁱ	0.634 – 1.960
Raffinose (%DW)	0.4 – 1.8 ^h	0.212 – 0.661
Stachyose (%DW)	3.08 – 4.13 ^f	1.21 – 3.50
Trypsin inhibitor (TIU/mg DW)	33.2 – 54.5 ^c	19.59 – 118.68
Lectin (H.U./mg FW)	0.8 – 2.4 ^c	0.105 – 9.038
FORAGE		
Proximate		
Ash (% DW)	8.8-10.5 ⁱ	6.718-10.782
Carbohydrates (% DW)	not available	59.8-74.7
Fat, total (% DW)	3.1-5.1 ⁱ	1.302-5.132
Moisture (% FW)	74-79 ⁱ	73.5-81.6
Protein (% DW)	11.2-17.3 ⁱ	14.38-24.71
Fiber		
Acid Detergent Fiber (% DW)	32-38 ⁱ	not available
Neutral Detergent Fiber (% DW)	34-40 ⁱ	not available
Crude fiber	not available	13.58-31.73

¹DW = dry weight; DM = dry matter; FW = fresh weight; FA = fatty acid; TIU = trypsin inhibitor unit; H.U. = hemagglutinating unit.

² ILSI Crop Composition Database, 2007.

a USDA-ISU Isoflavone Database, 2002. b Taylor et al., 1999. c Padgett et al., 1996. d Maestri et al., 1998. e Hartwig and Kilen, 1991. f Grieshop et al., 2003. g Guzman and Murphy, 1986. h Jacorzynski and Barylko-Pikielna, 1983. i OECD, 2001.

Conversions: % dw x 10⁴ = µg/g dw; mg/g dw x 10³ = mg/kg dw; mg/100g dw x 10 = mg/kg dw; g/100g dw x 10 = mg/g dw

Appendix 1. Covance Laboratories Inc. Analytical Sub-report

The following 65 pages are the analytical sub-report
Pages 35-99



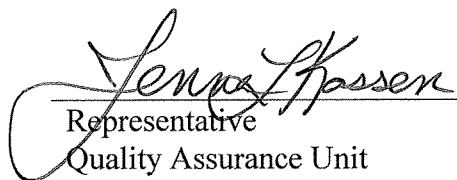
Final Sub-Report

Study Title	Compositional Analyses of Forage and Seed Collected from Stearidonic Acid-Containing Soybeans, MON 87769 Grown in the United States during 2006
Sponsor	Monsanto Company 800 North Lindbergh Blvd. St. Louis, MO 63167
Study Director	Suzanne M. Drury Monsanto Company
Compositional Analysis Testing Facility	Covance Laboratories Inc. 3301 Kinsman Blvd. Madison, WI 53704
Covance Principal Investigator	Kathleen D. Miller
Monsanto Study Number	07-01-83-39
Covance Study Number	6103-693
Sub-Report Issued	21 October, 2008
Page Number	1 of 65

QUALITY ASSURANCE STATEMENT

This report has been reviewed by the Quality Assurance Unit of Covance Laboratories Inc. and accurately reflects the raw data. The following study specific inspections were conducted and findings reported to the principal investigator (PI), study director (SD), and associated management.

Inspection Dates		Phase	Date Reported to PI and PI Management	Date Reported to SD and SD Management
From	To			
25 Sep 2007	26 Sep 2007	Analytical Chemistry	28 Sep 2007	03 Dec 2007
10 Dec 2007	10 Dec 2007	Draft Report and Data Review	10 Dec 2007	02 Jan 2008
20 Dec 2007	20 Dec 2007	Revised Draft Report and Data Review	20 Dec 2007	02 Jan 2008
02 Jan 2008	02 Jan 2008	Revised Draft Report Review	02 Jan 2008	02 Jan 2008


Representative
Quality Assurance Unit

21 Oct 08
Date

TABLE OF CONTENTS

QUALITY ASSURANCE STATEMENT	2
TABLE OF CONTENTS.....	3
STUDY IDENTIFICATION	4
COVANCE KEY PERSONNEL	6
INTRODUCTION	7
REGULATORY COMPLIANCE.....	7
TEST, CONTROL, AND REFERENCE SUBSTANCES	7
Identification	7
Test Substance.....	7
Control Substances.....	7
Reference Substances.....	8
Characterization	8
Storage Retention.....	8
Retain Samples.....	8
SAFETY PRECAUTIONS	8
SAMPLE RECEIPT AND HANDLING.....	9
CONTROL OF BIAS	9
PROCEDURES.....	9
STATISTICAL METHODS	10
MAJOR COMPUTER SYSTEMS	10
MAINTENANCE OF RAW DATA AND RECORDS.....	11
RESULTS	11
SIGNATURE.....	12
TABLES	
1 - Compositional Analyses of Soybean Forage.....	13
2 - Compositional Analyses of Soybean Seed	28
APPENDIX A.....	58
Analytical Method Summaries and Reference Standards.....	59

STUDY IDENTIFICATION

Test Substance:

MON 87769

Monsanto Study Number:

07-01-83-39

Study Title:

Compositional Analyses of Forage and Seed
Collected from Stearidonic Acid-Containing
Soybeans, MON 87769 Grown in the United
States during 2006

Sponsor:

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Study Timetable

Study Initiation Date:	05 July, 2007
Study Completion Date:	21 October, 2008

COVANCE KEY PERSONNEL

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Douglas J. Winters
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Supervisor **Proximate Chemistry**

Lynn M. Olstadt
Supervisor **Sample Management**

Quality Assurance Unit

Timothy H. Valley
Manager

INTRODUCTION

The purpose of this portion of the study was to conduct compositional analyses for evaluation between soybean tissues from MON 87769, and a control variety, A3525. In this portion of the study, forage and seed from MON 87769, A3525, and 15 commercial reference soybean varieties were analyzed.

REGULATORY COMPLIANCE

This portion of the study was conducted in accordance with the Environmental Protection Agency (EPA) Good Laboratory Practice Standards, §160.135(b) in compliance with all requirements of section 40 CFR 160 with the following exceptions:

1. Reference standards (if applicable) were not listed in the protocol but are listed in the sub-report, not characterized according to GLP standards, and no reserve samples were retained from each batch.
2. Storage stability was not determined in this portion of the study; however, the samples were maintained at Covance at approximately -20°C throughout the study to minimize degradation.

These exceptions had no effect on the integrity or quality of the study.

TEST, CONTROL, AND REFERENCE SUBSTANCES

Identification

Test Substance

The test substance was MON 87769. The forage and seed from the test substance was evaluated in this study. The test substance was identified as follows:

<u>Description</u>	<u>Starting Seed Lot No.</u>
MON 87769	GLP-0604-17267-S

Control Substances

The control substance was a conventional soybean variety, A3525. Forage and seed tissues of the control substance were evaluated in this study. The control substance was identified as follows:

<u>Description</u>	<u>Starting Seed Lot No.</u>
A3525	GLP-0604-17278-S

Reference Substances

The reference substances were conventional soybean varieties. The forage and seed tissues from each reference substance were analyzed in this study and were described as follows:

Vendor/Variety	Starting Seed Lot No.	Field Site
Stine/ST3300	GLP-0605-17335-S	IA-1
Asgrow/A3244	GLP-0604-17273-S	IA-1
Asgrow/A2869	GLP-0604-17264-S	IA-1
Stine/ST2788	GLP-0605-17334-S	IA-2
Lewis 372	GLP-0604-17261-S	IA-2
Stine/ST3300	GLP-0605-17335-S	IA-2
Stine/ST3600	GLP-0605-17336-S	IL
P-93B82	GLP-0604-17260-S	IL
Lewis 392	GLP-0604-17262-S	IL
Asgrow/A2553	GLP-0604-17263-S	MI
Asgrow/A2804	REF-0506-16373-S	MI
Lewis 372	GLP-0604-17261-S	MI
Lewis 372	GLP-0604-17261-S	OH
Asgrow/A3244	GLP-0604-17273-S	OH
Stine/ST3300	GLP-0605-17335-S	OH

Appropriate reference standards were used in each assay for the analytical procedures or calibration of equipment. See Appendix A for reference standard identification (if applicable).

Characterization

Information on the characterization that defined the soybean test, control, and reference substances was the responsibility of the Sponsor.

Storage Retention

The samples were stored at Covance in a freezer set to maintain $-20 \pm 10^{\circ}\text{C}$. Any excess samples of the test, control, and reference substances will be retained at Covance until the Sponsor determines their final disposition.

Reserve/Retain Samples

Reserve sampling of the seed was the responsibility of the Sponsor.

SAFETY PRECAUTIONS

Safety precautions were taken as outlined in the Environmental, Health, and Safety section of the Covance Policies and Procedures Manual.

SAMPLE RECEIPT AND HANDLING

The soybean samples were received at Covance in a frozen state. The samples were entered into the Covance Laboratory Information Management System (LIMS) with unique LIMS numbers. Each Monsanto sample identification was matched with the Covance LIMS information.

CONTROL OF BIAS

The samples were analyzed in a non-systematic, random order to minimize assay bias. The samples were entered into the LIMS system in a random order provided by the Study Director.

PROCEDURES

This study was conducted in accordance with Monsanto Study Number 07-01-83-39. See Appendix A for a summary of the analytical methods referenced by the method mnemonic.

The following analyses were performed on the forage samples:

Analyte	Method Mnemonic¹
Proximates	
Moisture	M100
Protein	PGEN
Fat	FAAH
Ash	ASHM
Acid detergent fiber	ADF
Neutral detergent fiber	NDFE

¹analytical methods are kept on file at Covance Laboratories Inc.

In addition, carbohydrate (CHO) values were estimated by calculation.

The following analyses were performed on the seed samples:

Analyte	Method Mnemonic¹
Proximates	
Moisture	M100
Protein	PGEN
Fat	FSOX
Ash	ASHM
Acid detergent fiber	ADF
Neutral detergent fiber	NDFE
Amino acids	TAA5
Fatty acid profile	FALT
Trypsin Inhibitors	TRIP
Phytic acid	PHYT
Lectins	LECT
Isoflavones	ISOF
Stachyose/Raffinose	SUGT
Vitamin E (α -tocopherol)	LCAT

¹analytical methods are kept on file at Covance Laboratories Inc.

In addition, carbohydrate (CHO) values were estimated by calculation.

This study used approved analytical methods to determine the composition of forage and seed samples. The samples were analyzed singly unless otherwise determined by Covance methods and/or SOPs. A minimum frequency of 10% quality control samples (duplicates, recoveries, certified reference standards, blanks, or validated control samples) were prepared and analyzed at Covance. Appropriate standards were used in each assay as reference standards for the analytical procedures or calibration of equipment. Re-analyses were performed as determined by Covance methods and/or SOPs. When re-analyses were deemed necessary, documentation and justification were provided in the raw data.

STATISTICAL METHODS

There were no statistical evaluations performed on the final tabulated results by Covance.

MAJOR COMPUTER SYSTEMS

The major computer systems used on this study may have included, but were not limited to, the following systems:

- Balance Application (balance weight capture system)
- eNotes (official study communication)
- PCCalc (result calculation program)
- Waters Empower[®] Chromatography Manager (data acquisition and result calculation system)
- Laboratory Information Management System (sample and assay tracking)
- Metasys or REES (monitor and document storage conditions for test/control/reference materials and samples, if applicable)
- UV-Visible ChemStation (data acquisition)

MAINTENANCE OF RAW DATA AND RECORDS

All data relating to or generated by this portion of the project, including (if applicable) a copy of the protocol and amendments, a copy of the analytical sub-report, results, laboratory notebooks and any other information or records relating to this portion of the project will be retained in the archives of Covance in accordance with EPA 40 CFR Part 160. The data will be returned to Monsanto Company, upon request by the Study Director. Electronic data collected at Covance Laboratories Inc. using Empower[®] software will be stored on duplicate compact discs (CDs). One of the CDs will be stored in the archives at Covance Laboratories Inc. The second CD will be transferred to the archives at Monsanto Company in St. Louis, Missouri.

The supporting records retained at Covance, but not archived with the study data, include the following items:

1. Instrument calibration and maintenance records
2. Storage temperature records
3. Training records of study personnel
4. Durable media records
5. Standard Operating Procedures
6. Standard logbooks
7. Certificates of Analysis for reference standards

RESULTS

The results for the soybean forage and seed analyses are presented in Tables 1 and 2, respectively. All of the results were on a fresh-weight basis and were deemed acceptable.

[®]Empower is a registered trademark of Waters Corporation

SIGNATURE

Kathleen D. Miller
Kathleen D. Miller
Principal Investigator
Food and Drug Analysis
Covance Laboratories Inc.

21 Oct 08
Date

Table 1
Compositional Analyses of Soybean Forage

Sample ID	06018306-00114	06018306-00122	06018306-00130
Lot Number	GLP-0604-17267-S	GLP-0604-17267-S	GLP-0604-17267-S
Product Description	MON 87769	MON 87769	MON 87769
Site Code	IA-1	IA-1	IA-1
Covance LIMS Number	70702730	70702773	70702758
Proximate (%)			
Moisture	74.9	73.2	75.9
Protein	5.98	5.93	5.68
Total Fat	1.31	1.70	1.42
Ash	1.52	1.73	1.51
Carbohydrates	16.3	17.4	15.5
Acid Detergent Fiber (%)	8.11	8.34	7.93
Neutral Detergent Fiber (%)	8.07	9.74	7.35

Table 1 (Continued)
Compositional Analyses of Soybean Forage

Sample ID	06018306-00162	06018306-00170	06018306-00178
Lot Number	GLP-0604-17267-S	GLP-0604-17267-S	GLP-0604-17267-S
Product Description	MON 87769	MON 87769	MON 87769
Site Code	IA-2	IA-2	IA-2
Covance LIMS Number	70702736	70702737	70702752
Proximate (%)			
Moisture	73.3	70.7	74.8
Protein	6.55	6.73	5.59
Total Fat	1.41	1.29	1.24
Ash	1.95	2.05	1.83
Carbohydrates	16.8	19.2	16.5
Acid Detergent Fiber (%)	7.09	7.30	6.75
Neutral Detergent Fiber (%)	8.11	9.98	7.07

Table 1 (Continued)
Compositional Analyses of Soybean Forage

Sample ID	06018306-00246	06018306-00254	06018306-00262
Lot Number	GLP-0604-17267-S	GLP-0604-17267-S	GLP-0604-17267-S
Product Description	MON 87769	MON 87769	MON 87769
Site Code	IL	IL	IL
Covance LIMS Number	70702747	70702743	70702769
Proximate (%)			
Moisture	70.6	72.9	71.4
Protein	5.22	5.10	5.50
Total Fat	1.53	1.25	1.53
Ash	1.97	1.83	1.98
Carbohydrates	20.7	18.9	19.6
Acid Detergent Fiber (%)	9.13	9.22	8.65
Neutral Detergent Fiber (%)	11.2	11.5	8.30

Table 1 (Continued)
Compositional Analyses of Soybean Forage

Sample ID	06018306-00067	06018306-00270	06018306-00278
Lot Number	GLP-0605-17335-S	GLP-0604-17267-S	GLP-0604-17267-S
Product Description	ST3300	MON 87769	MON 87769
Site Code	IA-1	MI	MI
Covance LIMS Number	70702733	70702744	70702738
Proximate (%)			
Moisture	74.5	71.6	69.5
Protein	5.37	5.37	5.20
Total Fat	1.31	1.20	1.16
Ash	1.36	1.79	1.94
Carbohydrates	17.5	20.0	22.2
Acid Detergent Fiber (%)	7.43	7.93	11.1
Neutral Detergent Fiber (%)	7.81	9.05	12.4

Table 1 (Continued)
Compositional Analyses of Soybean Forage

Sample ID	06018306-00286	06018306-00450	06018306-00458
Lot Number	GLP-0604-17267-S	GLP-0604-17267-S	GLP-0604-17267-S
Product Description	MON 87769	MON 87769	MON 87769
Site Code	MI	OH	OH
Covance LIMS Number	70702757	70702742	70702741
Proximate (%)			
Moisture	72.8	69.9	72.4
Protein	5.56	5.64	5.76
Total Fat	1.63	1.77	1.49
Ash	1.44	1.82	1.90
Carbohydrates	18.6	20.9	18.5
Acid Detergent Fiber (%)	9.45	9.69	9.37
Neutral Detergent Fiber (%)	9.78	8.79	9.82

Table 1 (Continued)
Compositional Analyses of Soybean Forage

Sample ID	06018306-00466	06018306-00090	06018306-00098
Lot Number	GLP-0604-17267-S	GLP-0604-17278-S	GLP-0604-17278-S
Product Description	MON 87769	A3525	A3525
Site Code	OH	IA-1	IA-1
Covance LIMS Number	70702760	70702729	70702767
Proximate (%)			
Moisture	70.3	73.3	73.1
Protein	5.85	6.13	6.01
Total Fat	2.05	1.48	1.71
Ash	2.10	1.65	1.66
Carbohydrates	19.7	17.4	17.5
Acid Detergent Fiber (%)	9.13	8.31	7.66
Neutral Detergent Fiber (%)	10.1	7.67	9.20

Table 1 (Continued)
Compositional Analyses of Soybean Forage

Sample ID	06018306-00106	06018306-00138	06018306-00146
Lot Number	GLP-0604-17278-S	GLP-0604-17278-S	GLP-0604-17278-S
Product Description	A3525	A3525	A3525
Site Code	IA-1	IA-2	IA-2
Covance LIMS Number	70702732	70702766	70702763
Proximate (%)			
Moisture	72.8	74.5	72.9
Protein	5.81	6.26	6.77
Total Fat	1.45	1.58	1.76
Ash	1.56	1.85	1.99
Carbohydrates	18.4	15.8	16.6
Acid Detergent Fiber (%)	9.48	6.62	6.61
Neutral Detergent Fiber (%)	6.93	7.83	8.57

Table 1 (Continued)
Compositional Analyses of Soybean Forage

Sample ID	06018306-00154	06018306-00222	06018306-00230
Lot Number	GLP-0604-17278-S	GLP-0604-17278-S	GLP-0604-17278-S
Product Description	A3525	A3525	A3525
Site Code	IA-2	IL	IL
Covance LIMS Number	70702756	70702750	70702754
Proximate (%)			
Moisture	74.7	71.5	70.2
Protein	5.65	5.24	5.39
Total Fat	1.55	1.21	1.40
Ash	1.96	1.86	1.92
Carbohydrates	16.1	20.2	21.1
Acid Detergent Fiber (%)	6.81	7.78	10.5
Neutral Detergent Fiber (%)	8.60	8.69	12.7

Table 1 (Continued)
Compositional Analyses of Soybean Forage

Sample ID	06018306-00238	06018306-00294	06018306-00302
Lot Number	GLP-0604-17278-S	GLP-0604-17278-S	GLP-0604-17278-S
Product Description	A3525	A3525	A3525
Site Code	IL	MI	MI
Covance LIMS Number	70702751	70702762	70702749
Proximate (%)			
Moisture	72.1	73.1	70.9
Protein	5.37	5.15	5.31
Total Fat	1.49	1.62	1.17
Ash	2.01	1.72	1.81
Carbohydrates	19.0	18.4	20.8
Acid Detergent Fiber (%)	8.60	9.97	8.94
Neutral Detergent Fiber (%)	10.7	9.99	9.64

Table 1 (Continued)
Compositional Analyses of Soybean Forage

Sample ID	06018306-00310	06018306-00426	06018306-00434
Lot Number	GLP-0604-17278-S	GLP-0604-17278-S	GLP-0604-17278-S
Product Description	A3525	A3525	A3525
Site Code	MI	OH	OH
Covance LIMS Number	70702759	70702735	70702740
Proximate (%)			
Moisture	70.1	71.6	71.0
Protein	5.45	5.77	5.53
Total Fat	1.83	1.74	1.95
Ash	1.61	1.83	1.87
Carbohydrates	21.0	19.1	19.7
Acid Detergent Fiber (%)	10.2	8.23	8.53
Neutral Detergent Fiber (%)	11.4	8.80	9.54

Table 1 (Continued)
Compositional Analyses of Soybean Forage

Sample ID	06018306-00442	06018306-00073	06018306-00079
Lot Number	GLP-0604-17278-S	GLP 0604-17273-S	GLP-0604-17264-S
Product Description	A3525	A3244	A2869
Site Code	OH	IA-1	IA-1
Covance LIMS Number	70702745	70702765	70702731
Proximate (%)			
Moisture	71.2	74.9	71.5
Protein	6.01	4.95	6.12
Total Fat	1.88	1.26	1.76
Ash	1.98	1.56	1.60
Carbohydrates	18.9	17.3	19.0
Acid Detergent Fiber (%)	7.64	7.42	7.86
Neutral Detergent Fiber (%)	8.58	8.72	8.75

Table 1 (Continued)
Compositional Analyses of Soybean Forage

Sample ID	06018306-00181	06018306-00187	06018306-00193
Lot Number	GLP-0605-17334-S	GLP-0604-17261-S	GLP-0605-17335-S
Product Description	ST2788	Lewis 372	ST3300
Site Code	IA-2	IA-2	IA-2
Covance LIMS Number	70702761	70702755	70702768
Proximate (%)			
Moisture	74.5	74.0	74.6
Protein	5.31	5.63	5.43
Total Fat	1.79	1.25	1.51
Ash	1.84	2.02	1.71
Carbohydrates	16.6	17.1	16.8
Acid Detergent Fiber (%)	6.20	8.25	6.74
Neutral Detergent Fiber (%)	7.71	6.98	8.05

Table 1 (Continued)
Compositional Analyses of Soybean Forage

Sample ID	06018306-00199	06018306-00205	06018306-00211
Lot Number	GLP-0605-17336-S	GLP-0604-17260-S	GLP-0604-17262-S
Product Description	ST3600	P-93B82	Lewis 392
Site Code	IL	IL	IL
Covance LIMS Number	70702739	70702764	70702772
Proximate (%)			
Moisture	74.3	73.3	71.1
Protein	4.57	4.75	5.46
Total Fat	1.57	1.18	1.20
Ash	1.97	1.84	1.80
Carbohydrates	17.6	18.9	20.4
Acid Detergent Fiber (%)	7.33	8.31	9.03
Neutral Detergent Fiber (%)	9.79	9.87	9.72

Table 1 (Continued)
Compositional Analyses of Soybean Forage

Sample ID	06018306-00313	06018306-00319	06018306-00325
Lot Number	GLP-0604-17263-S	GLP-0604-17261-S	REF-0506-16373-S
Product Description	A2553	Lewis 372	A2804
Site Code	MI	MI	MI
Covance LIMS Number	70702748	70702770	70702734
Proximate (%)			
Moisture	72.2	72.0	71.5
Protein	5.50	4.75	5.23
Total Fat	1.86	1.17	1.59
Ash	1.72	1.87	1.80
Carbohydrates	18.7	20.2	19.9
Acid Detergent Fiber (%)	8.30	7.57	8.72
Neutral Detergent Fiber (%)	9.63	9.41	9.27

Table 1 (Continued)
Compositional Analyses of Soybean Forage

Sample ID	06018306-00403	06018306-00409	06018306-00415
Lot Number	GLP-0604-17261-S	GLP 0604-17273-S	GLP-0605-17335-S
Product Description	Lewis 372	A3244	ST3300
Site Code	OH	OH	OH
Covance LIMS Number	70702771	70702753	70702746
Proximate (%)			
Moisture	71.8	71.1	72.3
Protein	5.23	5.56	5.46
Total Fat	1.53	1.90	1.90
Ash	1.79	1.77	1.65
Carbohydrates	19.7	19.7	18.7
Acid Detergent Fiber (%)	7.49	8.47	6.94
Neutral Detergent Fiber (%)	7.89	9.36	6.75

Table 2
Compositional Analyses of Soybean Seed

Sample ID	06018306-00116	06018306-00124	06018306-00132
Lot Number	GLP-0604-17267-S	GLP-0604-17267-S	GLP-0604-17267-S
Product Description	MON 87769	MON 87769	MON 87769
Site Code	IA-1	IA-1	IA-1
Covance LIMS Number	70702796	70702778	70702810
Proximate (%)			
Moisture	7.14	7.49	8.01
Protein	38.4	39.1	38.8
Total Fat	12.4	13.5	15.0
Ash	5.34	5.24	5.35
Carbohydrates	36.7	34.7	32.8
Acid Detergent Fiber (%)	15.3	13.3	13.6
Neutral Detergent Fiber (%)	14.9	14.3	14.6
Lectin (H.U./mg)*	3.01	1.41	7.42
Trypsin Inhibitor (TIU/mg)**	30.7	50.7	44.1
Vitamin E (mg/100g)	0.797	1.20	0.821
Phytic Acid (%)	1.13	1.24	1.17
Raffinose (%)	0.372	0.305	0.291
Stachyose (%)	3.04	2.71	2.71
Isoflavones (µg/g)			
Daidzein	953	908	900
Glycitein	99.1	67.9	75.5
Genistein	543	567	539
Amino Acids (mg/g)			
Aspartic Acid	41.9	42.8	42.1
Threonine	14.6	15.2	14.7
Serine	20.1	20.5	20.6
Glutamic Acid	70.5	71.1	70.8
Proline	19.6	19.7	19.5
Glycine	16.6	16.6	16.6
Alanine	16.4	16.5	16.4
Cystine	5.97	5.82	5.97
Valine	18.6	18.3	18.3
Methionine	5.63	5.52	5.54
Isoleucine	17.5	17.4	17.3
Leucine	29.6	29.6	29.3
Tyrosine	11.8	13.6	13.5
Phenylalanine	19.3	20.0	19.8
Lysine	24.9	25.1	24.9
Histidine	10.1	10.1	10.1
Arginine	29.0	29.9	29.9
Tryptophan	4.34	4.64	4.15

*H.U. - Hemagglutinating Unit

**TIU - Trypsin Inhibitor Unit

Table 2 (Continued)
Compositional Analyses of Soybean Seed

Sample ID	06018306-00116	06018306-00124	06018306-00132
Lot Number	GLP-0604-17267-S	GLP-0604-17267-S	GLP-0604-17267-S
Product Description	MON 87769	MON 87769	MON 87769
Site Code	IA-1	IA-1	IA-1
Covance LIMS Number	70702796	70702778	70702810
Fatty Acids (%)			
8:0 Caprylic	< 0.0200	< 0.0200	< 0.0200
10:0 Capric	< 0.0200	< 0.0200	< 0.0200
12:0 Lauric	< 0.0200	< 0.0200	< 0.0200
14:0 Myristic	< 0.0200	< 0.0200	< 0.0200
14:1 Myristoleic	< 0.0200	< 0.0200	< 0.0200
15:0 Pentadecanoic	< 0.0200	< 0.0200	< 0.0200
15:1 Pentadecenoic	< 0.0200	< 0.0200	< 0.0200
16:0 Palmitic	1.50	1.64	1.76
16:1 Palmitoleic	< 0.0200	< 0.0200	< 0.0200
17:0 Heptadecanoic	< 0.0200	< 0.0200	< 0.0200
17:1 Heptadecenoic	< 0.0200	< 0.0200	< 0.0200
18:0 Stearic	0.486	0.524	0.570
18:1T Total 18:1 Trans	< 0.0200	< 0.0200	< 0.0200
18:1 Total 18:1 Cis	1.57	1.76	1.98
18:2T Total 18:2 Trans	< 0.0200	< 0.0200	< 0.0200
18:2 6c,9c (Isolinoleic Acid)	< 0.0200	< 0.0200	< 0.0200
18:2 9c,12c Linoleic	2.21	2.42	2.68
20:0 Arachidic	0.0407	0.0429	0.0474
18:3 Gamma Linolenic	0.867	0.964	1.04
18:3 9c,12c,15t (Trans ALA)	0.0572	0.0642	0.0654
18:3 Other 18:3 Trans	< 0.0200	< 0.0200	< 0.0200
20:1 Eicosenoic	< 0.0200	< 0.0200	0.0215
18:3 Linolenic	1.33	1.47	1.59
18:4 6c,9c,12c,15t (Trans SDA)	0.0311	0.0318	0.0334
18:4 Stearidonic	3.83	4.28	4.52
20:2 Eicosadienoic	< 0.0200	< 0.0200	< 0.0200
22:0 Behenic	0.0337	0.0416	0.0380
22:1 Erucic	< 0.0200	< 0.0200	< 0.0200
20:3 Eicosatrienoic	< 0.0200	< 0.0200	< 0.0200
20:4 Arachidonic	< 0.0200	< 0.0200	< 0.0200
20:5 Eicosapentaenoic	< 0.0200	< 0.0200	< 0.0200
24:0 Lignoceric	< 0.0200	< 0.0200	< 0.0200
22:5 Docosapentaenoic	< 0.0200	< 0.0200	< 0.0200
22:6 Docosaheptaenoic	< 0.0200	< 0.0200	< 0.0200

Table 2 (Continued)
Compositional Analyses of Soybean Seed

Sample ID	06018306-00164	06018306-00172	06018306-00180
Lot Number	GLP-0604-17267-S	GLP-0604-17267-S	GLP-0604-17267-S
Product Description	MON 87769	MON 87769	MON 87769
Site Code	IA-2	IA-2	IA-2
Covance LIMS Number	70702794	70702798	70702809
Proximate (%)			
Moisture	8.08	8.21	7.99
Protein	39.1	39.8	39.1
Total Fat	11.9	14.3	14.4
Ash	5.02	5.03	5.18
Carbohydrates	35.9	32.7	33.3
Acid Detergent Fiber (%)	16.2	15.1	16.2
Neutral Detergent Fiber (%)	17.6	14.2	16.0
Lectin (H.U./mg)*	1.98	1.90	3.94
Trypsin Inhibitor (TIU/mg)**	27.4	26.0	25.2
Vitamin E (mg/100g)	0.939	0.840	1.12
Phytic Acid (%)	0.855	0.787	1.02
Raffinose (%)	0.321	0.409	0.330
Stachyose (%)	2.33	2.97	2.62
Isoflavones (µg/g)			
Daidzein	1010	917	1040
Glycitein	65.6	61.5	80.2
Genistein	632	562	617
Amino Acids (mg/g)			
Aspartic Acid	41.5	42.3	42.0
Threonine	14.7	14.5	14.5
Serine	20.0	20.0	20.3
Glutamic Acid	70.0	71.9	71.2
Proline	19.6	19.7	19.2
Glycine	16.4	16.8	16.7
Alanine	16.2	16.6	16.5
Cystine	5.76	5.68	5.76
Valine	17.9	19.0	18.6
Methionine	5.63	5.46	5.59
Isoleucine	16.9	17.8	17.4
Leucine	29.1	29.9	29.4
Tyrosine	13.3	12.4	13.1
Phenylalanine	19.6	19.6	19.8
Lysine	24.4	25.1	25.0
Histidine	9.96	10.2	10.1
Arginine	31.4	32.1	30.9
Tryptophan	4.20	4.26	4.23

*H.U. - Hemagglutinating Unit

**TIU - Trypsin Inhibitor Unit

Table 2 (Continued)
Compositional Analyses of Soybean Seed

Sample ID	06018306-00164	06018306-00172	06018306-00180
Lot Number	GLP-0604-17267-S	GLP-0604-17267-S	GLP-0604-17267-S
Product Description	MON 87769	MON 87769	MON 87769
Site Code	IA-2	IA-2	IA-2
Covance LIMS Number	70702794	70702798	70702809
Fatty Acids (%)			
8:0 Caprylic	< 0.0200	< 0.0200	< 0.0200
10:0 Capric	< 0.0200	< 0.0200	< 0.0200
12:0 Lauric	< 0.0200	< 0.0200	< 0.0200
14:0 Myristic	< 0.0200	< 0.0200	< 0.0200
14:1 Myristoleic	< 0.0200	< 0.0200	< 0.0200
15:0 Pentadecanoic	< 0.0200	< 0.0200	< 0.0200
15:1 Pentadecenoic	< 0.0200	< 0.0200	< 0.0200
16:0 Palmitic	1.39	1.66	1.63
16:1 Palmitoleic	< 0.0200	< 0.0200	< 0.0200
17:0 Heptadecanoic	< 0.0200	< 0.0200	< 0.0200
17:1 Heptadecenoic	< 0.0200	< 0.0200	< 0.0200
18:0 Stearic	0.484	0.588	0.603
18:1T Total 18:1 Trans	< 0.0200	< 0.0200	< 0.0200
18:1 Total 18:1 Cis	1.51	1.87	2.03
18:2T Total 18:2 Trans	< 0.0200	< 0.0200	< 0.0200
18:2 6c,9c (Isolinoleic Acid)	< 0.0200	< 0.0200	< 0.0200
18:2 9c,12c Linoleic	2.38	2.85	3.22
20:0 Arachidic	0.0398	0.0467	0.0475
18:3 Gamma Linolenic	0.935	1.12	1.12
18:3 9c,12c,15t (Trans ALA)	0.0508	0.0634	0.0582
18:3 Other 18:3 Trans	< 0.0200	< 0.0200	< 0.0200
20:1 Eicosenoic	< 0.0200	0.0206	0.0209
18:3 Linolenic	1.29	1.56	1.58
18:4 6c,9c,12c,15t (Trans SDA)	0.0258	0.0291	0.0263
18:4 Stearidonic	3.52	4.13	3.76
20:2 Eicosadienoic	< 0.0200	< 0.0200	< 0.0200
22:0 Behenic	0.0311	0.0377	0.0375
22:1 Erucic	< 0.0200	< 0.0200	< 0.0200
20:3 Eicosatrienoic	< 0.0200	< 0.0200	< 0.0200
20:4 Arachidonic	< 0.0200	< 0.0200	< 0.0200
20:5 Eicosapentaenoic	< 0.0200	< 0.0200	< 0.0200
24:0 Lignoceric	< 0.0200	< 0.0200	< 0.0200
22:5 Docosapentaenoic	< 0.0200	< 0.0200	< 0.0200
22:6 Docosaheptaenoic	< 0.0200	< 0.0200	< 0.0200

Table 2 (Continued)
Compositional Analyses of Soybean Seed

Sample ID	06018306-00248	06018306-00256	06018306-00264
Lot Number	GLP-0604-17267-S	GLP-0604-17267-S	GLP-0604-17267-S
Product Description	MON 87769	MON 87769	MON 87769
Site Code	IL	IL	IL
Covance LIMS Number	70702816	70702808	70702795
Proximate (%)			
Moisture	7.24	7.00	6.71
Protein	39.2	38.7	38.3
Total Fat	17.0	17.7	15.8
Ash	5.72	5.70	5.50
Carbohydrates	30.8	30.9	33.7
Acid Detergent Fiber (%)	14.8	14.8	15.5
Neutral Detergent Fiber (%)	16.0	16.0	15.6
Lectin (H.U./mg)*	3.99	6.53	3.44
Trypsin Inhibitor (TIU/mg)**	37.9	34.5	33.8
Vitamin E (mg/100g)	2.36	2.11	2.27
Phytic Acid (%)	1.01	1.02	0.950
Raffinose (%)	0.409	0.376	0.415
Stachyose (%)	2.94	2.71	2.89
Isoflavones (µg/g)			
Daidzein	1010	1110	893
Glycitein	77.2	81.6	78.0
Genistein	626	666	538
Amino Acids (mg/g)			
Aspartic Acid	41.8	41.4	43.8
Threonine	14.7	14.3	15.2
Serine	20.5	19.9	21.0
Glutamic Acid	70.3	69.4	73.7
Proline	19.0	19.1	20.1
Glycine	16.7	16.6	17.4
Alanine	16.5	16.4	17.2
Cystine	5.87	5.74	5.96
Valine	18.2	18.6	19.4
Methionine	5.76	5.64	5.72
Isoleucine	17.3	17.6	18.4
Leucine	29.3	29.2	31.0
Tyrosine	13.1	12.9	12.5
Phenylalanine	19.3	19.6	20.3
Lysine	24.5	24.5	25.7
Histidine	10.1	10.0	10.6
Arginine	28.5	27.9	29.3
Tryptophan	4.56	4.65	4.68

*H.U. - Hemagglutinating Unit

**TIU - Trypsin Inhibitor Unit

Table 2 (Continued)
Compositional Analyses of Soybean Seed

Sample ID	06018306-00248	06018306-00256	06018306-00264
Lot Number	GLP-0604-17267-S	GLP-0604-17267-S	GLP-0604-17267-S
Product Description	MON 87769	MON 87769	MON 87769
Site Code	IL	IL	IL
Covance LIMS Number	70702816	70702808	70702795
Fatty Acids (%)			
8:0 Caprylic	< 0.0200	< 0.0200	< 0.0200
10:0 Capric	< 0.0200	< 0.0200	< 0.0200
12:0 Lauric	< 0.0200	< 0.0200	< 0.0200
14:0 Myristic	< 0.0200	< 0.0200	< 0.0200
14:1 Myristoleic	< 0.0200	< 0.0200	< 0.0200
15:0 Pentadecanoic	< 0.0200	< 0.0200	< 0.0200
15:1 Pentadecenoic	< 0.0200	< 0.0200	< 0.0200
16:0 Palmitic	2.01	2.15	1.89
16:1 Palmitoleic	< 0.0200	< 0.0200	< 0.0200
17:0 Heptadecanoic	< 0.0200	< 0.0200	< 0.0200
17:1 Heptadecenoic	< 0.0200	< 0.0200	< 0.0200
18:0 Stearic	0.728	0.758	0.684
18:1T Total 18:1 Trans	< 0.0200	< 0.0200	< 0.0200
18:1 Total 18:1 Cis	2.95	3.04	2.79
18:2T Total 18:2 Trans	< 0.0200	< 0.0200	< 0.0200
18:2 6c,9c (Isolinoleic Acid)	< 0.0200	< 0.0200	< 0.0200
18:2 9c,12c Linoleic	5.06	5.25	4.66
20:0 Arachidic	0.0600	0.0618	0.0567
18:3 Gamma Linolenic	1.01	1.10	0.946
18:3 9c,12c,15t (Trans ALA)	0.0627	0.0653	0.0606
18:3 Other 18:3 Trans	< 0.0200	< 0.0200	< 0.0200
20:1 Eicosenoic	0.0321	0.0340	0.0301
18:3 Linolenic	1.68	1.77	1.59
18:4 6c,9c,12c,15t (Trans SDA)	< 0.0200	< 0.0200	< 0.0200
18:4 Stearidonic	2.77	3.06	2.59
20:2 Eicosadienoic	< 0.0200	< 0.0200	< 0.0200
22:0 Behenic	0.0507	0.0524	0.0475
22:1 Erucic	< 0.0200	< 0.0200	< 0.0200
20:3 Eicosatrienoic	< 0.0200	< 0.0200	< 0.0200
20:4 Arachidonic	< 0.0200	< 0.0200	< 0.0200
20:5 Eicosapentaenoic	< 0.0200	< 0.0200	< 0.0200
24:0 Lignoceric	< 0.0200	< 0.0200	< 0.0200
22:5 Docosapentaenoic	< 0.0200	< 0.0200	< 0.0200
22:6 Docosaheptaenoic	< 0.0200	< 0.0200	< 0.0200

Table 2 (Continued)
Compositional Analyses of Soybean Seed

Sample ID	06018306-00272	06018306-00280	06018306-00288
Lot Number	GLP-0604-17267-S	GLP-0604-17267-S	GLP-0604-17267-S
Product Description	MON 87769	MON 87769	MON 87769
Site Code	MI	MI	MI
Covance LIMS Number	70702783	70702787	70702775
Proximate (%)			
Moisture	7.01	7.31	7.14
Protein	38.2	38.2	40.2
Total Fat	13.2	12.4	12.2
Ash	5.26	5.08	4.86
Carbohydrates	36.3	37.0	35.6
Acid Detergent Fiber (%)	16.1	16.3	15.7
Neutral Detergent Fiber (%)	16.9	16.3	15.0
Lectin (H.U./mg)*	1.99	1.64	0.512
Trypsin Inhibitor (TIU/mg)**	22.6	25.9	23.7
Vitamin E (mg/100g)	1.25	1.13	1.14
Phytic Acid (%)	0.860	0.753	0.788
Raffinose (%)	0.299	0.323	0.335
Stachyose (%)	2.12	2.29	2.35
Isoflavones (µg/g)			
Daidzein	1710	1630	1290
Glycitein	78.4	93.7	60.7
Genistein	1040	967	781
Amino Acids (mg/g)			
Aspartic Acid	42.0	41.5	43.9
Threonine	15.3	14.8	15.3
Serine	20.7	20.7	20.7
Glutamic Acid	69.9	69.2	73.1
Proline	18.9	18.9	20.3
Glycine	16.4	16.3	17.0
Alanine	16.5	16.3	17.0
Cystine	5.17	5.37	5.61
Valine	17.3	17.1	19.1
Methionine	5.00	5.22	5.50
Isoleucine	16.4	16.2	18.0
Leucine	29.3	29.0	30.5
Tyrosine	13.6	12.0	13.9
Phenylalanine	19.9	19.6	20.8
Lysine	24.6	24.3	25.5
Histidine	10.0	9.90	10.5
Arginine	29.8	29.3	33.5
Tryptophan	4.23	4.35	4.73

*H.U. - Hemagglutinating Unit

**TIU - Trypsin Inhibitor Unit

Table 2 (Continued)
Compositional Analyses of Soybean Seed

Sample ID	06018306-00272	06018306-00280	06018306-00288
Lot Number	GLP-0604-17267-S	GLP-0604-17267-S	GLP-0604-17267-S
Product Description	MON 87769	MON 87769	MON 87769
Site Code	MI	MI	MI
Covance LIMS Number	70702783	70702787	70702775
Fatty Acids (%)			
8:0 Caprylic	< 0.0200	< 0.0200	< 0.0200
10:0 Capric	< 0.0200	< 0.0200	< 0.0200
12:0 Lauric	< 0.0200	< 0.0200	< 0.0200
14:0 Myristic	< 0.0200	< 0.0200	< 0.0200
14:1 Myristoleic	< 0.0200	< 0.0200	< 0.0200
15:0 Pentadecanoic	< 0.0200	< 0.0200	< 0.0200
15:1 Pentadecenoic	< 0.0200	< 0.0200	< 0.0200
16:0 Palmitic	1.56	1.48	1.46
16:1 Palmitoleic	< 0.0200	< 0.0200	< 0.0200
17:0 Heptadecanoic	< 0.0200	< 0.0200	< 0.0200
17:1 Heptadecenoic	< 0.0200	< 0.0200	< 0.0200
18:0 Stearic	0.515	0.479	0.447
18:1T Total 18:1 Trans	< 0.0200	< 0.0200	< 0.0200
18:1 Total 18:1 Cis	1.67	1.55	1.58
18:2T Total 18:2 Trans	< 0.0200	< 0.0200	< 0.0200
18:2 6c,9c (Isolinoleic Acid)	< 0.0200	< 0.0200	< 0.0200
18:2 9c,12c Linoleic	2.53	2.34	1.97
20:0 Arachidic	0.0412	0.0394	0.0369
18:3 Gamma Linolenic	1.01	0.951	0.880
18:3 9c,12c,15t (Trans ALA)	0.0622	0.0557	0.0571
18:3 Other 18:3 Trans	< 0.0200	< 0.0200	< 0.0200
20:1 Eicosenoic	< 0.0200	< 0.0200	< 0.0200
18:3 Linolenic	1.53	1.44	1.41
18:4 6c,9c,12c,15t (Trans SDA)	0.0287	0.0301	0.0301
18:4 Stearidonic	3.95	3.84	4.06
20:2 Eicosadienoic	< 0.0200	< 0.0200	< 0.0200
22:0 Behenic	0.0407	0.0333	0.0370
22:1 Erucic	< 0.0200	< 0.0200	< 0.0200
20:3 Eicosatrienoic	< 0.0200	< 0.0200	< 0.0200
20:4 Arachidonic	< 0.0200	< 0.0200	< 0.0200
20:5 Eicosapentaenoic	< 0.0200	< 0.0200	< 0.0200
24:0 Lignoceric	< 0.0200	< 0.0200	< 0.0200
22:5 Docosapentaenoic	< 0.0200	< 0.0200	< 0.0200
22:6 Docosaheptaenoic	< 0.0200	< 0.0200	< 0.0200

Table 2 (Continued)
Compositional Analyses of Soybean Seed

Sample ID	06018306-00452	06018306-00460	06018306-00468
Lot Number	GLP-0604-17267-S	GLP-0604-17267-S	GLP-0604-17267-S
Product Description	MON 87769	MON 87769	MON 87769
Site Code	OH	OH	OH
Covance LIMS Number	70702818	70702812	70702790
Proximate (%)			
Moisture	7.20	7.71	7.87
Protein	38.7	38.3	37.7
Total Fat	17.6	17.5	15.9
Ash	5.37	5.33	5.46
Carbohydrates	31.1	31.2	33.1
Acid Detergent Fiber (%)	16.5	16.9	16.4
Neutral Detergent Fiber (%)	15.7	13.9	16.7
Lectin (H.U./mg)*	2.85	6.16	2.54
Trypsin Inhibitor (TIU/mg)**	33.8	24.1	28.9
Vitamin E (mg/100g)	2.02	2.15	1.55
Phytic Acid (%)	1.11	0.992	0.942
Raffinose (%)	0.293	0.358	0.331
Stachyose (%)	2.42	2.78	2.40
Isoflavones (µg/g)			
Daidzein	1020	1010	1090
Glycitein	69.5	76.2	83.3
Genistein	696	698	713
Amino Acids (mg/g)			
Aspartic Acid	41.5	40.8	40.6
Threonine	14.7	14.5	14.4
Serine	20.5	20.1	19.2
Glutamic Acid	70.4	69.3	68.4
Proline	19.0	18.7	19.0
Glycine	16.4	16.3	16.2
Alanine	16.5	16.3	16.2
Cystine	5.60	5.54	5.54
Valine	18.0	17.9	18.5
Methionine	5.55	5.52	5.39
Isoleucine	17.1	17.1	17.5
Leucine	29.5	29.0	29.0
Tyrosine	12.6	12.8	13.3
Phenylalanine	19.7	19.7	19.5
Lysine	24.4	24.1	24.2
Histidine	9.93	9.82	9.86
Arginine	29.2	28.6	28.3
Tryptophan	4.33	4.13	4.35

*H.U. - Hemagglutinating Unit

**TIU - Trypsin Inhibitor Unit

Table 2 (Continued)
Compositional Analyses of Soybean Seed

Sample ID	06018306-00452	06018306-00460	06018306-00468
Lot Number	GLP-0604-17267-S	GLP-0604-17267-S	GLP-0604-17267-S
Product Description	MON 87769	MON 87769	MON 87769
Site Code	OH	OH	OH
Covance LIMS Number	70702818	70702812	70702790
Fatty Acids (%)			
8:0 Caprylic	< 0.0200	< 0.0200	< 0.0200
10:0 Capric	< 0.0200	< 0.0200	< 0.0200
12:0 Lauric	< 0.0200	< 0.0200	< 0.0200
14:0 Myristic	< 0.0200	< 0.0200	< 0.0200
14:1 Myristoleic	< 0.0200	< 0.0200	< 0.0200
15:0 Pentadecanoic	< 0.0200	< 0.0200	< 0.0200
15:1 Pentadecenoic	< 0.0200	< 0.0200	< 0.0200
16:0 Palmitic	2.00	1.98	1.86
16:1 Palmitoleic	< 0.0200	< 0.0200	< 0.0200
17:0 Heptadecanoic	< 0.0200	< 0.0200	< 0.0200
17:1 Heptadecenoic	< 0.0200	< 0.0200	< 0.0200
18:0 Stearic	0.779	0.776	0.669
18:1T Total 18:1 Trans	< 0.0200	< 0.0200	< 0.0200
18:1 Total 18:1 Cis	3.23	3.22	2.59
18:2T Total 18:2 Trans	< 0.0200	< 0.0200	< 0.0200
18:2 6c,9c (Isolinoleic Acid)	< 0.0200	< 0.0200	< 0.0200
18:2 9c,12c Linoleic	4.35	4.41	3.88
20:0 Arachidic	0.0619	0.0617	0.0535
18:3 Gamma Linolenic	1.05	1.04	1.06
18:3 9c,12c,15t (Trans ALA)	0.0749	0.0736	0.0679
18:3 Other 18:3 Trans	< 0.0200	< 0.0200	< 0.0200
20:1 Eicosenoic	0.0318	0.0318	0.0271
18:3 Linolenic	2.02	2.01	1.77
18:4 6c,9c,12c,15t (Trans SDA)	0.0235	0.0235	0.0247
18:4 Stearidonic	3.52	3.45	3.45
20:2 Eicosadienoic	< 0.0200	< 0.0200	< 0.0200
22:0 Behenic	0.0503	0.0511	0.0437
22:1 Erucic	< 0.0200	< 0.0200	< 0.0200
20:3 Eicosatrienoic	< 0.0200	< 0.0200	< 0.0200
20:4 Arachidonic	< 0.0200	< 0.0200	< 0.0200
20:5 Eicosapentaenoic	< 0.0200	< 0.0200	< 0.0200
24:0 Lignoceric	< 0.0200	< 0.0200	< 0.0200
22:5 Docosapentaenoic	< 0.0200	< 0.0200	< 0.0200
22:6 Docosaheptaenoic	< 0.0200	< 0.0200	< 0.0200

Table 2 (Continued)
Compositional Analyses of Soybean Seed

Sample ID	06018306-00092	06018306-00100	06018306-00108
Lot Number	GLP-0604-17278-S	GLP-0604-17278-S	GLP-0604-17278-S
Product Description	A3525	A3525	A3525
Site Code	IA-1	IA-1	IA-1
Covance LIMS Number	70702789	70702780	70702797
Proximate (%)			
Moisture	7.66	7.28	7.17
Protein	37.2	37.6	36.6
Total Fat	12.8	11.8	12.1
Ash	5.47	5.22	5.20
Carbohydrates	36.9	38.1	38.9
Acid Detergent Fiber (%)	14.5	15.0	15.5
Neutral Detergent Fiber (%)	13.8	16.7	13.4
Lectin (H.U./mg)*	2.98	0.699	2.73
Trypsin Inhibitor (TIU/mg)**	36.7	23.8	38.7
Vitamin E (mg/100g)	1.05	1.10	0.900
Phytic Acid (%)	0.980	1.17	1.09
Raffinose (%)	0.297	0.272	0.291
Stachyose (%)	2.64	2.49	2.59
Isoflavones (µg/g)			
Daidzein	1430	1420	1460
Glycitein	105	79.9	102
Genistein	895	912	897
Amino Acids (mg/g)			
Aspartic Acid	40.6	41.8	39.6
Threonine	14.6	14.9	14.0
Serine	20.2	20.1	19.0
Glutamic Acid	67.6	69.2	65.9
Proline	18.3	19.1	18.3
Glycine	15.9	16.2	15.7
Alanine	16.0	16.2	15.6
Cystine	5.60	5.54	5.93
Valine	16.8	18.0	17.8
Methionine	5.25	5.24	5.50
Isoleucine	15.9	17.1	16.8
Leucine	28.2	29.1	28.2
Tyrosine	12.4	13.1	11.7
Phenylalanine	18.4	19.2	18.7
Lysine	24.1	24.8	24.0
Histidine	9.70	10.0	9.56
Arginine	27.5	28.2	26.1
Tryptophan	4.28	4.10	4.25

*H.U. - Hemagglutinating Unit

**TIU - Trypsin Inhibitor Unit

Table 2 (Continued)
Compositional Analyses of Soybean Seed

Sample ID	06018306-00092	06018306-00100	06018306-00108
Lot Number	GLP-0604-17278-S	GLP-0604-17278-S	GLP-0604-17278-S
Product Description	A3525	A3525	A3525
Site Code	IA-1	IA-1	IA-1
Covance LIMS Number	70702789	70702780	70702797
Fatty Acids (%)			
8:0 Caprylic	< 0.0200	< 0.0200	< 0.0200
10:0 Capric	< 0.0200	< 0.0200	< 0.0200
12:0 Lauric	< 0.0200	< 0.0200	< 0.0200
14:0 Myristic	< 0.0200	< 0.0200	< 0.0200
14:1 Myristoleic	< 0.0200	< 0.0200	< 0.0200
15:0 Pentadecanoic	< 0.0200	< 0.0200	< 0.0200
15:1 Pentadecenoic	< 0.0200	< 0.0200	< 0.0200
16:0 Palmitic	1.47	1.36	1.39
16:1 Palmitoleic	< 0.0200	< 0.0200	< 0.0200
17:0 Heptadecanoic	< 0.0200	< 0.0200	< 0.0200
17:1 Heptadecenoic	< 0.0200	< 0.0200	< 0.0200
18:0 Stearic	0.498	0.451	0.465
18:1T Total 18:1 Trans	< 0.0200	< 0.0200	< 0.0200
18:1 Total 18:1 Cis	2.26	2.08	2.12
18:2T Total 18:2 Trans	< 0.0200	< 0.0200	< 0.0200
18:2 6c,9c (Isolinoleic Acid)	< 0.0200	< 0.0200	< 0.0200
18:2 9c,12c Linoleic	6.69	6.17	6.35
20:0 Arachidic	0.0370	0.0332	0.0346
18:3 Gamma Linolenic	< 0.0200	< 0.0200	< 0.0200
18:3 9c,12c,15t (Trans ALA)	< 0.0200	< 0.0200	< 0.0200
18:3 Other 18:3 Trans	< 0.0200	< 0.0200	< 0.0200
20:1 Eicosenoic	< 0.0200	< 0.0200	< 0.0200
18:3 Linolenic	1.20	1.11	1.13
18:4 6c,9c,12c,15t (Trans SDA)	< 0.0200	< 0.0200	< 0.0200
18:4 Stearidonic	< 0.0200	< 0.0200	< 0.0200
20:2 Eicosadienoic	< 0.0200	< 0.0200	< 0.0200
22:0 Behenic	0.0370	0.0383	0.0346
22:1 Erucic	< 0.0200	< 0.0200	< 0.0200
20:3 Eicosatrienoic	< 0.0200	< 0.0200	< 0.0200
20:4 Arachidonic	< 0.0200	< 0.0200	< 0.0200
20:5 Eicosapentaenoic	< 0.0200	< 0.0200	< 0.0200
24:0 Lignoceric	< 0.0200	< 0.0200	< 0.0200
22:5 Docosapentaenoic	< 0.0200	< 0.0200	< 0.0200
22:6 Docosaheptaenoic	< 0.0200	< 0.0200	< 0.0200

Table 2 (Continued)
Compositional Analyses of Soybean Seed

Sample ID	06018306-00140	06018306-00148	06018306-00156
Lot Number	GLP-0604-17278-S	GLP-0604-17278-S	GLP-0604-17278-S
Product Description	A3525	A3525	A3525
Site Code	IA-2	IA-2	IA-2
Covance LIMS Number	70702779	70702788	70702805
Proximate (%)			
Moisture	7.88	7.95	8.11
Protein	38.3	38.1	35.2
Total Fat	12.2	12.3	13.9
Ash	4.83	4.93	5.18
Carbohydrates	36.8	36.7	37.6
Acid Detergent Fiber (%)	15.5	12.7	16.4
Neutral Detergent Fiber (%)	15.5	15.4	17.8
Lectin (H.U./mg)*	0.656	1.51	2.49
Trypsin Inhibitor (TIU/mg)**	28.8	29.0	22.8
Vitamin E (mg/100g)	1.26	1.13	0.867
Phytic Acid (%)	0.974	0.862	0.960
Raffinose (%)	0.339	0.319	0.288
Stachyose (%)	2.76	2.57	2.23
Isoflavones (µg/g)			
Daidzein	1470	1430	1470
Glycitein	67.0	60.3	83.0
Genistein	999	942	943
Amino Acids (mg/g)			
Aspartic Acid	41.9	42.3	40.1
Threonine	14.9	14.9	14.3
Serine	20.2	21.1	19.9
Glutamic Acid	70.2	71.0	67.6
Proline	19.2	19.2	18.5
Glycine	16.4	16.7	16.0
Alanine	16.4	16.7	16.0
Cystine	5.52	5.47	5.56
Valine	18.1	17.4	17.4
Methionine	5.29	5.19	5.53
Isoleucine	17.1	16.4	16.4
Leucine	29.3	29.4	28.5
Tyrosine	12.0	12.3	12.1
Phenylalanine	19.4	19.8	19.0
Lysine	25.0	25.1	24.1
Histidine	10.1	10.1	9.68
Arginine	28.9	29.0	28.0
Tryptophan	4.38	4.27	4.21

*H.U. - Hemagglutinating Unit

**TIU - Trypsin Inhibitor Unit

Table 2 (Continued)
Compositional Analyses of Soybean Seed

Sample ID	06018306-00140	06018306-00148	06018306-00156
Lot Number	GLP-0604-17278-S	GLP-0604-17278-S	GLP-0604-17278-S
Product Description	A3525	A3525	A3525
Site Code	IA-2	IA-2	IA-2
Covance LIMS Number	70702779	70702788	70702805
Fatty Acids (%)			
8:0 Caprylic	< 0.0200	< 0.0200	< 0.0200
10:0 Capric	< 0.0200	< 0.0200	< 0.0200
12:0 Lauric	< 0.0200	< 0.0200	< 0.0200
14:0 Myristic	< 0.0200	< 0.0200	< 0.0200
14:1 Myristoleic	< 0.0200	< 0.0200	< 0.0200
15:0 Pentadecanoic	< 0.0200	< 0.0200	< 0.0200
15:1 Pentadecenoic	< 0.0200	< 0.0200	< 0.0200
16:0 Palmitic	1.21	1.34	1.53
16:1 Palmitoleic	< 0.0200	< 0.0200	< 0.0200
17:0 Heptadecanoic	< 0.0200	< 0.0200	< 0.0200
17:1 Heptadecenoic	< 0.0200	< 0.0200	< 0.0200
18:0 Stearic	0.431	0.494	0.551
18:1T Total 18:1 Trans	< 0.0200	< 0.0200	< 0.0200
18:1 Total 18:1 Cis	1.99	2.18	2.48
18:2T Total 18:2 Trans	< 0.0200	< 0.0200	< 0.0200
18:2 6c,9c (Isolinoleic Acid)	< 0.0200	< 0.0200	< 0.0200
18:2 9c,12c Linoleic	6.05	6.48	7.32
20:0 Arachidic	0.0308	0.0372	0.0402
18:3 Gamma Linolenic	< 0.0200	< 0.0200	< 0.0200
18:3 9c,12c,15t (Trans ALA)	< 0.0200	< 0.0200	< 0.0200
18:3 Other 18:3 Trans	< 0.0200	< 0.0200	< 0.0200
20:1 Eicosenoic	< 0.0200	< 0.0200	< 0.0200
18:3 Linolenic	1.12	1.16	1.29
18:4 6c,9c,12c,15t (Trans SDA)	< 0.0200	< 0.0200	< 0.0200
18:4 Stearidonic	< 0.0200	< 0.0200	< 0.0200
20:2 Eicosadienoic	< 0.0200	< 0.0200	< 0.0200
22:0 Behenic	0.0405	0.0348	0.0377
22:1 Erucic	< 0.0200	< 0.0200	< 0.0200
20:3 Eicosatrienoic	< 0.0200	< 0.0200	< 0.0200
20:4 Arachidonic	< 0.0200	< 0.0200	< 0.0200
20:5 Eicosapentaenoic	< 0.0200	< 0.0200	< 0.0200
24:0 Lignoceric	< 0.0200	< 0.0200	< 0.0200
22:5 Docosapentaenoic	< 0.0200	< 0.0200	< 0.0200
22:6 Docosaheptaenoic	< 0.0200	< 0.0200	< 0.0200

Table 2 (Continued)
Compositional Analyses of Soybean Seed

Sample ID	06018306-00224	06018306-00232	06018306-00240
Lot Number	GLP-0604-17278-S	GLP-0604-17278-S	GLP-0604-17278-S
Product Description	A3525	A3525	A3525
Site Code	IL	IL	IL
Covance LIMS Number	70702806	70702799	70702804
Proximate (%)			
Moisture	7.21	7.25	7.37
Protein	36.3	37.7	36.1
Total Fat	17.3	17.2	16.8
Ash	5.63	5.11	5.34
Carbohydrates	33.6	32.7	34.4
Acid Detergent Fiber (%)	16.5	16.2	16.7
Neutral Detergent Fiber (%)	16.5	16.6	16.6
Lectin (H.U./mg)*	10.5	4.66	4.52
Trypsin Inhibitor (TIU/mg)**	32.5	32.3	33.3
Vitamin E (mg/100g)	1.94	2.05	1.86
Phytic Acid (%)	0.953	0.923	1.03
Raffinose (%)	0.368	0.420	0.407
Stachyose (%)	2.67	2.98	2.88
Isoflavones (µg/g)			
Daidzein	1570	1280	1280
Glycitein	123	114	98.2
Genistein	873	744	714
Amino Acids (mg/g)			
Aspartic Acid	39.5	41.0	40.6
Threonine	13.9	14.8	14.6
Serine	18.6	19.8	20.2
Glutamic Acid	65.7	68.3	68.0
Proline	18.1	18.9	18.4
Glycine	16.0	16.3	16.3
Alanine	15.9	16.3	16.3
Cystine	5.67	5.58	5.72
Valine	18.1	17.8	17.4
Methionine	5.48	5.27	5.54
Isoleucine	17.1	17.0	16.6
Leucine	28.1	29.1	28.9
Tyrosine	12.3	13.4	12.3
Phenylalanine	18.8	19.5	19.3
Lysine	23.7	24.3	24.1
Histidine	9.64	9.91	9.83
Arginine	26.0	27.8	26.8
Tryptophan	4.26	4.56	4.66

*H.U. - Hemagglutinating Unit

**TIU - Trypsin Inhibitor Unit

Table 2 (Continued)
Compositional Analyses of Soybean Seed

Sample ID	06018306-00224	06018306-00232	06018306-00240
Lot Number	GLP-0604-17278-S	GLP-0604-17278-S	GLP-0604-17278-S
Product Description	A3525	A3525	A3525
Site Code	IL	IL	IL
Covance LIMS Number	70702806	70702799	70702804
Fatty Acids (%)			
8:0 Caprylic	< 0.0200	< 0.0200	< 0.0200
10:0 Capric	< 0.0200	< 0.0200	< 0.0200
12:0 Lauric	< 0.0200	< 0.0200	< 0.0200
14:0 Myristic	< 0.0200	< 0.0200	< 0.0200
14:1 Myristoleic	< 0.0200	< 0.0200	< 0.0200
15:0 Pentadecanoic	< 0.0200	< 0.0200	< 0.0200
15:1 Pentadecenoic	< 0.0200	< 0.0200	< 0.0200
16:0 Palmitic	1.98	1.96	1.94
16:1 Palmitoleic	< 0.0200	< 0.0200	< 0.0200
17:0 Heptadecanoic	< 0.0200	< 0.0200	< 0.0200
17:1 Heptadecenoic	< 0.0200	< 0.0200	< 0.0200
18:0 Stearic	0.712	0.705	0.703
18:1T Total 18:1 Trans	< 0.0200	< 0.0200	< 0.0200
18:1 Total 18:1 Cis	3.40	3.44	3.38
18:2T Total 18:2 Trans	< 0.0200	< 0.0200	< 0.0200
18:2 6c,9c (Isolinoleic Acid)	< 0.0200	< 0.0200	< 0.0200
18:2 9c,12c Linoleic	9.12	8.82	8.68
20:0 Arachidic	0.0549	0.0546	0.0550
18:3 Gamma Linolenic	< 0.0200	< 0.0200	< 0.0200
18:3 9c,12c,15t (Trans ALA)	< 0.0200	< 0.0200	< 0.0200
18:3 Other 18:3 Trans	< 0.0200	< 0.0200	< 0.0200
20:1 Eicosenoic	0.0321	0.0309	0.0299
18:3 Linolenic	1.30	1.21	1.21
18:4 6c,9c,12c,15t (Trans SDA)	< 0.0200	< 0.0200	< 0.0200
18:4 Stearidonic	< 0.0200	< 0.0200	< 0.0200
20:2 Eicosadienoic	< 0.0200	< 0.0200	< 0.0200
22:0 Behenic	0.0535	0.0531	0.0543
22:1 Erucic	< 0.0200	< 0.0200	< 0.0200
20:3 Eicosatrienoic	< 0.0200	< 0.0200	< 0.0200
20:4 Arachidonic	< 0.0200	< 0.0200	< 0.0200
20:5 Eicosapentaenoic	< 0.0200	< 0.0200	< 0.0200
24:0 Lignoceric	0.0200	0.0206	0.0201
22:5 Docosapentaenoic	< 0.0200	< 0.0200	< 0.0200
22:6 Docosaheptaenoic	< 0.0200	< 0.0200	< 0.0200

Table 2 (Continued)
Compositional Analyses of Soybean Seed

Sample ID	06018306-00296	06018306-00304	06018306-00312
Lot Number	GLP-0604-17278-S	GLP-0604-17278-S	GLP-0604-17278-S
Product Description	A3525	A3525	A3525
Site Code	MI	MI	MI
Covance LIMS Number	70702814	70702801	70702786
Proximate (%)			
Moisture	6.84	7.23	7.39
Protein	36.1	37.4	35.4
Total Fat	15.8	15.2	12.6
Ash	4.98	5.20	5.16
Carbohydrates	36.3	35.0	39.5
Acid Detergent Fiber (%)	15.8	16.1	14.8
Neutral Detergent Fiber (%)	15.3	16.8	16.2
Lectin (H.U./mg)*	4.09	3.69	1.81
Trypsin Inhibitor (TIU/mg)**	32.5	19.8	23.4
Vitamin E (mg/100g)	0.744	0.653	1.01
Phytic Acid (%)	0.959	0.797	0.692
Raffinose (%)	0.305	0.301	0.293
Stachyose (%)	2.45	2.30	2.27
Isoflavones (µg/g)			
Daidzein	2520	2570	2570
Glycitein	78.4	92.9	147
Genistein	1590	1560	1540
Amino Acids (mg/g)			
Aspartic Acid	39.2	40.5	39.8
Threonine	13.9	14.6	14.6
Serine	19.2	20.1	19.8
Glutamic Acid	65.5	67.9	65.9
Proline	17.8	18.4	17.9
Glycine	15.6	16.0	15.7
Alanine	15.7	16.3	15.9
Cystine	5.40	5.18	5.25
Valine	17.4	17.7	16.6
Methionine	5.29	5.23	5.18
Isoleucine	16.3	16.7	15.7
Leucine	28.0	29.2	28.0
Tyrosine	12.3	12.2	13.0
Phenylalanine	18.8	19.5	18.9
Lysine	23.4	24.2	23.7
Histidine	9.52	9.89	9.64
Arginine	27.1	27.6	27.1
Tryptophan	4.09	4.36	4.37

*H.U. - Hemagglutinating Unit

**TIU - Trypsin Inhibitor Unit

Table 2 (Continued)
Compositional Analyses of Soybean Seed

Sample ID	06018306-00296	06018306-00304	06018306-00312
Lot Number	GLP-0604-17278-S	GLP-0604-17278-S	GLP-0604-17278-S
Product Description	A3525	A3525	A3525
Site Code	MI	MI	MI
Covance LIMS Number	70702814	70702801	70702786
Fatty Acids (%)			
8:0 Caprylic	< 0.0200	< 0.0200	< 0.0200
10:0 Capric	< 0.0200	< 0.0200	< 0.0200
12:0 Lauric	< 0.0200	< 0.0200	< 0.0200
14:0 Myristic	< 0.0200	< 0.0200	< 0.0200
14:1 Myristoleic	< 0.0200	< 0.0200	< 0.0200
15:0 Pentadecanoic	< 0.0200	< 0.0200	< 0.0200
15:1 Pentadecenoic	< 0.0200	< 0.0200	< 0.0200
16:0 Palmitic	1.78	1.69	1.44
16:1 Palmitoleic	< 0.0200	< 0.0200	< 0.0200
17:0 Heptadecanoic	< 0.0200	< 0.0200	< 0.0200
17:1 Heptadecenoic	< 0.0200	< 0.0200	< 0.0200
18:0 Stearic	0.596	0.557	0.469
18:1T Total 18:1 Trans	< 0.0200	< 0.0200	< 0.0200
18:1 Total 18:1 Cis	2.66	2.49	2.11
18:2T Total 18:2 Trans	< 0.0200	< 0.0200	< 0.0200
18:2 6c,9c (Isolinoleic Acid)	< 0.0200	< 0.0200	< 0.0200
18:2 9c,12c Linoleic	8.38	8.11	6.67
20:0 Arachidic	0.0438	0.0405	0.0349
18:3 Gamma Linolenic	< 0.0200	< 0.0200	< 0.0200
18:3 9c,12c,15t (Trans ALA)	< 0.0200	< 0.0200	< 0.0200
18:3 Other 18:3 Trans	< 0.0200	< 0.0200	< 0.0200
20:1 Eicosenoic	0.0205	< 0.0200	< 0.0200
18:3 Linolenic	1.60	1.53	1.28
18:4 6c,9c,12c,15t (Trans SDA)	< 0.0200	< 0.0200	< 0.0200
18:4 Stearidonic	< 0.0200	< 0.0200	< 0.0200
20:2 Eicosadienoic	< 0.0200	< 0.0200	< 0.0200
22:0 Behenic	0.0442	0.0417	0.0357
22:1 Erucic	< 0.0200	< 0.0200	< 0.0200
20:3 Eicosatrienoic	< 0.0200	< 0.0200	< 0.0200
20:4 Arachidonic	< 0.0200	< 0.0200	< 0.0200
20:5 Eicosapentaenoic	< 0.0200	< 0.0200	< 0.0200
24:0 Lignoceric	< 0.0200	< 0.0200	< 0.0200
22:5 Docosapentaenoic	< 0.0200	< 0.0200	< 0.0200
22:6 Docosaheptaenoic	< 0.0200	< 0.0200	< 0.0200

Table 2 (Continued)
Compositional Analyses of Soybean Seed

Sample ID	06018306-00428	06018306-00436	06018306-00444
Lot Number	GLP-0604-17278-S	GLP-0604-17278-S	GLP-0604-17278-S
Product Description	A3525	A3525	A3525
Site Code	OH	OH	OH
Covance LIMS Number	70702803	70702784	70702813
Proximate (%)			
Moisture	7.24	7.15	7.43
Protein	36.7	37.1	36.2
Total Fat	17.2	16.9	17.4
Ash	5.27	5.27	5.34
Carbohydrates	33.6	33.6	33.6
Acid Detergent Fiber (%)	16.8	15.5	16.8
Neutral Detergent Fiber (%)	16.5	16.6	14.9
Lectin (H.U./mg)*	2.61	1.93	7.00
Trypsin Inhibitor (TIU/mg)**	25.5	29.1	23.8
Vitamin E (mg/100g)	1.70	2.06	1.52
Phytic Acid (%)	0.969	0.947	0.901
Raffinose (%)	0.355	0.296	0.312
Stachyose (%)	2.50	2.36	2.49
Isoflavones (µg/g)			
Daidzein	1550	1470	1620
Glycitein	94.5	90.4	83.9
Genistein	1030	1040	1110
Amino Acids (mg/g)			
Aspartic Acid	39.4	39.8	39.7
Threonine	14.4	14.7	14.3
Serine	19.8	19.9	19.5
Glutamic Acid	66.4	66.5	66.6
Proline	18.2	18.0	18.0
Glycine	15.8	15.9	16.0
Alanine	16.1	16.0	16.2
Cystine	5.44	5.52	5.37
Valine	17.1	16.5	17.6
Methionine	5.44	5.51	5.39
Isoleucine	16.2	15.8	16.7
Leucine	28.5	28.0	28.4
Tyrosine	11.9	13.1	12.2
Phenylalanine	19.0	18.9	19.1
Lysine	23.7	23.6	23.9
Histidine	9.58	9.59	9.62
Arginine	26.2	26.8	26.5
Tryptophan	4.23	4.26	4.13

*H.U. - Hemagglutinating Unit

**TIU - Trypsin Inhibitor Unit

Table 2 (Continued)
Compositional Analyses of Soybean Seed

Sample ID	06018306-00428	06018306-00436	06018306-00444
Lot Number	GLP-0604-17278-S	GLP-0604-17278-S	GLP-0604-17278-S
Product Description	A3525	A3525	A3525
Site Code	OH	OH	OH
Covance LIMS Number	70702803	70702784	70702813
Fatty Acids (%)			
8:0 Caprylic	< 0.0200	< 0.0200	< 0.0200
10:0 Capric	< 0.0200	< 0.0200	< 0.0200
12:0 Lauric	< 0.0200	< 0.0200	< 0.0200
14:0 Myristic	< 0.0200	< 0.0200	< 0.0200
14:1 Myristoleic	< 0.0200	< 0.0200	< 0.0200
15:0 Pentadecanoic	< 0.0200	< 0.0200	< 0.0200
15:1 Pentadecenoic	< 0.0200	< 0.0200	< 0.0200
16:0 Palmitic	1.92	1.63	1.89
16:1 Palmitoleic	< 0.0200	< 0.0200	< 0.0200
17:0 Heptadecanoic	< 0.0200	< 0.0200	< 0.0200
17:1 Heptadecenoic	< 0.0200	< 0.0200	< 0.0200
18:0 Stearic	0.714	0.623	0.704
18:1T Total 18:1 Trans	< 0.0200	< 0.0200	< 0.0200
18:1 Total 18:1 Cis	3.40	2.92	3.33
18:2T Total 18:2 Trans	< 0.0200	< 0.0200	< 0.0200
18:2 6c,9c (Isolinoleic Acid)	< 0.0200	< 0.0200	< 0.0200
18:2 9c,12c Linoleic	8.90	7.65	8.92
20:0 Arachidic	0.0534	0.0469	0.0525
18:3 Gamma Linolenic	< 0.0200	< 0.0200	< 0.0200
18:3 9c,12c,15t (Trans ALA)	< 0.0200	< 0.0200	< 0.0200
18:3 Other 18:3 Trans	< 0.0200	< 0.0200	< 0.0200
20:1 Eicosenoic	0.0282	0.0251	0.0282
18:3 Linolenic	1.31	1.10	1.34
18:4 6c,9c,12c,15t (Trans SDA)	< 0.0200	< 0.0200	< 0.0200
18:4 Stearidonic	< 0.0200	< 0.0200	< 0.0200
20:2 Eicosadienoic	< 0.0200	< 0.0200	< 0.0200
22:0 Behenic	0.0502	0.0519	0.0500
22:1 Erucic	< 0.0200	< 0.0200	< 0.0200
20:3 Eicosatrienoic	< 0.0200	< 0.0200	< 0.0200
20:4 Arachidonic	< 0.0200	< 0.0200	< 0.0200
20:5 Eicosapentaenoic	< 0.0200	< 0.0200	< 0.0200
24:0 Lignoceric	< 0.0200	< 0.0200	< 0.0200
22:5 Docosapentaenoic	< 0.0200	< 0.0200	< 0.0200
22:6 Docosaheptaenoic	< 0.0200	< 0.0200	< 0.0200

Table 2 (Continued)
Compositional Analyses of Soybean Seed

Sample ID	06018306-00068	06018306-00074	06018306-00080
Lot Number	GLP-0605-17335-S	GLP 0604-17273-S	GLP-0604-17264-S
Product Description	ST3300	A3244	A2869
Site Code	IA-1	IA-1	IA-1
Covance LIMS Number	70702781	70702776	70702807
Proximate (%)			
Moisture	6.96	7.80	7.97
Protein	35.9	38.0	36.0
Total Fat	14.3	12.9	17.2
Ash	5.50	5.52	5.44
Carbohydrates	37.3	35.8	33.4
Acid Detergent Fiber (%)	15.0	13.8	14.0
Neutral Detergent Fiber (%)	14.9	14.3	14.8
Lectin (H.U./mg)*	1.28	0.749	8.95
Trypsin Inhibitor (TIU/mg)**	22.6	35.7	32.4
Vitamin E (mg/100g)	0.700	0.996	0.971
Phytic Acid (%)	1.17	1.16	1.17
Raffinose (%)	0.350	0.292	0.307
Stachyose (%)	2.66	2.54	3.03
Isoflavones (µg/g)			
Daidzein	1540	1560	728
Glycitein	150	127	140
Genistein	1050	1080	992
Amino Acids (mg/g)			
Aspartic Acid	39.8	41.6	39.7
Threonine	14.5	14.9	14.1
Serine	19.1	20.0	19.1
Glutamic Acid	65.5	68.7	64.7
Proline	18.1	19.2	18.0
Glycine	15.5	16.2	16.1
Alanine	15.8	16.1	16.0
Cystine	5.16	5.72	5.26
Valine	17.2	18.0	18.3
Methionine	4.88	5.60	5.22
Isoleucine	16.4	17.0	17.2
Leucine	28.1	29.2	28.5
Tyrosine	13.0	13.4	12.4
Phenylalanine	18.8	19.6	19.1
Lysine	23.9	24.7	23.7
Histidine	9.65	10.0	9.86
Arginine	26.3	28.7	25.6
Tryptophan	4.15	4.48	4.26

*H.U. - Hemagglutinating Unit

**TIU - Trypsin Inhibitor Unit

Table 2 (Continued)
Compositional Analyses of Soybean Seed

Sample ID	06018306-00068	06018306-00074	06018306-00080
Lot Number	GLP-0605-17335-S	GLP 0604-17273-S	GLP-0604-17264-S
Product Description	ST3300	A3244	A2869
Site Code	IA-1	IA-1	IA-1
Covance LIMS Number	70702781	70702776	70702807
Fatty Acids (%)			
8:0 Caprylic	< 0.0200	< 0.0200	< 0.0200
10:0 Capric	< 0.0200	< 0.0200	< 0.0200
12:0 Lauric	< 0.0200	< 0.0200	< 0.0200
14:0 Myristic	< 0.0200	< 0.0200	< 0.0200
14:1 Myristoleic	< 0.0200	< 0.0200	< 0.0200
15:0 Pentadecanoic	< 0.0200	< 0.0200	< 0.0200
15:1 Pentadecenoic	< 0.0200	< 0.0200	< 0.0200
16:0 Palmitic	1.60	1.52	1.64
16:1 Palmitoleic	< 0.0200	< 0.0200	< 0.0200
17:0 Heptadecanoic	< 0.0200	< 0.0200	< 0.0200
17:1 Heptadecenoic	< 0.0200	< 0.0200	< 0.0200
18:0 Stearic	0.554	0.523	0.602
18:1T Total 18:1 Trans	< 0.0200	< 0.0200	< 0.0200
18:1 Total 18:1 Cis	2.54	2.22	3.16
18:2T Total 18:2 Trans	< 0.0200	< 0.0200	< 0.0200
18:2 6c,9c (Isolinoleic Acid)	< 0.0200	< 0.0200	< 0.0200
18:2 9c,12c Linoleic	7.63	6.79	9.36
20:0 Arachidic	0.0410	0.0400	0.0436
18:3 Gamma Linolenic	< 0.0200	< 0.0200	< 0.0200
18:3 9c,12c,15t (Trans ALA)	< 0.0200	< 0.0200	< 0.0200
18:3 Other 18:3 Trans	< 0.0200	< 0.0200	< 0.0200
20:1 Eicosenoic	0.0203	< 0.0200	0.0237
18:3 Linolenic	1.33	1.20	1.48
18:4 6c,9c,12c,15t (Trans SDA)	< 0.0200	< 0.0200	< 0.0200
18:4 Stearidonic	< 0.0200	< 0.0200	< 0.0200
20:2 Eicosadienoic	< 0.0200	< 0.0200	< 0.0200
22:0 Behenic	0.0501	0.0478	0.0497
22:1 Erucic	< 0.0200	< 0.0200	< 0.0200
20:3 Eicosatrienoic	< 0.0200	< 0.0200	< 0.0200
20:4 Arachidonic	< 0.0200	< 0.0200	< 0.0200
20:5 Eicosapentaenoic	< 0.0200	< 0.0200	< 0.0200
24:0 Lignoceric	< 0.0200	< 0.0200	< 0.0200
22:5 Docosapentaenoic	< 0.0200	< 0.0200	< 0.0200
22:6 Docosaheptaenoic	< 0.0200	< 0.0200	< 0.0200

Table 2 (Continued)
Compositional Analyses of Soybean Seed

Sample ID	06018306-00182	06018306-00188	06018306-00194
Lot Number	GLP-0605-17334-S	GLP-0604-17261-S	GLP-0605-17335-S
Product Description	ST2788	Lewis 372	ST3300
Site Code	IA-2	IA-2	IA-2
Covance LIMS Number	70702802	70702774	70702800
Proximate (%)			
Moisture	8.07	8.16	7.60
Protein	37.7	38.3	36.6
Total Fat	16.9	13.0	16.6
Ash	5.45	5.31	5.27
Carbohydrates	31.9	35.2	33.9
Acid Detergent Fiber (%)	14.4	14.7	14.9
Neutral Detergent Fiber (%)	16.9	13.8	15.5
Lectin (H.U./mg)*	3.08	1.78	2.70
Trypsin Inhibitor (TIU/mg)**	27.0	24.7	24.1
Vitamin E (mg/100g)	0.754	1.16	< 0.500
Phytic Acid (%)	0.763	0.972	0.746
Raffinose (%)	0.291	0.362	0.351
Stachyose (%)	2.56	2.10	2.65
Isoflavones (µg/g)			
Daidzein	831	1000	1350
Glycitein	103	145	74.0
Genistein	1060	948	1100
Amino Acids (mg/g)			
Aspartic Acid	40.6	41.2	40.2
Threonine	14.6	14.5	14.4
Serine	20.3	19.5	19.8
Glutamic Acid	69.0	68.7	67.6
Proline	18.7	18.8	18.5
Glycine	15.9	16.2	15.8
Alanine	16.3	16.1	16.1
Cystine	5.48	5.42	5.36
Valine	17.5	18.3	17.6
Methionine	5.37	5.37	5.28
Isoleucine	16.6	17.2	16.7
Leucine	29.1	29.0	28.9
Tyrosine	12.2	12.9	11.9
Phenylalanine	19.5	19.2	19.0
Lysine	24.5	24.3	24.2
Histidine	9.97	9.86	9.80
Arginine	27.0	27.8	26.8
Tryptophan	4.33	4.60	4.00

*H.U. - Hemagglutinating Unit

**TIU - Trypsin Inhibitor Unit

Table 2 (Continued)
Compositional Analyses of Soybean Seed

Sample ID	06018306-00182	06018306-00188	06018306-00194
Lot Number	GLP-0605-17334-S	GLP-0604-17261-S	GLP-0605-17335-S
Product Description	ST2788	Lewis 372	ST3300
Site Code	IA-2	IA-2	IA-2
Covance LIMS Number	70702802	70702774	70702800
Fatty Acids (%)			
8:0 Caprylic	< 0.0200	< 0.0200	< 0.0200
10:0 Capric	< 0.0200	< 0.0200	< 0.0200
12:0 Lauric	< 0.0200	< 0.0200	< 0.0200
14:0 Myristic	< 0.0200	< 0.0200	< 0.0200
14:1 Myristoleic	< 0.0200	< 0.0200	< 0.0200
15:0 Pentadecanoic	< 0.0200	< 0.0200	< 0.0200
15:1 Pentadecenoic	< 0.0200	< 0.0200	< 0.0200
16:0 Palmitic	1.60	1.29	1.81
16:1 Palmitoleic	< 0.0200	< 0.0200	< 0.0200
17:0 Heptadecanoic	< 0.0200	< 0.0200	< 0.0200
17:1 Heptadecenoic	< 0.0200	< 0.0200	< 0.0200
18:0 Stearic	0.753	0.528	0.668
18:1T Total 18:1 Trans	< 0.0200	< 0.0200	< 0.0200
18:1 Total 18:1 Cis	3.30	2.39	2.98
18:2T Total 18:2 Trans	< 0.0200	< 0.0200	< 0.0200
18:2 6c,9c (Isolinoleic Acid)	< 0.0200	< 0.0200	< 0.0200
18:2 9c,12c Linoleic	8.88	6.83	8.79
20:0 Arachidic	0.0542	0.0384	0.0493
18:3 Gamma Linolenic	< 0.0200	< 0.0200	< 0.0200
18:3 9c,12c,15t (Trans ALA)	< 0.0200	< 0.0200	< 0.0200
18:3 Other 18:3 Trans	< 0.0200	< 0.0200	< 0.0200
20:1 Eicosenoic	0.0229	< 0.0200	0.0228
18:3 Linolenic	1.53	1.15	1.56
18:4 6c,9c,12c,15t (Trans SDA)	< 0.0200	< 0.0200	< 0.0200
18:4 Stearidonic	< 0.0200	< 0.0200	0.0263
20:2 Eicosadienoic	< 0.0200	< 0.0200	< 0.0200
22:0 Behenic	0.0546	0.0453	0.0498
22:1 Erucic	< 0.0200	< 0.0200	< 0.0200
20:3 Eicosatrienoic	< 0.0200	< 0.0200	< 0.0200
20:4 Arachidonic	< 0.0200	< 0.0200	< 0.0200
20:5 Eicosapentaenoic	< 0.0200	< 0.0200	< 0.0200
24:0 Lignoceric	< 0.0200	< 0.0200	< 0.0200
22:5 Docosapentaenoic	< 0.0200	< 0.0200	< 0.0200
22:6 Docosaheptaenoic	< 0.0200	< 0.0200	< 0.0200

Table 2 (Continued)
Compositional Analyses of Soybean Seed

Sample ID	06018306-00200	06018306-00206	06018306-00212
Lot Number	GLP-0605-17336-S	GLP-0604-17260-S	GLP-0604-17262-S
Product Description	ST3600	P-93B82	Lewis 392
Site Code	IL	IL	IL
Covance LIMS Number	70702811	70702777	70702792
Proximate (%)			
Moisture	7.70	6.68	7.48
Protein	36.3	37.8	39.2
Total Fat	18.0	18.5	16.6
Ash	5.72	5.47	5.73
Carbohydrates	32.3	31.6	31.0
Acid Detergent Fiber (%)	17.4	13.6	15.6
Neutral Detergent Fiber (%)	16.6	14.3	15.4
Lectin (H.U./mg)*	7.09	0.960	3.35
Trypsin Inhibitor (TIU/mg)**	33.1	43.2	25.3
Vitamin E (mg/100g)	2.18	1.43	2.71
Phytic Acid (%)	0.921	1.03	0.986
Raffinose (%)	0.365	0.331	0.361
Stachyose (%)	2.52	2.65	2.98
Isoflavones (µg/g)			
Daidzein	904	808	731
Glycitein	73.5	73.1	130
Genistein	1120	692	791
Amino Acids (mg/g)			
Aspartic Acid	40.8	42.1	43.6
Threonine	14.2	15.1	15.1
Serine	20.0	20.2	21.0
Glutamic Acid	67.7	69.8	73.9
Proline	18.4	19.2	20.0
Glycine	16.1	16.5	17.2
Alanine	16.2	16.4	17.2
Cystine	5.71	5.63	5.51
Valine	17.8	18.3	19.5
Methionine	5.53	5.46	5.52
Isoleucine	16.9	17.3	18.5
Leucine	29.0	29.5	31.2
Tyrosine	12.4	13.7	12.8
Phenylalanine	19.3	19.7	21.2
Lysine	24.0	24.7	25.7
Histidine	10.0	10.2	10.5
Arginine	26.5	27.4	28.7
Tryptophan	4.16	4.85	4.74

*H.U. - Hemagglutinating Unit

**TIU - Trypsin Inhibitor Unit

Table 2 (Continued)
Compositional Analyses of Soybean Seed

Sample ID	06018306-00200	06018306-00206	06018306-00212
Lot Number	GLP-0605-17336-S	GLP-0604-17260-S	GLP-0604-17262-S
Product Description	ST3600	P-93B82	Lewis 392
Site Code	IL	IL	IL
Covance LIMS Number	70702811	70702777	70702792
Fatty Acids (%)			
8:0 Caprylic	< 0.0200	< 0.0200	< 0.0200
10:0 Capric	< 0.0200	< 0.0200	< 0.0200
12:0 Lauric	< 0.0200	< 0.0200	< 0.0200
14:0 Myristic	< 0.0200	< 0.0200	< 0.0200
14:1 Myristoleic	< 0.0200	< 0.0200	< 0.0200
15:0 Pentadecanoic	< 0.0200	< 0.0200	< 0.0200
15:1 Pentadecenoic	< 0.0200	< 0.0200	< 0.0200
16:0 Palmitic	1.98	1.89	1.58
16:1 Palmitoleic	< 0.0200	< 0.0200	< 0.0200
17:0 Heptadecanoic	< 0.0200	< 0.0200	< 0.0200
17:1 Heptadecenoic	< 0.0200	< 0.0200	< 0.0200
18:0 Stearic	0.765	0.789	0.719
18:1T Total 18:1 Trans	< 0.0200	< 0.0200	< 0.0200
18:1 Total 18:1 Cis	3.67	4.03	3.57
18:2T Total 18:2 Trans	< 0.0200	< 0.0200	< 0.0200
18:2 6c,9c (Isolinoleic Acid)	< 0.0200	< 0.0200	< 0.0200
18:2 9c,12c Linoleic	9.27	9.55	8.74
20:0 Arachidic	0.0586	0.0598	0.0567
18:3 Gamma Linolenic	< 0.0200	< 0.0200	< 0.0200
18:3 9c,12c,15t (Trans ALA)	< 0.0200	< 0.0200	< 0.0200
18:3 Other 18:3 Trans	< 0.0200	< 0.0200	< 0.0200
20:1 Eicosenoic	0.0333	0.0321	0.0289
18:3 Linolenic	1.31	1.23	1.13
18:4 6c,9c,12c,15t (Trans SDA)	< 0.0200	< 0.0200	< 0.0200
18:4 Stearidonic	0.0337	< 0.0200	< 0.0200
20:2 Eicosadienoic	< 0.0200	< 0.0200	< 0.0200
22:0 Behenic	0.0614	0.0667	0.0607
22:1 Erucic	< 0.0200	< 0.0200	< 0.0200
20:3 Eicosatrienoic	< 0.0200	< 0.0200	< 0.0200
20:4 Arachidonic	< 0.0200	< 0.0200	< 0.0200
20:5 Eicosapentaenoic	< 0.0200	< 0.0200	< 0.0200
24:0 Lignoceric	0.0219	< 0.0200	< 0.0200
22:5 Docosapentaenoic	< 0.0200	< 0.0200	< 0.0200
22:6 Docosaheptaenoic	< 0.0200	< 0.0200	< 0.0200

Table 2 (Continued)
Compositional Analyses of Soybean Seed

Sample ID	06018306-00314	06018306-00320	06018306-00326
Lot Number	GLP-0604-17263-S	GLP-0604-17261-S	REF-0506-16373-S
Product Description	A2553	Lewis 372	A2804
Site Code	MI	MI	MI
Covance LIMS Number	70702815	70702817	70702785
Proximate (%)			
Moisture	6.98	6.99	6.71
Protein	34.9	35.2	35.6
Total Fat	18.5	16.6	14.8
Ash	5.34	5.20	5.37
Carbohydrates	34.3	36.0	37.5
Acid Detergent Fiber (%)	17.1	15.3	16.6
Neutral Detergent Fiber (%)	17.6	14.0	15.6
Lectin (H.U./mg)*	3.44	3.52	1.85
Trypsin Inhibitor (TIU/mg)**	28.6	37.5	27.8
Vitamin E (mg/100g)	0.733	0.620	1.05
Phytic Acid (%)	1.02	0.923	0.889
Raffinose (%)	0.366	0.395	0.291
Stachyose (%)	2.47	2.07	2.74
Isoflavones (µg/g)			
Daidzein	1060	1500	1540
Glycitein	83.1	127	104
Genistein	1120	1470	1340
Amino Acids (mg/g)			
Aspartic Acid	37.3	39.4	38.3
Threonine	13.5	13.8	14.1
Serine	18.5	19.5	19.2
Glutamic Acid	62.0	66.2	63.1
Proline	16.8	18.1	17.3
Glycine	15.0	15.4	15.1
Alanine	15.2	15.7	15.4
Cystine	5.39	5.36	5.10
Valine	16.5	17.3	15.9
Methionine	5.19	5.33	5.00
Isoleucine	15.6	16.3	15.1
Leucine	26.6	28.2	27.0
Tyrosine	11.5	11.3	12.3
Phenylalanine	17.9	18.9	18.1
Lysine	22.5	23.4	22.9
Histidine	9.13	9.51	9.30
Arginine	24.3	26.0	24.9
Tryptophan	4.16	4.24	4.19

*H.U. - Hemagglutinating Unit

**TIU - Trypsin Inhibitor Unit

Table 2 (Continued)
Compositional Analyses of Soybean Seed

Sample ID	06018306-00314	06018306-00320	06018306-00326
Lot Number	GLP-0604-17263-S	GLP-0604-17261-S	REF-0506-16373-S
Product Description	A2553	Lewis 372	A2804
Site Code	MI	MI	MI
Covance LIMS Number	70702815	70702817	70702785
Fatty Acids (%)			
8:0 Caprylic	< 0.0200	< 0.0200	< 0.0200
10:0 Capric	< 0.0200	< 0.0200	< 0.0200
12:0 Lauric	< 0.0200	< 0.0200	< 0.0200
14:0 Myristic	< 0.0200	< 0.0200	< 0.0200
14:1 Myristoleic	< 0.0200	< 0.0200	< 0.0200
15:0 Pentadecanoic	< 0.0200	< 0.0200	< 0.0200
15:1 Pentadecenoic	< 0.0200	< 0.0200	< 0.0200
16:0 Palmitic	1.78	1.68	1.58
16:1 Palmitoleic	< 0.0200	< 0.0200	< 0.0200
17:0 Heptadecanoic	0.0210	< 0.0200	< 0.0200
17:1 Heptadecenoic	< 0.0200	< 0.0200	< 0.0200
18:0 Stearic	0.863	0.589	0.577
18:1T Total 18:1 Trans	< 0.0200	< 0.0200	< 0.0200
18:1 Total 18:1 Cis	3.49	2.77	2.35
18:2T Total 18:2 Trans	< 0.0200	< 0.0200	< 0.0200
18:2 6c,9c (Isolinoleic Acid)	< 0.0200	< 0.0200	< 0.0200
18:2 9c,12c Linoleic	9.83	9.09	7.99
20:0 Arachidic	0.0608	0.0434	0.0420
18:3 Gamma Linolenic	< 0.0200	< 0.0200	< 0.0200
18:3 9c,12c,15t (Trans ALA)	< 0.0200	< 0.0200	< 0.0200
18:3 Other 18:3 Trans	< 0.0200	< 0.0200	< 0.0200
20:1 Eicosenoic	0.0275	0.0200	< 0.0200
18:3 Linolenic	1.53	1.60	1.49
18:4 6c,9c,12c,15t (Trans SDA)	< 0.0200	< 0.0200	< 0.0200
18:4 Stearidonic	< 0.0200	< 0.0200	< 0.0200
20:2 Eicosadienoic	< 0.0200	< 0.0200	< 0.0200
22:0 Behenic	0.0599	0.0473	0.0538
22:1 Erucic	< 0.0200	< 0.0200	< 0.0200
20:3 Eicosatrienoic	< 0.0200	< 0.0200	< 0.0200
20:4 Arachidonic	< 0.0200	< 0.0200	< 0.0200
20:5 Eicosapentaenoic	< 0.0200	< 0.0200	< 0.0200
24:0 Lignoceric	< 0.0200	< 0.0200	< 0.0200
22:5 Docosapentaenoic	< 0.0200	< 0.0200	< 0.0200
22:6 Docosaheptaenoic	< 0.0200	< 0.0200	< 0.0200

Table 2 (Continued)
Compositional Analyses of Soybean Seed

Sample ID	06018306-00404	06018306-00410	06018306-00416
Lot Number	GLP-0604-17261-S	GLP 0604-17273-S	GLP-0605-17335-S
Product Description	Lewis 372	A3244	ST3300
Site Code	OH	OH	OH
Covance LIMS Number	70702793	70702782	70702791
Proximate (%)			
Moisture	7.72	7.17	7.10
Protein	37.4	36.1	35.5
Total Fat	17.0	15.7	19.1
Ash	5.49	5.26	5.48
Carbohydrates	32.4	35.8	32.8
Acid Detergent Fiber (%)	14.6	15.6	15.5
Neutral Detergent Fiber (%)	14.3	14.3	16.3
Lectin (H.U./mg)*	3.34	3.34	2.13
Trypsin Inhibitor (TIU/mg)**	26.0	24.0	31.6
Vitamin E (mg/100g)	1.60	1.90	0.901
Phytic Acid (%)	1.00	1.01	0.878
Raffinose (%)	0.373	0.296	0.314
Stachyose (%)	2.37	2.36	2.55
Isoflavones (µg/g)			
Daidzein	723	1370	1210
Glycitein	175	69.5	98.9
Genistein	840	1070	1010
Amino Acids (mg/g)			
Aspartic Acid	41.7	42.1	38.2
Threonine	14.5	15.3	13.7
Serine	20.0	20.7	18.3
Glutamic Acid	70.5	70.2	63.6
Proline	19.3	18.9	17.8
Glycine	16.3	16.5	15.2
Alanine	16.3	16.6	15.5
Cystine	5.41	5.10	5.25
Valine	18.6	17.7	17.4
Methionine	5.38	5.15	5.15
Isoleucine	17.6	16.9	16.4
Leucine	30.0	29.7	27.8
Tyrosine	12.3	13.8	11.7
Phenylalanine	20.0	20.0	18.4
Lysine	24.4	24.7	23.0
Histidine	9.94	10.1	9.34
Arginine	27.7	29.2	24.9
Tryptophan	4.25	4.43	3.96

*H.U. - Hemagglutinating Unit

**TIU - Trypsin Inhibitor Unit

Table 2 (Continued)
Compositional Analyses of Soybean Seed

Sample ID	06018306-00404	06018306-00410	06018306-00416
Lot Number	GLP-0604-17261-S	GLP 0604-17273-S	GLP-0605-17335-S
Product Description	Lewis 372	A3244	ST3300
Site Code	OH	OH	OH
Covance LIMS Number	70702793	70702782	70702791
Fatty Acids (%)			
8:0 Caprylic	< 0.0200	< 0.0200	< 0.0200
10:0 Capric	< 0.0200	< 0.0200	< 0.0200
12:0 Lauric	< 0.0200	< 0.0200	< 0.0200
14:0 Myristic	< 0.0200	< 0.0200	< 0.0200
14:1 Myristoleic	< 0.0200	< 0.0200	< 0.0200
15:0 Pentadecanoic	< 0.0200	< 0.0200	< 0.0200
15:1 Pentadecenoic	< 0.0200	< 0.0200	< 0.0200
16:0 Palmitic	1.74	1.76	2.04
16:1 Palmitoleic	< 0.0200	< 0.0200	< 0.0200
17:0 Heptadecanoic	< 0.0200	< 0.0200	< 0.0200
17:1 Heptadecenoic	< 0.0200	< 0.0200	< 0.0200
18:0 Stearic	0.750	0.695	0.784
18:1T Total 18:1 Trans	< 0.0200	< 0.0200	< 0.0200
18:1 Total 18:1 Cis	3.78	3.21	4.12
18:2T Total 18:2 Trans	< 0.0200	< 0.0200	< 0.0200
18:2 6c,9c (Isolinoleic Acid)	< 0.0200	< 0.0200	< 0.0200
18:2 9c,12c Linoleic	8.72	8.00	9.62
20:0 Arachidic	0.0547	0.0535	0.0599
18:3 Gamma Linolenic	< 0.0200	< 0.0200	< 0.0200
18:3 9c,12c,15t (Trans ALA)	< 0.0200	< 0.0200	< 0.0200
18:3 Other 18:3 Trans	< 0.0200	< 0.0200	< 0.0200
20:1 Eicosenoic	0.0268	0.0273	0.0318
18:3 Linolenic	1.19	1.12	1.31
18:4 6c,9c,12c,15t (Trans SDA)	< 0.0200	< 0.0200	< 0.0200
18:4 Stearidonic	< 0.0200	< 0.0200	0.0532
20:2 Eicosadienoic	< 0.0200	< 0.0200	< 0.0200
22:0 Behenic	0.0536	0.0609	0.0579
22:1 Erucic	< 0.0200	< 0.0200	< 0.0200
20:3 Eicosatrienoic	< 0.0200	< 0.0200	< 0.0200
20:4 Arachidonic	< 0.0200	< 0.0200	< 0.0200
20:5 Eicosapentaenoic	< 0.0200	< 0.0200	< 0.0200
24:0 Lignoceric	0.0217	< 0.0200	0.0219
22:5 Docosapentaenoic	< 0.0200	< 0.0200	< 0.0200
22:6 Docosaheptaenoic	< 0.0200	< 0.0200	< 0.0200

APPENDIX A

Analytical Method Summaries and Reference Standards

Acid Detergent Fiber (ADF)

The sample was placed in a fritted vessel and washed with an acidic boiling detergent solution that dissolved the protein, carbohydrate, and ash. An acetone wash removed the fats and pigments. The lignocellulose fraction was collected on the frit and determined gravimetrically. The limit of quantitation for this study was 0.100%.

Reference:

Forage and Fiber Analyses, Agriculture Handbook No.379, United States Department of Agriculture, Washington, D.C. (1970).

Amino Acid Composition (TAA5)

Total aspartic acid (including asparagine)

Total threonine

Total serine

Total glutamic acid (including glutamine)

Total proline

Total glycine

Total alanine

Total valine

Total isoleucine

Total leucine

Total tyrosine

Total phenylalanine

Total histidine

Total lysine

Total arginine

Total tryptophan

Sulfur-containing amino acids:	Total methionine
	Total cystine (including cysteine)

The sample was assayed by three methods to obtain the full profile. Tryptophan required a base hydrolysis with sodium hydroxide. The sulfur-containing amino acids required an oxidation with performic acid prior to hydrolysis with hydrochloric acid. Analysis of the samples for the remaining amino acids was accomplished through direct acid hydrolysis with hydrochloric acid. Once hydrolyzed, the individual amino acids were then quantitated using an automated amino acid analyzer. The limit of quantitation for this study was 0.100 mg/g.

Reference Standards:

Beckman K18, 2.5 µmol/mL per constituent except cystine (1.25 µmol/mL),
Lot Number S702114
Sigma, L-Tryptophan, 100%, Lot Number 076K50075
Fluka, L-Cysteic Acid Monohydrate, 100%, Lot Number 1157629
Sigma, L-Methionine Sulfone, 100%, Lot Number 012H3349

Reference:

Official Methods of Analysis of AOAC INTERNATIONAL, 18th Ed., Method 982.30,
AOAC INTERNATIONAL: Gaithersburg, Maryland, (2005).

Ash (ASHM)

The sample was placed in an electric furnace at 550°C and ignited to drive off all volatile organic matter. The nonvolatile matter remaining was quantitated gravimetrically and calculated to determine percent ash. The limit of quantitation for this study was 0.100%.

Reference:

Official Methods of Analysis of AOAC INTERNATIONAL, 18th Ed., Method 923.03,
AOAC INTERNATIONAL: Gaithersburg, Maryland, (2005).

Carbohydrates (CHO)

The total carbohydrate level was calculated by difference using the fresh weight-derived data and the following equation:

$$\% \text{ carbohydrates} = 100 \% - (\% \text{ protein} + \% \text{ fat} + \% \text{ moisture} + \% \text{ ash})$$

The limit of quantitation for this study was 0.100%.

Reference:

United States Department of Agriculture, "Energy Value of Foods", *Agriculture Handbook No. 74*, pp. 2-11, (1973).

Fat by Acid Hydrolysis (FAAH)

The sample was hydrolyzed with hydrochloric acid at an elevated temperature. The fat was extracted with ether and hexane. The extract was evaporated on a steambath, re-dissolved in hexane and filtered through a sodium sulfate column. The hexane extract was then evaporated again on a steambath under nitrogen, dried, and weighed. The limit of quantitation for this study was 0.100%.

Reference:

Official Methods of Analysis of AOAC INTERNATIONAL, 18th Ed., Methods 922.06 and 954.02, AOAC INTERNATIONAL, Gaithersburg, Maryland, (2005).

Fat by Soxhlet Extraction (FSOX)

The sample was weighed into a cellulose thimble containing sodium sulfate and dried to remove excess moisture. Pentane was dripped through the sample to remove the fat. The extract was then evaporated, dried, and weighed. The limit of quantitation for this study was 0.100%.

Reference:

Official Methods of Analysis of AOAC INTERNATIONAL, 18th Ed., Method 960.39, AOAC INTERNATIONAL: Gaithersburg, Maryland, (2005).

Fatty Acid Profile with Trans Fat by GC (FALT)

The lipid was extracted, saponified with 0.5N methanolic sodium hydroxide, and methylated with 14% BF₃-methanol. The resulting methyl esters of the fatty acids were extracted with heptane. An internal standard was added prior to the lipid extraction. The methyl esters of the fatty acids were analyzed by gas chromatography using external standards for quantitation. The limit of quantitation was 0.0200%.

Reference Standards:

Nu Chek Prep GLC Reference Standard Hazelton No. 1, Lot Number AU22-P

Nu Chek Prep GLC Reference Standard Hazelton No. 2, Lot Number M13-O

Nu Chek Prep GLC Reference Standard Hazelton No. 3, Lot Number N28-Q

Nu Chek Prep GLC Reference Standard Hazelton No. 4, Lot Number N28-Q

Nu Chek Prep Methyl Gamma Linolenate, used as 100%

Lot Number U-63M-N30-Q

Sigma Methyl Tridecanoate, Lot Number 036K2636, used as 99%,

Lot Numbers 035K1392 and 046K1065, used as 100%

Nu Chek Prep Methyl Butyrate, used as 100%, Lot Number N-4M-A4-R

Nu Chek Prep Methyl Hexanoate, used as 100%, Lot Number N-6M-S1-Q

Nu Chek Prep Methyl Erucate, used as 100%, Lot Number U-79M-AU3-Q

Nu Chek Prep Methyl Lignocerate, used as 100%, Lot Number N-24M-A5-R

Nu Chek Prep Methyl Docosapentaenoate, used as 100%,

Lot Number U-101M-MA27-R

Nu Chek Prep Methyl Docosaheptaenoate, used as 100%,

Lot Number U-84M-D18-Q

Nu Chek Prep Methyl Eicosapentaenoate, used as 100%,

Lot Number U-99M-F13-R

Cayman Chemicals Stearidonic Acid Methyl Ester, used as 100%,

Lot Number 171721-172473

Nu Chek Prep Methyl Elaidate, used as 100%, Lot Number U-47M-JA18-R

Nu Chek Prep Methyl Linoelaidate, used as 100%, Lot Number U-60M-MA27-R

References:

Official Methods of Analysis of AOAC INTERNATIONAL, 18th Ed., Method 996.06, AOAC INTERNATIONAL, Gaithersburg, MD (2005).

Official Methods and Recommended Practices of the AOCS, Fifth Ed., American Oil Chemists' Society, Champaign, IL (1997), American Oil Chemists' Society, Ce 2c-66, Ce 1C-89.

Official Methods of Analysis of AOAC INTERNATIONAL, 18th Ed., Method 983.23, AOAC INTERNATIONAL, Gaithersburg, MD, (2005).

Isoflavones Analysis (ISOF)

The sample was extracted using a solution of hydrochloric acid and reagent alcohol heated on steam baths or hot plates. The extract was brought to volume, diluted, and centrifuged. An aliquot of the supernatant was placed onto a C18 solid-phase extraction column. Unwanted components of the matrix were rinsed off with 20% methanol and then the isoflavones were eluted with 80% methanol. The sample was analyzed on a high-performance liquid chromatography system with ultraviolet detection and was compared to an external standard curve of known standards for quantitation. The limit of quantitation for each component was 10.0 ppm for each component.

Reference Standards:

Indofine, Daidzein, 99%, Lot Number 020508146
Indofine, Genistein, $\geq 99\%$, (used as 100%), Lot Number 0604043
Indofine, Glycitein, 99%, Lot Number 0704034

References:

Seo, A. and Morr, C. V., "Improved High-Performance Liquid Chromatographic Analysis of Phenolic Acids and Isoflavonoids from Soybean Protein Products," *Journal of Agricultural and Food Chemistry*, 32(3):530-533, (1984).

Pettersson, H., and Kiessling, K. H., "Liquid Chromatographic Determination of the Plant Estrogens Coumestrol and Isoflavones in Animal Feed," *Association of Official Analytical Chemists Journal*, 67(3):503-506, (1984).

Lectin (LECT)

The sample was suspended in phosphate buffered saline (PBS), shaken, and filtered. An aliquot of the resulting extract was serially diluted in 10 cuvettes containing PBS. A 10% hematocrit of lyophilized rabbit blood in PBS was added to each dilution. After 2.5 hours, the absorbance of each dilution of the sample and lectin control was measured on a spectrophotometer at 620 nm, using PBS to zero the instrument. One hemagglutinating unit (H.U.) was defined as the level that caused 50% of the standard cell suspension to sediment in 2.5 hours. The limit of quantitation for this study was 0.10 H.U./mg.

Reference Standard:

Sigma-Aldrich, Red Blood Cells, Rabbit, Product #R1629, Lot Number 105K6042

References:

Klurfeld, D. M. and Kritchevsky, D., "Isolation and Quantitation of Lectins from Vegetable Oils," *Lipids*, 22:667-668, (1987).

Klurfeld, D. M., Personal communication.

Liener, I. E., "The Photometric Determination of the Hemagglutinating Activity of Soyin and Crude Soybean Extracts," *Archives of Biochemistry and Biophysics*, 54:223-231, (1955).

Moisture (M100)

The sample was dried in a vacuum oven at approximately 100°C to a constant weight. The moisture weight loss was determined and converted to percent moisture. The limit of quantitation for this study was 0.100%.

Reference:

Official Methods of Analysis of AOAC INTERNATIONAL, 18th Ed., Methods 926.08 and 925.09, AOAC INTERNATIONAL: Gaithersburg, Maryland, (2005).

Neutral Detergent Fiber, Enzyme Method (NDFE)

The sample was placed in a fritted vessel and washed with a neutral boiling detergent solution that dissolved the protein, carbohydrate, enzyme, and ash. An acetone wash removed the fats and pigments. Hemicellulose, cellulose, and lignin fractions were collected on the frit and determined gravimetrically. The limit of quantitation for this study was 0.100%.

References:

Approved Methods of the American Association of Cereal Chemists, 9th Ed., Method 32.20, (1998).

Forage Fiber Analyses, Agriculture Handbook No. 379, United States Department of Agriculture, (1970).

Phytic Acid (PHYT)

The sample was extracted using 0.5M HCl with ultrasonication. Purification and concentration were accomplished on a silica-based anion-exchange column. The sample was analyzed on a polymer high-performance liquid chromatography column PRP-1, 5µm (150 x 4.1mm) with a refractive index detector. The limit of quantitation for this study was 0.100%.

Reference Standard:

Aldrich, Phytic Acid, Dodecasodium Salt Hydrate, 97%, Lot Number 035K0590

References:

Lehrfeld, Jacob, "HPLC Separation and Quantitation of Phytic Acid and Some Inositol Phosphates in Foods: Problem and Solutions," *Journal of Agricultural and Food Chemistry*, 42:2726-2731, (1994).

Lehrfeld, Jacob, "High-Performance Liquid Chromatography Analysis of Phytic Acid on a pH-Stable, Macroporous Polymer Column," *Cereal Chemistry*, 66(6):510-515, (1989).

Protein (PGEN)

Nitrogenous compounds in the sample were reduced in the presence of boiling sulfuric acid and a mercury catalyst mixture to form ammonia. The acid digest was made alkaline. The ammonia was distilled and then titrated with a previously standardized acid. The percent nitrogen was calculated and converted to equivalent protein using the factor 6.25. The limit of quantitation for this study was 0.100%.

References:

Official Methods of Analysis of AOAC INTERNATIONAL, 18th Ed., Methods 955.04 and 979.09, AOAC INTERNATIONAL, Gaithersburg, Maryland, (2005).

Bradstreet, R. B., *The Kjeldahl Method for Organic Nitrogen*, Academic Press: New York, New York, (1965).

Kalhoff, I. M., and Sandell, E. B., *Quantitative Inorganic Analysis*, MacMillan: New York, (1948).

Raffinose and Stachyose (SUGT)

The sample was extracted with deionized water and the extract treated with a hydroxylamine hydrochloride solution in pyridine, containing phenyl- β -D-glucoside as an internal standard. The resulting oximes were converted to silyl derivatives by treatment with hexamethyldisilazane and trifluoroacetic acid and analyzed by gas chromatography using a flame ionization detector. The quantitation limit for this study was 0.0500%.

Reference Standards:

Sigma, Raffinose Pentahydrate, 99% (84% after correction for degree of hydration), Lot Number 035K1371

Sigma, Stachyose, 98% (96.4% after correction for degree of hydration), Lot Number 065K3775

References:

Brobst, K. M., "Gas-Liquid Chromatography of Trimethylsilyl Derivatives," *Methods in Carbohydrate Chemistry*, Volume 6, Academic Press: New York, New York, (1972).

Mason, B. S., and Slover, H. T., "A Gas Chromatographic Method for the Determination of Sugars in Foods," *Journal of Agricultural and Food Chemistry*, 19(3):551-554, (1971).

Trypsin Inhibitor (TRIP)

The sample was ground and defatted with petroleum ether. A sample of matrix was extracted with 0.01N sodium hydroxide. Varying aliquots of the sample suspension were exposed to a known amount of trypsin and benzoyl-DL-arginine-p-nitroanilide hydrochloride. The sample was allowed to react for 10 minutes at 37°C. After 10 minutes, the reaction was halted by the addition of acetic acid. The solution was centrifuged, then the absorbance was determined at 410 nm. Trypsin inhibitor activity was determined by photometrically measuring the inhibition of trypsin's reaction with benzoyl-DL-arginine-p-nitroanilide hydrochloride. The limit of quantitation for this study was 1.00 Trypsin Inhibitor Units (TIU)/mg.

Reference:

Official Methods and Recommended Practices of the American Oil Chemists' Society, 5th Ed., Method Ba 12-75, American Oil Chemists' Society: Champaign, Illinois, (1997).

Vitamin E (LCAT)

The sample was saponified to break down any fat and release vitamin E. The saponified mixture was extracted with ethyl ether and then quantitated by high-performance liquid chromatography using a silica column. The limit of quantitation for this study was 0.500 mg/100g.

Reference Standard:

USP, Alpha Tocopherol, 100%, Lot Number M

References:

Speek, A. J., Schijver, J., and Schreurs, W. H. P., "Vitamin E Composition of Some Seed Oils as Determined by High-Performance Liquid Chromatography with Fluorometric Quantitation," *Journal of Food Science*, 50(1):121-124, (1985).

Cort, W. M., Vincente, T. S., Waysek, E. H., and Williams, B. D., "Vitamin E Content of Feedstuffs Determined by High-Performance Liquid Chromatographic Fluorescence," *Journal of Agricultural and Food Chemistry*, 31:1330-1333, (1983).

McMurray, C. H., Blanchflower, W. J., and Rice, D. A., "Influence of Extraction Techniques on Determination of α -Tocopherol in Animal Feedstuffs," *Journal of the Association of Official Analytical Chemists*, 63(6):1258-1261, (1980).

Appendix 2. Certus Statistical Sub-report

The following 62 pages are the analytical sub-report
Pages 101-162

STATISTICAL REPORT

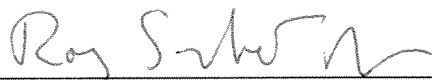
Compositional Analyses of Forage and Seed Collected From Stearidonic Acid-Containing Soybeans, MON 87769, Grown in the United States during 2006

STUDY NUMBER: 07-01-83-39

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Date

TABLE OF CONTENTS

Title Page	1
Table of Contents	2
1. Data Description	4
2. Statistical Methods.....	5
3. Statistical Results	6
4. References.....	7

Tables

1. Statistical Summary of Site IA-1 Soybean Forage Fiber and Proximate Content for Test (MON 87769) vs. the Conventional Control (A3525)	8
2. Statistical Summary of Site IA-1 Soybean Seed Amino Acid, Fatty Acid, Fiber, Proximate, Vitamin, Antinutrient and Isoflavone Content for Test (MON 87769) vs. the Conventional Control (A3525).....	9
3. Statistical Summary of Site IA-2 Soybean Forage Fiber and Proximate Content for Test (MON 87769) vs. the Conventional Control (A3525)	15
4. Statistical Summary of Site IA-2 Soybean Seed Amino Acid, Fatty Acid, Fiber, Proximate, Vitamin, Antinutrient and Isoflavone Content for Test (MON 87769) vs. the Conventional Control (A3525).....	16
5. Statistical Summary of Site IL Soybean Forage Fiber and Proximate Content for Test (MON 87769) vs. the Conventional Control (A3525)	22
6. Statistical Summary of Site IL Soybean Seed Amino Acid, Fatty Acid, Fiber, Proximate, Vitamin, Antinutrient and Isoflavone Content for Test (MON 87769) vs. the Conventional Control (A3525).....	23
7. Statistical Summary of Site MI Soybean Forage Fiber and Proximate Content for Test (MON 87769) vs. the Conventional Control (A3525)	29
8. Statistical Summary of Site MI Soybean Seed Amino Acid, Fatty Acid, Fiber, Proximate, Vitamin, Antinutrient and Isoflavone Content for Test (MON 87769) vs. the Conventional Control (A3525).....	30
9. Statistical Summary of Site OH Soybean Forage Fiber and Proximate Content for Test (MON 87769) vs. the Conventional Control (A3525)	36

10. Statistical Summary of Site OH Soybean Seed Amino Acid, Fatty Acid, Fiber, Proximate, Vitamin, Antinutrient and Isoflavone Content for Test (MON 87769) vs. the Conventional Control (A3525).....	37
11. Statistical Summary of Combined Site Soybean Forage Fiber and Proximate Content for Test (MON 87769) vs. the Conventional Control (A3525)	43
12. Statistical Summary of Combined Site Soybean Seed Amino Acid, Fatty Acid, Fiber, Proximate, Vitamin, Antinutrient and Isoflavone Content for Test (MON 87769) vs. the Conventional Control (A3525).....	44
13. Summary of Differences (p<0.05) for the Comparison of Soybean Component Levels for Test (MON 87769) vs. the Conventional Control (A3525) and Commercial Reference Substances	50
14. Table 14. Statistical Summary of Soybean 18:3 9c,12c,15t (Trans ALA), 18:3 Gamma Linolenic, 18:4 6c,9c,12c,15t (Trans SDA) and 18:4 Stearidonic Fatty Acid Content for Test (MON 87769)	58

Listings

1. Components Excluded From Summary and Analysis Due to Excessive Observations Below the Assay's Limit of Quantitation	60
2. Components with Observations Below the Assay's Limit of Quantitation Not Excluded from Summaries and Analysis	62

1. Data Description

A SAS[®] dataset (data693.sas7bdat, created 1/8/2008) containing soybean forage and seed compositional analysis data was received from Monsanto. Data were from test substance MON 87769, conventional control substance A3525, and ten commercial conventional reference substances.

Soybean forage and seed of the test, control, and reference substances were collected from replicated plots at five U.S. sites during 2006. Test and control substances were planted in a randomized complete block design. Reference substances were distributed as follows across sites:

Site IA-1	Site IA-2	Site IL	Site MI	Site OH
ST3300,A3244, A2869	ST3300,ST2788, Lewis 372	ST3600, P-93B82, Lewis 392	Lewis 372, A2553, A2804	ST3300, A3244, Lewis 372

Components with greater than fifty percent of observations below the assay's limit of quantitation (LOQ) were excluded from analysis. Excluded components are presented in Listing 1. For four of the seed fatty acids excluded from analysis, the majority of values below the LOQ were from the control and commercial reference materials. These fatty acids were distributed relative to the assay's LOQ by material type as follows:

Fatty Acid	Material	(N) Below LOQ	(N) Total	(%) Below LOQ
18:3 9c,12c,15t (Trans ALA)	MON 87769	0	15	0.0
	Other	30	30	100.0
18:3 Gamma Linolenic	MON 87769	0	15	0.0
	Other	30	30	100.0
18:4 6c,9c,12c,15t (Trans SDA)	MON 87769	3	15	20.0
	Other	30	30	100.0
18:4 Stearidonic	MON 87769	0	15	0.0
	Other	27	30	90.0

Because of their presence in quantities higher than the LOQ, MON 87769 data for the above four fatty acids were retained for inclusion in the calculation of total fatty acids for use in the fatty acid composition data re-expression formula.

Retained data below the quantitation limit were assigned a value equal to half their quantitation limit. The following components were assigned values:

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		Obs. Below LOQ					
Component	Units	Materials	N	(%)	Total N	LOQ	Value Assigned
Seed Fatty Acid							
18:4 6c,9c,12c,15t (Trans SDA)	% FW	MON 87769	3	20.0	15	0.020	0.010
20:1 Eicosenoic	% FW	A2804, A3244, A3525, Lewis 372, MON 87769	17	37.8	45	0.020	0.010
Seed Vitamin							
Vitamin E	mg/100g FW	ST3300	1	2.2	45	0.50	0.25

Individual samples assigned a value are presented in Listing 2.

The following formulas were used for re-expression of soybean composition data for statistical analysis:

Component	From (X)	To	Formula ¹
Proximates (excluding Moisture), Fiber, Phytic Acid, Raffinose, Stachyose	% FW	% DW	X/d
Isoflavones	µg/g FW	µg/g DW	X/d
Lectin (H.U./mg DW)	H.U./mg FW	H.U./mg DW	X/d
Trypsin Inhibitor	TIU/mg FW	TIU/mg DW	X/d
Vitamin E	mg/100g FW	mg/100g DW	X/d
Amino Acids (AA)	mg/g FW	% DW	X/(10*d)
Fatty Acids (FA)	% FW	% Total FA	(100)X _j /ΣX, for each FA _j where ΣX is over all the FA

¹ 'X' is the individual sample value; 'd' is the fraction of the sample that is dry matter.

2. Statistical Methods

The SAS¹ GLM procedure was applied to all data (test, control and reference) to detect potential outliers in the dataset by screening studentized PRESS residuals. Substance, site and replication effects were included in the model.

A PRESS residual² is the difference between any value and its predicted value from a statistical model that excludes the data point. The studentized version scales these residuals so that the values tend to have a standard normal distribution when outliers are absent. Thus, most values are expected to be between ± 3 . Extreme data points that are also outside of the ± 6 studentized PRESS residual range are considered for exclusion, as outliers, from the final

analyses. For this study, no results had a PRESS residual value outside of the ± 6 studentized PRESS residual range.

All soybean compositional analysis components were statistically analyzed using a mixed model analysis of variance. The five replicated sites were analyzed both separately and combined. Individual replicated site analyses used the model:

$$Y_{ij} = U + T_i + B_j + e_{ij},$$

where Y_{ij} = unique individual observation, U = overall mean, T_i = substance effect, B_j = random block effect, and e_{ij} = residual error.

Combined site analyses used the model:

$$Y_{ijk} = U + T_i + L_j + B(L)_{jk} + LT_{ij} + e_{ijk},$$

where Y_{ijk} = unique individual observation, U = overall mean, T_i = substance effect, L_j = random location effect, $B(L)_{jk}$ = random block within location effect, LT_{ij} = random location by substance interaction effect, and e_{ijk} = residual error.

A tolerance interval is an interval that one can claim, with a specified degree of confidence, contains at least a specified proportion, p , of an entire sampled population for the parameter measured.

For each compositional component, 99% tolerance intervals were calculated that are expected to contain, with 95% confidence, 99% of the quantities expressed in the population of commercial conventional substances. Each tolerance interval estimate was based upon one observation per unique reference substance. Data were first summarized by substance within site and then by substance across sites. Because negative quantities are not possible, negative calculated lower tolerance bounds were set to zero.

3. Statistical Results

SAS software was used to generate all summary statistics and perform all analyses. Report tables present p-values from SAS as either <0.001 or the actual value truncated to three decimal places.

Statistical results are summarized for MON 87769 vs. the control in Tables 1 through 12. For each component, least-square means, standard errors (S.E.), and the range of observed values are presented for each substance. Mean differences, standard errors of the differences, the range of observed differences, 95% confidence intervals for the mean differences and the significance probability are presented for each comparison. In addition, the range of the observed reference values and 99% tolerance intervals are presented. Components with a statistically

significant comparison ($p < 0.05$) for MON 87769 vs. the control are further summarized in Table 13.

Table 14 presents means, standard errors (S.E.), and the range of observed values for MON 87769 fatty acids 18:3 9c,12c,15t (Trans ALA), 18:3 Gamma Linolenic, 18:4 6c,9c,12c,15t (Trans SDA) and 18:4 Stearidonic.

Numbers of significant comparisons ($p < 0.05$) observed are summarized below.

		No. of Significant Comparisons
Site	Comparisons Tested	MON 87769 vs. Control (A3525)
IA-1	49	11
IA-2	49	9
IL	49	10
MI	49	8
OH	49	20
Combined	49	28

4. References

1. SAS Software Release 9.1 (TS1M3). Copyright (c) 2002-2003 by SAS Institute Inc., Cary, NC, USA.
2. Belsley, D. A., Kuh, E., Welsch, R. E. 1980. Regression Diagnostics: Identifying Influential Data and Sources of Collinearity. John Wiley & Sons, New York.

Table 1. Statistical Summary of Site IA-1 Soybean Forage Fiber and Proximate Content for Test (MON 87769) vs. the Conventional Control (A3525)

Analytical Component (Units) ¹	MON 87769 Mean (S.E.) [Range]	A3525 Mean (S.E.) [Range]	Difference (Test minus Control)			Commercial (Range) [99% Tolerance Interval ²]
			Mean (S.E.) [Range]	95% CI (Lower, Upper)	p-Value	
Fiber						
Acid Detergent Fiber (% DW)	32.11 (1.36) [31.12 - 32.90]	31.48 (1.36) [28.48 - 34.85]	0.63 (1.35) [-1.95 - 2.64]	-5.20, 6.46	0.688	(24.31 - 31.73) [19.24, 38.36]
Neutral Detergent Fiber (% DW)	33.00 (2.18) [30.50 - 36.34]	29.47 (2.18) [25.48 - 34.20]	3.53 (0.83) [2.14 - 5.02]	-0.052, 7.11	0.051	(24.37 - 38.09) [19.01, 46.73]
Proximate						
Ash (% DW)	6.26 (0.13) [6.06 - 6.46]	6.03 (0.13) [5.74 - 6.18]	0.23 (0.19) [-0.12 - 0.53]	-0.57, 1.03	0.342	(5.33 - 7.77) [3.73, 9.32]
Carbohydrates (% DW)	64.75 (0.58) [64.27 - 65.07]	66.01 (0.58) [65.13 - 67.57]	-1.26 (0.82) [-3.30 - -0.055]	-4.79, 2.28	0.265	(64.94 - 72.18) [60.10, 76.68]
Moisture (% FW)	74.67 (0.57) [73.20 - 75.90]	73.07 (0.57) [72.80 - 73.30]	1.60 (0.80) [0.10 - 3.10]	-1.85, 5.05	0.183	(71.10 - 74.90) [67.41, 78.15]
Protein (% DW)	23.17 (0.50) [22.13 - 23.82]	22.22 (0.50) [21.36 - 22.96]	0.95 (0.70) [-0.22 - 2.21]	-2.06, 3.97	0.306	(16.96 - 21.65) [13.69, 25.14]
Total Fat (% DW)	5.82 (0.32) [5.22 - 6.34]	5.74 (0.32) [5.33 - 6.36]	0.075 (0.26) [-0.32 - 0.56]	-1.04, 1.19	0.800	(4.15 - 7.02) [1.46, 9.88]

¹DW = dry weight; FW = fresh weight; S.E. = standard error; CI = Confidence Interval.²With 95% confidence, interval contains 99% of the values expressed in the population of commercial substances. Negative limits were set to zero.

Table 2. Statistical Summary of Site IA-1 Soybean Seed Amino Acid, Fatty Acid, Fiber, Proximate, Vitamin, Antinutrient and Isoflavone Content for Test (MON 87769) vs. the Conventional Control (A3525)

Analytical Component (Units) ¹	MON 87769 Mean (S.E.) [Range]	A3525 Mean (S.E.) [Range]	Difference (Test minus Control)			Commercial (Range) [99% Tolerance Interval ²]
			Mean (S.E.) [Range]	95% CI (Lower, Upper)	p-Value	
Amino Acid (% DW)						
Alanine (% DW)	1.78 (0.015) [1.77 - 1.78]	1.72 (0.015) [1.68 - 1.75]	0.057 (0.021) [0.033 - 0.10]	-0.033, 0.15	0.112	(1.63 - 1.86) [1.45, 2.02]
Arginine (% DW)	3.20 (0.056) [3.12 - 3.25]	2.94 (0.056) [2.81 - 3.04]	0.26 (0.079) [0.14 - 0.44]	-0.083, 0.60	0.082	(2.61 - 3.15) [2.13, 3.62]
Aspartic Acid (% DW)	4.57 (0.055) [4.51 - 4.63]	4.39 (0.055) [4.27 - 4.51]	0.18 (0.065) [0.12 - 0.31]	-0.097, 0.46	0.106	(4.01 - 4.71) [3.45, 5.29]
Cystine (% DW)	0.64 (0.0098) [0.63 - 0.65]	0.61 (0.0098) [0.60 - 0.64]	0.026 (0.0081) [0.010 - 0.036]	-0.0086, 0.061	0.083	(0.55 - 0.62) [0.49, 0.68]
Glutamic Acid (% DW)	7.66 (0.079) [7.59 - 7.70]	7.29 (0.079) [7.10 - 7.46]	0.36 (0.11) [0.22 - 0.60]	-0.11, 0.84	0.081	(6.67 - 7.99) [5.51, 9.04]
Glycine (% DW)	1.80 (0.012) [1.79 - 1.80]	1.72 (0.012) [1.69 - 1.75]	0.075 (0.017) [0.047 - 0.11]	0.0027, 0.15	0.046	(1.61 - 1.86) [1.39, 2.05]
Histidine (% DW)	1.09 (0.010) [1.09 - 1.10]	1.05 (0.010) [1.03 - 1.08]	0.040 (0.014) [0.013 - 0.068]	-0.023, 0.10	0.111	(0.98 - 1.13) [0.86, 1.27]
Isoleucine (% DW)	1.88 (0.026) [1.88 - 1.88]	1.79 (0.026) [1.72 - 1.84]	0.090 (0.036) [0.037 - 0.16]	-0.067, 0.25	0.132	(1.62 - 2.00) [1.34, 2.28]

Table 2. Statistical Summary of Site IA-1 Soybean Seed Amino Acid, Fatty Acid, Fiber, Proximate, Vitamin, Antinutrient and Isoflavone Content for Test (MON 87769) vs. the Conventional Control (A3525) (cont.)

Analytical Component (Units) ¹	MON 87769 Mean (S.E.) [Range]	A3525 Mean (S.E.) [Range]	Difference (Test minus Control)			Commercial (Range) [99% Tolerance Interval ²]
			Mean (S.E.) [Range]	95% CI (Lower, Upper)	p-Value	
Amino Acid (% DW)						
Leucine (% DW)	3.19 (0.022) [3.19 - 3.20]	3.08 (0.022) [3.04 - 3.14]	0.11 (0.027) [0.061 - 0.15]	-0.00097, 0.23	0.050	(2.86 - 3.37) [2.45, 3.76]
Lysine (% DW)	2.70 (0.020) [2.68 - 2.71]	2.62 (0.020) [2.59 - 2.67]	0.077 (0.024) [0.039 - 0.12]	-0.027, 0.18	0.085	(2.42 - 2.78) [2.13, 3.06]
Methionine (% DW)	0.60 (0.0064) [0.60 - 0.61]	0.58 (0.0064) [0.57 - 0.59]	0.026 (0.0085) [0.0098 - 0.038]	-0.010, 0.063	0.089	(0.52 - 0.61) [0.48, 0.66]
Phenylalanine (% DW)	2.13 (0.025) [2.08 - 2.16]	2.03 (0.025) [1.99 - 2.07]	0.10 (0.017) [0.086 - 0.14]	0.034, 0.18	0.024	(1.92 - 2.29) [1.61, 2.55]
Proline (% DW)	2.12 (0.020) [2.11 - 2.13]	2.00 (0.020) [1.97 - 2.06]	0.12 (0.024) [0.070 - 0.15]	0.014, 0.22	0.039	(1.81 - 2.16) [1.53, 2.45]
Serine (% DW)	2.21 (0.035) [2.16 - 2.24]	2.13 (0.035) [2.05 - 2.19]	0.073 (0.049) [-0.023 - 0.19]	-0.14, 0.28	0.278	(1.97 - 2.27) [1.75, 2.51]
Threonine (% DW)	1.60 (0.026) [1.57 - 1.64]	1.57 (0.026) [1.51 - 1.61]	0.039 (0.029) [-0.0089 - 0.090]	-0.084, 0.16	0.304	(1.45 - 1.65) [1.30, 1.82]
Tryptophan (% DW)	0.47 (0.011) [0.45 - 0.50]	0.45 (0.011) [0.44 - 0.46]	0.019 (0.016) [-0.0067 - 0.059]	-0.051, 0.088	0.363	(0.43 - 0.52) [0.35, 0.59]

Table 2. Statistical Summary of Site IA-1 Soybean Seed Amino Acid, Fatty Acid, Fiber, Proximate, Vitamin, Antinutrient and Isoflavone Content for Test (MON 87769) vs. the Conventional Control (A3525) (cont.)

Analytical Component (Units) ¹	MON 87769 Mean (S.E.) [Range]	A3525 Mean (S.E.) [Range]	Difference (Test minus Control)			Commercial (Range) [99% Tolerance Interval ²]
			Mean (S.E.) [Range]	95% CI (Lower, Upper)	p-Value	
Amino Acid (% DW)						
Tyrosine (% DW)	1.40 (0.056) [1.27 - 1.47]	1.34 (0.056) [1.26 - 1.41]	0.064 (0.079) [-0.072 - 0.21]	-0.28, 0.41	0.504	(1.21 - 1.49) [1.03, 1.67]
Valine (% DW)	1.99 (0.027) [1.98 - 2.00]	1.89 (0.027) [1.82 - 1.94]	0.097 (0.038) [0.037 - 0.18]	-0.066, 0.26	0.124	(1.70 - 2.11) [1.42, 2.41]
Fatty Acid (% Total FA)						
16:0 Palmitic (% Total FA)	12.39 (0.056) [12.27 - 12.54]	12.06 (0.056) [12.05 - 12.06]	0.34 (0.078) [0.21 - 0.48]	-0.0012, 0.67	0.050	(9.88 - 12.33) [7.28, 14.20]
18:0 Stearic (% Total FA)	4.00 (0.027) [3.96 - 4.06]	4.04 (0.027) [4.01 - 4.08]	-0.043 (0.015) [-0.064 - -0.015]	-0.11, 0.019	0.096	(3.68 - 4.89) [2.87, 5.85]
18:1 Total 18:1 Cis (% Total FA)	13.42 (0.14) [13.14 - 13.80]	18.45 (0.14) [18.35 - 18.52]	-5.04 (0.20) [-5.38 - -4.55]	-5.92, -4.15	0.001	(16.70 - 23.16) [12.56, 27.98]
18:2 9c,12c Linoleic (% Total FA)	18.46 (0.11) [18.24 - 18.68]	54.90 (0.11) [54.80 - 55.07]	-36.45 (0.078) [-36.60 - -36.35]	-36.78, -36.11	<0.001	(53.36 - 57.39) [50.46, 59.96]
18:3 Linolenic (% Total FA)	11.11 (0.019) [11.08 - 11.13]	9.85 (0.019) [9.80 - 9.88]	1.27 (0.0091) [1.25 - 1.28]	1.23, 1.30	<0.001	(6.95 - 10.58) [3.72, 13.46]
20:0 Arachidic (% Total FA)	0.33 (0.0038) [0.32 - 0.34]	0.30 (0.0038) [0.29 - 0.30]	0.032 (0.0024) [0.029 - 0.037]	0.021, 0.042	0.005	(0.27 - 0.36) [0.20, 0.45]

Table 2. Statistical Summary of Site IA-1 Soybean Seed Amino Acid, Fatty Acid, Fiber, Proximate, Vitamin, Antinutrient and Isoflavone Content for Test (MON 87769) vs. the Conventional Control (A3525) (cont.)

Analytical Component (Units) ¹	MON 87769 Mean (S.E.) [Range]	A3525 Mean (S.E.) [Range]	Difference (Test minus Control)			Commercial (Range) [99% Tolerance Interval ²]
			Mean (S.E.) [Range]	95% CI (Lower, Upper)	p-Value	
Fatty Acid (% Total FA)						
20:1 Eicosenoic (% Total FA)	0.10 (0.017) [0.075 - 0.15]	0.086 (0.017) [0.082 - 0.089]	0.017 (0.023) [-0.013 - 0.063]	-0.084, 0.12	0.540	(0.071 - 0.19) [0, 0.31]
22:0 Behenic (% Total FA)	0.29 (0.014) [0.26 - 0.31]	0.31 (0.014) [0.30 - 0.34]	-0.028 (0.0039) [-0.035 - -0.022]	-0.045, -0.011	0.018	(0.30 - 0.41) [0.22, 0.49]
Fiber						
Acid Detergent Fiber (% DW)	15.21 (0.50) [14.38 - 16.48]	16.19 (0.50) [15.70 - 16.70]	-0.98 (0.70) [-1.91 - 0.77]	-4.01, 2.05	0.298	(14.57 - 18.85) [10.36, 22.77]
Neutral Detergent Fiber (% DW)	15.79 (0.80) [15.46 - 16.05]	15.80 (0.80) [14.43 - 18.01]	-0.0054 (1.13) [-2.55 - 1.44]	-4.87, 4.86	0.996	(15.03 - 18.92) [10.91, 22.59]
Proximate						
Ash (% DW)	5.74 (0.079) [5.66 - 5.82]	5.72 (0.079) [5.60 - 5.92]	0.025 (0.11) [-0.17 - 0.21]	-0.46, 0.51	0.843	(5.59 - 6.20) [5.16, 6.64]
Carbohydrates (% DW)	37.57 (0.89) [35.70 - 39.54]	40.99 (0.89) [39.93 - 41.94]	-3.41 (1.25) [-6.24 - -0.39]	-8.81, 1.98	0.112	(33.50 - 40.22) [26.76, 45.99]
Moisture (% FW)	7.55 (0.21) [7.14 - 8.01]	7.37 (0.21) [7.17 - 7.66]	0.18 (0.29) [-0.52 - 0.84]	-1.08, 1.44	0.607	(6.68 - 8.16) [5.23, 9.56]
Protein (% DW)	41.93 (0.32) [41.35 - 42.27]	40.09 (0.32) [39.43 - 40.55]	1.84 (0.45) [1.07 - 2.75]	-0.080, 3.77	0.054	(37.52 - 42.37) [33.37, 46.00]

Table 2. Statistical Summary of Site IA-1 Soybean Seed Amino Acid, Fatty Acid, Fiber, Proximate, Vitamin, Antinutrient and Isoflavone Content for Test (MON 87769) vs. the Conventional Control (A3525) (cont.)

Analytical Component (Units) ¹	MON 87769 Mean (S.E.) [Range]	A3525 Mean (S.E.) [Range]	Difference (Test minus Control)			Commercial (Range) [99% Tolerance Interval ²]
			Mean (S.E.) [Range]	95% CI (Lower, Upper)	p-Value	
Proximate						
Total Fat (% DW)	14.75 (0.65) [13.35 - 16.31]	13.21 (0.65) [12.73 - 13.86]	1.54 (0.92) [-0.51 - 3.27]	-2.42, 5.50	0.235	(13.99 - 20.56) [11.04, 25.03]
Vitamin						
Vitamin E (mg/100g DW)	1.02 (0.11) [0.86 - 1.30]	1.10 (0.11) [0.97 - 1.19]	-0.082 (0.11) [-0.28 - 0.11]	-0.57, 0.40	0.543	(0.27 - 2.93) [0, 4.65]
Antinutrient						
Lectin (H.U./mg DW)	4.28 (1.49) [1.52 - 8.07]	2.31 (1.49) [0.75 - 3.23]	1.97 (1.59) [0.014 - 5.13]	-4.88, 8.82	0.341	(0.81 - 9.73) [0, 16.00]
Phytic Acid (% DW)	1.28 (0.048) [1.22 - 1.34]	1.17 (0.048) [1.06 - 1.26]	0.11 (0.023) [0.079 - 0.16]	0.011, 0.21	0.041	(0.81 - 1.27) [0.51, 1.59]
Raffinose (% DW)	0.35 (0.019) [0.32 - 0.40]	0.31 (0.019) [0.29 - 0.32]	0.039 (0.022) [0.0029 - 0.079]	-0.055, 0.13	0.215	(0.31 - 0.42) [0.19, 0.52]
Stachyose (% DW)	3.05 (0.087) [2.93 - 3.27]	2.78 (0.087) [2.69 - 2.86]	0.27 (0.076) [0.16 - 0.41]	-0.055, 0.60	0.070	(2.23 - 3.29) [1.61, 4.05]
Trypsin Inhibitor (TIU/mg DW)	45.27 (5.77) [33.06 - 54.80]	35.70 (5.77) [25.67 - 41.69]	9.57 (8.16) [-6.68 - 29.14]	-25.56, 44.70	0.361	(24.29 - 46.29) [8.09, 57.27]
Isoflavone						
Daidzein (µg/g DW)	995.39 (13.83) [978.37 - 1026.28]	1550.96 (13.83) [1531.49 - 1572.77]	-555.58 (19.56) [-594.40 - -522.35]	-639.75, -471.40	0.001	(783.49 - 1691.97) [0, 2594.50]

Table 2. Statistical Summary of Site IA-1 Soybean Seed Amino Acid, Fatty Acid, Fiber, Proximate, Vitamin, Antinutrient and Isoflavone Content for Test (MON 87769) vs. the Conventional Control (A3525) (cont.)

Analytical Component (Units) ¹	MON 87769	A3525	Difference (Test minus Control)			Commercial
	Mean (S.E.) [Range]	Mean (S.E.) [Range]	Mean (S.E.) [Range]	95% CI (Lower, Upper)	p-Value	(Range) [99% Tolerance Interval ²]
Isoflavone						
Genistein (µg/g DW)	594.53 (7.52) [584.75 - 612.91]	973.04 (7.52) [966.28 - 983.61]	-378.51 (4.09) [-384.49 - -370.70]	-396.09, -360.93	<0.001	(741.53 - 1580.48) [254.31, 1976.30]
Glycitein (µg/g DW)	87.40 (9.32) [73.40 - 106.72]	103.25 (9.32) [86.17 - 113.71]	-15.86 (6.20) [-27.80 - -6.99]	-42.55, 10.83	0.124	(74.87 - 189.64) [0, 243.40]

¹DW = dry weight; FW = fresh weight; FA = fatty acid; S.E. = standard error; CI = Confidence Interval.

²With 95% confidence, interval contains 99% of the values expressed in the population of commercial substances. Negative limits were set to zero.

Table 3. Statistical Summary of Site IA-2 Soybean Forage Fiber and Proximate Content for Test (MON 87769) vs. the Conventional Control (A3525)

Analytical Component (Units) ¹	MON 87769 Mean (S.E.) [Range]	A3525 Mean (S.E.) [Range]	Difference (Test minus Control)			Commercial (Range) [99% Tolerance Interval ²]
			Mean (S.E.) [Range]	95% CI (Lower, Upper)	p-Value	
Fiber						
Acid Detergent Fiber (% DW)	26.08 (0.67) [24.91 - 26.79]	25.76 (0.67) [24.39 - 26.92]	0.33 (0.23) [-0.13 - 0.59]	-0.66, 1.32	0.290	(24.31 - 31.73) [19.24, 38.36]
Neutral Detergent Fiber (% DW)	30.83 (1.42) [28.06 - 34.06]	32.11 (1.42) [30.71 - 33.99]	-1.28 (2.00) [-5.94 - 2.44]	-9.90, 7.35	0.589	(24.37 - 38.09) [19.01, 46.73]
Proximate						
Ash (% DW)	7.19 (0.13) [7.00 - 7.30]	7.45 (0.13) [7.25 - 7.75]	-0.26 (0.16) [-0.49 - 0.048]	-0.95, 0.43	0.244	(5.33 - 7.77) [3.73, 9.32]
Carbohydrates (% DW)	64.72 (0.85) [62.88 - 65.63]	62.33 (0.85) [61.18 - 63.79]	2.39 (1.07) [0.88 - 4.45]	-2.19, 6.98	0.154	(64.94 - 72.18) [60.10, 76.68]
Moisture (% FW)	72.93 (0.94) [70.70 - 74.80]	74.03 (0.94) [72.90 - 74.70]	-1.10 (0.67) [-2.20 - 0.10]	-3.96, 1.76	0.240	(71.10 - 74.90) [67.41, 78.15]
Protein (% DW)	23.23 (0.76) [22.18 - 24.53]	23.95 (0.76) [22.33 - 24.98]	-0.73 (0.64) [-2.01 - -0.017]	-3.50, 2.05	0.376	(16.96 - 21.65) [13.69, 25.14]
Total Fat (% DW)	4.87 (0.20) [4.40 - 5.28]	6.27 (0.20) [6.13 - 6.49]	-1.40 (0.28) [-2.09 - -0.92]	-2.60, -0.20	0.037	(4.15 - 7.02) [1.46, 9.88]

¹DW = dry weight; FW = fresh weight; S.E. = standard error; CI = Confidence Interval.²With 95% confidence, interval contains 99% of the values expressed in the population of commercial substances. Negative limits were set to zero.

Table 4. Statistical Summary of Site IA-2 Soybean Seed Amino Acid, Fatty Acid, Fiber, Proximate, Vitamin, Antinutrient and Isoflavone Content for Test (MON 87769) vs. the Conventional Control (A3525)

Analytical Component (Units) ¹	MON 87769 Mean (S.E.) [Range]	A3525 Mean (S.E.) [Range]	Difference (Test minus Control)			Commercial (Range) [99% Tolerance Interval ²]
			Mean (S.E.) [Range]	95% CI (Lower, Upper)	p-Value	
Amino Acid (% DW)						
Alanine (% DW)	1.79 (0.018) [1.76 - 1.81]	1.78 (0.018) [1.74 - 1.81]	0.0095 (0.022) [-0.018 - 0.052]	-0.083, 0.10	0.703	(1.63 - 1.86) [1.45, 2.02]
Arginine (% DW)	3.42 (0.037) [3.36 - 3.50]	3.11 (0.037) [3.05 - 3.15]	0.31 (0.020) [0.28 - 0.35]	0.23, 0.40	0.003	(2.61 - 3.15) [2.13, 3.62]
Aspartic Acid (% DW)	4.56 (0.053) [4.51 - 4.61]	4.50 (0.053) [4.36 - 4.60]	0.060 (0.072) [-0.034 - 0.20]	-0.25, 0.37	0.490	(4.01 - 4.71) [3.45, 5.29]
Cystine (% DW)	0.62 (0.0028) [0.62 - 0.63]	0.60 (0.0028) [0.59 - 0.61]	0.024 (0.0019) [0.021 - 0.027]	0.016, 0.032	0.005	(0.55 - 0.62) [0.49, 0.68]
Glutamic Acid (% DW)	7.73 (0.088) [7.62 - 7.83]	7.56 (0.088) [7.36 - 7.71]	0.17 (0.11) [-0.0052 - 0.38]	-0.32, 0.66	0.283	(6.67 - 7.99) [5.51, 9.04]
Glycine (% DW)	1.81 (0.018) [1.78 - 1.83]	1.78 (0.018) [1.74 - 1.81]	0.031 (0.022) [0.0039 - 0.074]	-0.062, 0.12	0.284	(1.61 - 1.86) [1.39, 2.05]
Histidine (% DW)	1.10 (0.012) [1.08 - 1.11]	1.08 (0.012) [1.05 - 1.10]	0.015 (0.016) [-0.013 - 0.044]	-0.056, 0.086	0.455	(0.98 - 1.13) [0.86, 1.27]
Isoleucine (% DW)	1.89 (0.027) [1.84 - 1.94]	1.81 (0.027) [1.78 - 1.86]	0.082 (0.038) [-0.018 - 0.16]	-0.081, 0.25	0.162	(1.62 - 2.00) [1.34, 2.28]

Table 4. Statistical Summary of Site IA-2 Soybean Seed Amino Acid, Fatty Acid, Fiber, Proximate, Vitamin, Antinutrient and Isoflavone Content for Test (MON 87769) vs. the Conventional Control (A3525) (cont.)

Analytical Component (Units) ¹	MON 87769 Mean (S.E.) [Range]	A3525 Mean (S.E.) [Range]	Difference (Test minus Control)			Commercial (Range) [99% Tolerance Interval ²]
			Mean (S.E.) [Range]	95% CI (Lower, Upper)	p-Value	
Amino Acid (% DW)						
Leucine (% DW)	3.21 (0.028) [3.17 - 3.26]	3.16 (0.028) [3.10 - 3.19]	0.047 (0.032) [-0.015 - 0.094]	-0.092, 0.19	0.279	(2.86 - 3.37) [2.45, 3.76]
Lysine (% DW)	2.70 (0.029) [2.65 - 2.73]	2.69 (0.029) [2.62 - 2.73]	0.014 (0.041) [-0.059 - 0.094]	-0.16, 0.19	0.760	(2.42 - 2.78) [2.13, 3.06]
Methionine (% DW)	0.60 (0.0088) [0.59 - 0.61]	0.58 (0.0088) [0.56 - 0.60]	0.025 (0.0099) [0.0057 - 0.038]	-0.017, 0.067	0.126	(0.52 - 0.61) [0.48, 0.66]
Phenylalanine (% DW)	2.14 (0.018) [2.13 - 2.15]	2.11 (0.018) [2.07 - 2.15]	0.032 (0.025) [-0.016 - 0.084]	-0.075, 0.14	0.330	(1.92 - 2.29) [1.61, 2.55]
Proline (% DW)	2.12 (0.021) [2.09 - 2.15]	2.06 (0.021) [2.01 - 2.09]	0.061 (0.0073) [0.048 - 0.073]	0.029, 0.092	0.014	(1.81 - 2.16) [1.53, 2.45]
Serine (% DW)	2.19 (0.028) [2.18 - 2.21]	2.22 (0.028) [2.17 - 2.29]	-0.030 (0.040) [-0.11 - 0.041]	-0.20, 0.14	0.529	(1.97 - 2.27) [1.75, 2.51]
Threonine (% DW)	1.58 (0.015) [1.58 - 1.60]	1.60 (0.015) [1.56 - 1.62]	-0.013 (0.017) [-0.039 - 0.020]	-0.086, 0.061	0.542	(1.45 - 1.65) [1.30, 1.82]
Tryptophan (% DW)	0.46 (0.0039) [0.46 - 0.46]	0.47 (0.0039) [0.46 - 0.48]	-0.0056 (0.0055) [-0.019 - 0.0016]	-0.029, 0.018	0.417	(0.43 - 0.52) [0.35, 0.59]

Table 4. Statistical Summary of Site IA-2 Soybean Seed Amino Acid, Fatty Acid, Fiber, Proximate, Vitamin, Antinutrient and Isoflavone Content for Test (MON 87769) vs. the Conventional Control (A3525) (cont.)

Analytical Component (Units) ¹	MON 87769 Mean (S.E.) [Range]	A3525 Mean (S.E.) [Range]	Difference (Test minus Control)			Commercial (Range) [99% Tolerance Interval ²]
			Mean (S.E.) [Range]	95% CI (Lower, Upper)	p-Value	
Amino Acid (% DW)						
Tyrosine (% DW)	1.41 (0.022) [1.35 - 1.45]	1.32 (0.022) [1.30 - 1.34]	0.089 (0.031) [0.015 - 0.14]	-0.043, 0.22	0.100	(1.21 - 1.49) [1.03, 1.67]
Valine (% DW)	2.01 (0.031) [1.95 - 2.07]	1.92 (0.031) [1.89 - 1.96]	0.097 (0.043) [-0.017 - 0.18]	-0.089, 0.28	0.154	(1.70 - 2.11) [1.42, 2.41]
Fatty Acid (% Total FA)						
16:0 Palmitic (% Total FA)	11.77 (0.12) [11.53 - 11.90]	11.36 (0.12) [11.14 - 11.52]	0.41 (0.16) [0.0098 - 0.75]	-0.29, 1.12	0.128	(9.88 - 12.33) [7.28, 14.20]
18:0 Stearic (% Total FA)	4.21 (0.058) [4.15 - 4.27]	4.11 (0.058) [3.96 - 4.21]	0.097 (0.056) [-0.0058 - 0.19]	-0.14, 0.34	0.224	(3.68 - 4.89) [2.87, 5.85]
18:1 Total 18:1 Cis (% Total FA)	13.56 (0.31) [12.93 - 14.36]	18.53 (0.31) [18.29 - 18.72]	-4.97 (0.31) [-5.36 - -4.36]	-6.32, -3.63	0.003	(16.70 - 23.16) [12.56, 27.98]
18:2 9c,12c Linoleic (% Total FA)	21.19 (0.57) [20.36 - 22.78]	55.33 (0.57) [55.21 - 55.58]	-34.14 (0.80) [-35.15 - -32.43]	-37.60, -30.68	<0.001	(53.36 - 57.39) [50.46, 59.96]
18:3 Linolenic (% Total FA)	11.14 (0.12) [11.10 - 11.18]	9.96 (0.12) [9.73 - 10.28]	1.18 (0.16) [0.82 - 1.45]	0.47, 1.89	0.018	(6.95 - 10.58) [3.72, 13.46]
20:0 Arachidic (% Total FA)	0.34 (0.0072) [0.33 - 0.34]	0.30 (0.0072) [0.28 - 0.32]	0.036 (0.010) [0.017 - 0.058]	-0.0077, 0.080	0.071	(0.27 - 0.36) [0.20, 0.45]

Table 4. Statistical Summary of Site IA-2 Soybean Seed Amino Acid, Fatty Acid, Fiber, Proximate, Vitamin, Antinutrient and Isoflavone Content for Test (MON 87769) vs. the Conventional Control (A3525) (cont.)

Analytical Component (Units) ¹	MON 87769 Mean (S.E.) [Range]	A3525 Mean (S.E.) [Range]	Difference (Test minus Control)			Commercial (Range) [99% Tolerance Interval ²]
			Mean (S.E.) [Range]	95% CI (Lower, Upper)	p-Value	
Fatty Acid (% Total FA)						
20:1 Eicosenoic (% Total FA)	0.13 (0.015) [0.086 - 0.15]	0.084 (0.015) [0.075 - 0.092]	0.043 (0.021) [-0.0061 - 0.072]	-0.048, 0.13	0.180	(0.071 - 0.19) [0, 0.31]
22:0 Behenic (% Total FA)	0.27 (0.019) [0.27 - 0.27]	0.32 (0.019) [0.28 - 0.37]	-0.051 (0.027) [-0.11 - -0.019]	-0.17, 0.067	0.206	(0.30 - 0.41) [0.22, 0.49]
Fiber						
Acid Detergent Fiber (% DW)	17.23 (0.90) [16.45 - 17.62]	16.16 (0.90) [13.80 - 17.85]	1.07 (0.85) [-0.24 - 2.65]	-2.57, 4.71	0.333	(14.57 - 18.85) [10.36, 22.77]
Neutral Detergent Fiber (% DW)	17.34 (0.97) [15.47 - 19.15]	17.64 (0.97) [16.73 - 19.37]	-0.31 (1.33) [-1.98 - 2.32]	-6.03, 5.42	0.839	(15.03 - 18.92) [10.91, 22.59]
Proximate						
Ash (% DW)	5.52 (0.091) [5.46 - 5.63]	5.41 (0.091) [5.24 - 5.64]	0.11 (0.065) [-0.0074 - 0.22]	-0.17, 0.39	0.229	(5.59 - 6.20) [5.16, 6.64]
Carbohydrates (% DW)	36.95 (0.79) [35.58 - 39.06]	40.25 (0.79) [39.89 - 40.93]	-3.30 (1.12) [-4.71 - -0.88]	-8.12, 1.52	0.098	(33.50 - 40.22) [26.76, 45.99]
Moisture (% FW)	8.09 (0.066) [7.99 - 8.21]	7.98 (0.066) [7.88 - 8.11]	0.11 (0.093) [-0.12 - 0.26]	-0.29, 0.51	0.348	(6.68 - 8.16) [5.23, 9.56]
Protein (% DW)	42.80 (0.78) [42.50 - 43.36]	40.42 (0.78) [38.31 - 41.58]	2.37 (0.95) [0.96 - 4.19]	-1.73, 6.48	0.130	(37.52 - 42.37) [33.37, 46.00]

Table 4. Statistical Summary of Site IA-2 Soybean Seed Amino Acid, Fatty Acid, Fiber, Proximate, Vitamin, Antinutrient and Isoflavone Content for Test (MON 87769) vs. the Conventional Control (A3525) (cont.)

Analytical Component (Units) ¹	MON 87769 Mean (S.E.) [Range]	A3525 Mean (S.E.) [Range]	Difference (Test minus Control)			Commercial (Range) [99% Tolerance Interval ²]
			Mean (S.E.) [Range]	95% CI (Lower, Upper)	p-Value	
Proximate						
Total Fat (% DW)	14.73 (0.76) [12.95 - 15.65]	13.91 (0.76) [13.24 - 15.13]	0.81 (0.74) [-0.30 - 2.22]	-2.37, 4.00	0.386	(13.99 - 20.56) [11.04, 25.03]
Vitamin						
Vitamin E (mg/100g DW)	1.05 (0.11) [0.92 - 1.22]	1.18 (0.11) [0.94 - 1.37]	-0.13 (0.15) [-0.35 - 0.27]	-0.79, 0.53	0.489	(0.27 - 2.93) [0, 4.65]
Antinutrient						
Lectin (H.U./mg DW)	2.84 (0.65) [2.07 - 4.28]	1.69 (0.65) [0.71 - 2.71]	1.15 (0.36) [0.43 - 1.57]	-0.41, 2.70	0.086	(0.81 - 9.73) [0, 16.00]
Phytic Acid (% DW)	0.97 (0.059) [0.86 - 1.11]	1.01 (0.059) [0.94 - 1.06]	-0.047 (0.057) [-0.13 - 0.064]	-0.29, 0.20	0.495	(0.81 - 1.27) [0.51, 1.59]
Raffinose (% DW)	0.38 (0.024) [0.35 - 0.45]	0.34 (0.024) [0.31 - 0.37]	0.042 (0.034) [-0.019 - 0.099]	-0.10, 0.19	0.344	(0.31 - 0.42) [0.19, 0.52]
Stachyose (% DW)	2.87 (0.19) [2.53 - 3.24]	2.74 (0.19) [2.43 - 3.00]	0.13 (0.26) [-0.46 - 0.44]	-0.99, 1.26	0.659	(2.23 - 3.29) [1.61, 4.05]
Trypsin Inhibitor (TIU/mg DW)	28.51 (1.63) [27.39 - 29.81]	29.19 (1.63) [24.81 - 31.50]	-0.69 (1.71) [-3.18 - 2.58]	-8.02, 6.65	0.726	(24.29 - 46.29) [8.09, 57.27]
Isoflavone						
Daidzein (µg/g DW)	1076.04 (29.87) [999.02 - 1130.31]	1583.00 (29.87) [1553.50 - 1599.74]	-506.96 (25.06) [-554.48 - -469.43]	-614.77, -399.15	0.002	(783.49 - 1691.97) [0, 2594.50]

Table 4. Statistical Summary of Site IA-2 Soybean Seed Amino Acid, Fatty Acid, Fiber, Proximate, Vitamin, Antinutrient and Isoflavone Content for Test (MON 87769) vs. the Conventional Control (A3525) (cont.)

Analytical Component (Units) ¹	MON 87769	A3525	Difference (Test minus Control)			Commercial
	Mean (S.E.)	Mean (S.E.)	Mean (S.E.)	95% CI	p-Value	(Range)
	[Range]	[Range]	[Range]	(Lower, Upper)		[99% Tolerance Interval ²]
Isoflavone						
Genistein (µg/g DW)	656.80 (21.40) [612.27 - 687.55]	1044.68 (21.40) [1023.36 - 1084.46]	-387.88 (16.63) [-411.09 - -355.65]	-459.42, -316.33	0.001	(741.53 - 1580.48) [254.31, 1976.30]
Glycitein (µg/g DW)	75.18 (6.78) [67.00 - 87.16]	76.19 (6.78) [65.51 - 90.33]	-1.01 (1.36) [-3.16 - 1.49]	-6.84, 4.82	0.533	(74.87 - 189.64) [0, 243.40]

¹DW = dry weight; FW = fresh weight; FA = fatty acid; S.E. = standard error; CI = Confidence Interval.

²With 95% confidence, interval contains 99% of the values expressed in the population of commercial substances. Negative limits were set to zero.

Table 5. Statistical Summary of Site IL Soybean Forage Fiber and Proximate Content for Test (MON 87769) vs. the Conventional Control (A3525)

Analytical Component (Units) ¹	MON 87769 Mean (S.E.) [Range]	A3525 Mean (S.E.) [Range]	Difference (Test minus Control)			Commercial (Range) [99% Tolerance Interval ²]
			Mean (S.E.) [Range]	95% CI (Lower, Upper)	p-Value	
Fiber						
Acid Detergent Fiber (% DW)	31.77 (1.82) [30.24 - 34.02]	31.12 (1.82) [27.30 - 35.23]	0.65 (1.56) [-1.21 - 3.76]	-6.06, 7.37	0.715	(24.31 - 31.73) [19.24, 38.36]
Neutral Detergent Fiber (% DW)	36.52 (3.76) [29.02 - 42.44]	37.15 (3.76) [30.49 - 42.62]	-0.64 (4.89) [-9.33 - 7.60]	-21.69, 20.42	0.908	(24.37 - 38.09) [19.01, 46.73]
Proximate						
Ash (% DW)	6.79 (0.18) [6.70 - 6.92]	6.72 (0.18) [6.44 - 7.20]	0.068 (0.18) [-0.28 - 0.31]	-0.70, 0.84	0.741	(5.33 - 7.77) [3.73, 9.32]
Carbohydrates (% DW)	69.55 (0.72) [68.50 - 70.34]	69.94 (0.72) [68.21 - 70.84]	-0.39 (0.36) [-0.95 - 0.29]	-1.95, 1.17	0.396	(64.94 - 72.18) [60.10, 76.68]
Moisture (% FW)	71.63 (0.62) [70.60 - 72.90]	71.27 (0.62) [70.20 - 72.10]	0.37 (0.88) [-0.90 - 2.70]	-3.41, 4.14	0.716	(71.10 - 74.90) [67.41, 78.15]
Protein (% DW)	18.60 (0.40) [17.76 - 19.23]	18.57 (0.40) [18.09 - 19.25]	0.028 (0.39) [-0.63 - 0.73]	-1.67, 1.72	0.949	(16.96 - 21.65) [13.69, 25.14]
Total Fat (% DW)	5.06 (0.28) [4.61 - 5.35]	4.76 (0.28) [4.25 - 5.34]	0.29 (0.33) [-0.085 - 0.96]	-1.14, 1.73	0.470	(4.15 - 7.02) [1.46, 9.88]

¹DW = dry weight; FW = fresh weight; S.E. = standard error; CI = Confidence Interval.²With 95% confidence, interval contains 99% of the values expressed in the population of commercial substances. Negative limits were set to zero.

Table 6. Statistical Summary of Site IL Soybean Seed Amino Acid, Fatty Acid, Fiber, Proximate, Vitamin, Antinutrient and Isoflavone Content for Test (MON 87769) vs. the Conventional Control (A3525)

Analytical Component (Units) ¹	MON 87769 Mean (S.E.) [Range]	A3525 Mean (S.E.) [Range]	Difference (Test minus Control)			Commercial (Range) [99% Tolerance Interval ²]
			Mean (S.E.) [Range]	95% CI (Lower, Upper)	p-Value	
Amino Acid (% DW)						
Alanine (% DW)	1.80 (0.020) [1.76 - 1.84]	1.74 (0.020) [1.71 - 1.76]	0.052 (0.024) [0.0060 - 0.084]	-0.049, 0.15	0.158	(1.63 - 1.86) [1.45, 2.02]
Arginine (% DW)	3.07 (0.049) [3.00 - 3.14]	2.90 (0.049) [2.80 - 3.00]	0.17 (0.070) [0.0027 - 0.27]	-0.13, 0.47	0.129	(2.61 - 3.15) [2.13, 3.62]
Aspartic Acid (% DW)	4.55 (0.063) [4.45 - 4.70]	4.35 (0.063) [4.26 - 4.42]	0.20 (0.085) [0.031 - 0.31]	-0.17, 0.56	0.146	(4.01 - 4.71) [3.45, 5.29]
Cystine (% DW)	0.63 (0.0056) [0.62 - 0.64]	0.61 (0.0056) [0.60 - 0.62]	0.020 (0.0020) [0.016 - 0.022]	0.011, 0.028	0.010	(0.55 - 0.62) [0.49, 0.68]
Glutamic Acid (% DW)	7.65 (0.11) [7.46 - 7.90]	7.26 (0.11) [7.08 - 7.36]	0.39 (0.14) [0.098 - 0.56]	-0.24, 1.01	0.116	(6.67 - 7.99) [5.51, 9.04]
Glycine (% DW)	1.82 (0.019) [1.78 - 1.87]	1.75 (0.019) [1.72 - 1.76]	0.070 (0.023) [0.028 - 0.11]	-0.028, 0.17	0.091	(1.61 - 1.86) [1.39, 2.05]
Histidine (% DW)	1.10 (0.015) [1.08 - 1.14]	1.06 (0.015) [1.04 - 1.07]	0.044 (0.020) [0.0068 - 0.075]	-0.042, 0.13	0.158	(0.98 - 1.13) [0.86, 1.27]
Isoleucine (% DW)	1.91 (0.025) [1.87 - 1.97]	1.82 (0.025) [1.79 - 1.84]	0.087 (0.036) [0.022 - 0.18]	-0.066, 0.24	0.134	(1.62 - 2.00) [1.34, 2.28]

Table 6. Statistical Summary of Site IL Soybean Seed Amino Acid, Fatty Acid, Fiber, Proximate, Vitamin, Antinutrient and Isoflavone Content for Test (MON 87769) vs. the Conventional Control (A3525) (cont.)

Analytical Component (Units) ¹	MON 87769 Mean (S.E.) [Range]	A3525 Mean (S.E.) [Range]	Difference (Test minus Control)			Commercial (Range) [99% Tolerance Interval ²]
			Mean (S.E.) [Range]	95% CI (Lower, Upper)	p-Value	
Amino Acid (% DW)						
Leucine (% DW)	3.21 (0.048) [3.14 - 3.32]	3.10 (0.048) [3.03 - 3.14]	0.11 (0.059) [0.0023 - 0.20]	-0.14, 0.36	0.196	(2.86 - 3.37) [2.45, 3.76]
Lysine (% DW)	2.68 (0.031) [2.63 - 2.75]	2.59 (0.031) [2.55 - 2.62]	0.085 (0.040) [0.014 - 0.15]	-0.087, 0.26	0.168	(2.42 - 2.78) [2.13, 3.06]
Methionine (% DW)	0.61 (0.0070) [0.61 - 0.62]	0.59 (0.0070) [0.57 - 0.60]	0.028 (0.0068) [0.015 - 0.038]	-0.0014, 0.057	0.054	(0.52 - 0.61) [0.48, 0.66]
Phenylalanine (% DW)	2.12 (0.026) [2.08 - 2.18]	2.07 (0.026) [2.03 - 2.10]	0.051 (0.025) [0.0051 - 0.092]	-0.058, 0.16	0.182	(1.92 - 2.29) [1.61, 2.55]
Proline (% DW)	2.09 (0.030) [2.05 - 2.15]	1.99 (0.030) [1.95 - 2.04]	0.094 (0.043) [0.016 - 0.17]	-0.090, 0.28	0.159	(1.81 - 2.16) [1.53, 2.45]
Serine (% DW)	2.20 (0.044) [2.14 - 2.25]	2.11 (0.044) [2.00 - 2.18]	0.094 (0.059) [0.0050 - 0.21]	-0.16, 0.35	0.253	(1.97 - 2.27) [1.75, 2.51]
Threonine (% DW)	1.58 (0.028) [1.54 - 1.63]	1.56 (0.028) [1.50 - 1.60]	0.027 (0.040) [-0.058 - 0.087]	-0.14, 0.20	0.564	(1.45 - 1.65) [1.30, 1.82]
Tryptophan (% DW)	0.50 (0.0096) [0.49 - 0.50]	0.48 (0.0096) [0.46 - 0.50]	0.013 (0.010) [-0.0014 - 0.032]	-0.030, 0.056	0.322	(0.43 - 0.52) [0.35, 0.59]

Table 6. Statistical Summary of Site IL Soybean Seed Amino Acid, Fatty Acid, Fiber, Proximate, Vitamin, Antinutrient and Isoflavone Content for Test (MON 87769) vs. the Conventional Control (A3525) (cont.)

Analytical Component (Units) ¹	MON 87769 Mean (S.E.) [Range]	A3525 Mean (S.E.) [Range]	Difference (Test minus Control)			Commercial (Range) [99% Tolerance Interval ²]
			Mean (S.E.) [Range]	95% CI (Lower, Upper)	p-Value	
Amino Acid (% DW)						
Tyrosine (% DW)	1.38 (0.032) [1.34 - 1.41]	1.37 (0.032) [1.33 - 1.44]	0.014 (0.042) [-0.058 - 0.087]	-0.17, 0.19	0.773	(1.21 - 1.49) [1.03, 1.67]
Valine (% DW)	2.01 (0.029) [1.96 - 2.08]	1.92 (0.029) [1.88 - 1.95]	0.098 (0.040) [0.011 - 0.20]	-0.076, 0.27	0.136	(1.70 - 2.11) [1.42, 2.41]
Fatty Acid (% Total FA)						
16:0 Palmitic (% Total FA)	12.31 (0.052) [12.24 - 12.39]	12.00 (0.052) [11.89 - 12.08]	0.30 (0.048) [0.21 - 0.35]	0.095, 0.51	0.024	(9.88 - 12.33) [7.28, 14.20]
18:0 Stearic (% Total FA)	4.42 (0.027) [4.37 - 4.45]	4.33 (0.027) [4.28 - 4.37]	0.090 (0.036) [0.035 - 0.16]	-0.064, 0.24	0.128	(3.68 - 4.89) [2.87, 5.85]
18:1 Total 18:1 Cis (% Total FA)	17.89 (0.22) [17.52 - 18.18]	20.89 (0.22) [20.42 - 21.17]	-3.00 (0.31) [-3.65 - -2.46]	-4.31, -1.68	0.010	(16.70 - 23.16) [12.56, 27.98]
18:2 9c,12c Linoleic (% Total FA)	30.48 (0.20) [30.26 - 30.81]	54.33 (0.20) [54.05 - 54.77]	-23.86 (0.087) [-23.96 - -23.68]	-24.23, -23.48	<0.001	(53.36 - 57.39) [50.46, 59.96]
18:3 Linolenic (% Total FA)	10.27 (0.090) [10.20 - 10.38]	7.59 (0.090) [7.42 - 7.81]	2.68 (0.13) [2.42 - 2.82]	2.13, 3.22	0.002	(6.95 - 10.58) [3.72, 13.46]
20:0 Arachidic (% Total FA)	0.36 (0.0038) [0.36 - 0.37]	0.34 (0.0038) [0.33 - 0.34]	0.027 (0.0045) [0.020 - 0.036]	0.0083, 0.047	0.025	(0.27 - 0.36) [0.20, 0.45]

Table 6. Statistical Summary of Site IL Soybean Seed Amino Acid, Fatty Acid, Fiber, Proximate, Vitamin, Antinutrient and Isoflavone Content for Test (MON 87769) vs. the Conventional Control (A3525) (cont.)

Analytical Component (Units) ¹	MON 87769 Mean (S.E.) [Range]	A3525 Mean (S.E.) [Range]	Difference (Test minus Control)			Commercial (Range) [99% Tolerance Interval ²]
			Mean (S.E.) [Range]	95% CI (Lower, Upper)	p-Value	
Fatty Acid (% Total FA)						
20:1 Eicosenoic (% Total FA)	0.20 (0.0013) [0.20 - 0.20]	0.19 (0.0013) [0.19 - 0.19]	0.0062 (0.0019) [0.0027 - 0.0098]	-0.0019, 0.014	0.081	(0.071 - 0.19) [0, 0.31]
22:0 Behenic (% Total FA)	0.31 (0.0039) [0.30 - 0.31]	0.33 (0.0039) [0.32 - 0.34]	-0.022 (0.0049) [-0.029 - -0.013]	-0.043, -0.00089	0.046	(0.30 - 0.41) [0.22, 0.49]
Fiber						
Acid Detergent Fiber (% DW)	16.16 (0.20) [15.91 - 16.61]	17.76 (0.20) [17.47 - 18.03]	-1.60 (0.12) [-1.83 - -1.41]	-2.12, -1.08	0.005	(14.57 - 18.85) [10.36, 22.77]
Neutral Detergent Fiber (% DW)	17.06 (0.12) [16.72 - 17.25]	17.87 (0.12) [17.78 - 17.92]	-0.81 (0.17) [-1.20 - -0.53]	-1.56, -0.060	0.043	(15.03 - 18.92) [10.91, 22.59]
Proximate						
Ash (% DW)	6.06 (0.13) [5.90 - 6.17]	5.78 (0.13) [5.51 - 6.07]	0.28 (0.17) [0.099 - 0.62]	-0.44, 1.01	0.234	(5.59 - 6.20) [5.16, 6.64]
Carbohydrates (% DW)	34.20 (0.77) [33.23 - 36.11]	36.20 (0.77) [35.30 - 37.13]	-2.00 (0.55) [-2.92 - -1.01]	-4.38, 0.37	0.068	(33.50 - 40.22) [26.76, 45.99]
Moisture (% FW)	6.98 (0.11) [6.71 - 7.24]	7.28 (0.11) [7.21 - 7.37]	-0.29 (0.16) [-0.66 - 0.030]	-0.98, 0.40	0.209	(6.68 - 8.16) [5.23, 9.56]
Protein (% DW)	41.64 (0.45) [41.05 - 42.26]	39.58 (0.45) [38.97 - 40.65]	2.06 (0.63) [0.97 - 3.14]	-0.64, 4.76	0.081	(37.52 - 42.37) [33.37, 46.00]

Table 6. Statistical Summary of Site IL Soybean Seed Amino Acid, Fatty Acid, Fiber, Proximate, Vitamin, Antinutrient and Isoflavone Content for Test (MON 87769) vs. the Conventional Control (A3525) (cont.)

Analytical Component (Units) ¹	MON 87769 Mean (S.E.) [Range]	A3525 Mean (S.E.) [Range]	Difference (Test minus Control)			Commercial (Range) [99% Tolerance Interval ²]
			Mean (S.E.) [Range]	95% CI (Lower, Upper)	p-Value	
Proximate						
Total Fat (% DW)	18.10 (0.45) [16.94 - 19.03]	18.44 (0.45) [18.14 - 18.64]	-0.34 (0.49) [-1.20 - 0.49]	-2.44, 1.75	0.554	(13.99 - 20.56) [11.04, 25.03]
Vitamin						
Vitamin E (mg/100g DW)	2.42 (0.070) [2.27 - 2.54]	2.10 (0.070) [2.01 - 2.21]	0.31 (0.099) [0.059 - 0.45]	-0.11, 0.74	0.087	(0.27 - 2.93) [0, 4.65]
Antinutrient						
Lectin (H.U./mg DW)	5.00 (1.67) [3.69 - 7.02]	7.07 (1.67) [4.88 - 11.32]	-2.07 (2.36) [-7.01 - 2.00]	-12.21, 8.07	0.472	(0.81 - 9.73) [0, 16.00]
Phytic Acid (% DW)	1.07 (0.030) [1.02 - 1.10]	1.04 (0.030) [1.00 - 1.11]	0.023 (0.043) [-0.094 - 0.10]	-0.16, 0.21	0.641	(0.81 - 1.27) [0.51, 1.59]
Raffinose (% DW)	0.43 (0.015) [0.40 - 0.44]	0.43 (0.015) [0.40 - 0.45]	0.00042 (0.021) [-0.049 - 0.044]	-0.091, 0.092	0.985	(0.31 - 0.42) [0.19, 0.52]
Stachyose (% DW)	3.06 (0.088) [2.91 - 3.17]	3.07 (0.088) [2.88 - 3.21]	-0.0061 (0.12) [-0.30 - 0.29]	-0.54, 0.53	0.965	(2.23 - 3.29) [1.61, 4.05]
Trypsin Inhibitor (TIU/mg DW)	38.06 (1.03) [36.23 - 40.86]	35.27 (1.03) [34.82 - 35.95]	2.80 (1.46) [0.28 - 5.83]	-3.49, 9.09	0.195	(24.29 - 46.29) [8.09, 57.27]
Isoflavone						
Daidzein (µg/g DW)	1079.87 (87.82) [957.23 - 1193.55]	1484.63 (87.82) [1380.05 - 1691.99]	-404.76 (120.69) [-603.16 - -186.51]	-924.03, 114.51	0.078	(783.49 - 1691.97) [0, 2594.50]

Table 6. Statistical Summary of Site IL Soybean Seed Amino Acid, Fatty Acid, Fiber, Proximate, Vitamin, Antinutrient and Isoflavone Content for Test (MON 87769) vs. the Conventional Control (A3525) (cont.)

Analytical Component (Units) ¹	MON 87769	A3525	Difference (Test minus Control)			Commercial
	Mean (S.E.) [Range]	Mean (S.E.) [Range]	Mean (S.E.) [Range]	95% CI (Lower, Upper)	p-Value	(Range) [99% Tolerance Interval ²]
Isoflavone						
Genistein (µg/g DW)	655.90 (47.11) [576.70 - 716.13]	837.93 (47.11) [770.81 - 940.83]	-182.04 (52.30) [-265.97 - -86.03]	-407.05, 42.97	0.073	(741.53 - 1580.48) [254.31, 1976.30]
Glycitein (µg/g DW)	84.86 (5.58) [83.23 - 87.74]	120.49 (5.58) [106.01 - 132.56]	-35.63 (7.78) [-49.33 - -22.40]	-69.10, -2.17	0.044	(74.87 - 189.64) [0, 243.40]

¹DW = dry weight; FW = fresh weight; FA = fatty acid; S.E. = standard error; CI = Confidence Interval.

²With 95% confidence, interval contains 99% of the values expressed in the population of commercial substances. Negative limits were set to zero.

Table 7. Statistical Summary of Site MI Soybean Forage Fiber and Proximate Content for Test (MON 87769) vs. the Conventional Control (A3525)

Analytical Component (Units) ¹	MON 87769 Mean (S.E.) [Range]	A3525 Mean (S.E.) [Range]	Difference (Test minus Control)			Commercial (Range) [99% Tolerance Interval ²]
			Mean (S.E.) [Range]	95% CI (Lower, Upper)	p-Value	
Fiber						
Acid Detergent Fiber (% DW)	33.02 (2.24) [27.92 - 36.39]	33.97 (2.24) [30.72 - 37.06]	-0.95 (3.17) [-9.14 - 5.67]	-14.61, 12.71	0.793	(24.31 - 31.73) [19.24, 38.36]
Neutral Detergent Fiber (% DW)	36.16 (2.10) [31.87 - 40.66]	36.13 (2.10) [33.13 - 38.13]	0.029 (2.96) [-5.27 - 7.53]	-12.72, 12.78	0.993	(24.37 - 38.09) [19.01, 46.73]
Proximate						
Ash (% DW)	5.99 (0.33) [5.29 - 6.36]	6.00 (0.33) [5.38 - 6.39]	-0.014 (0.077) [-0.091 - 0.14]	-0.35, 0.32	0.875	(5.33 - 7.77) [3.73, 9.32]
Carbohydrates (% DW)	70.54 (1.12) [68.27 - 72.79]	70.07 (1.12) [68.44 - 71.51]	0.47 (1.26) [-2.00 - 2.12]	-4.94, 5.87	0.745	(64.94 - 72.18) [60.10, 76.68]
Moisture (% FW)	71.30 (0.93) [69.50 - 72.80]	71.37 (0.93) [70.10 - 73.10]	-0.067 (1.32) [-1.50 - 2.70]	-5.73, 5.60	0.964	(71.10 - 74.90) [67.41, 78.15]
Protein (% DW)	18.80 (0.73) [17.05 - 20.44]	18.54 (0.73) [18.23 - 19.14]	0.26 (1.02) [-1.20 - 2.21]	-4.11, 4.63	0.822	(16.96 - 21.65) [13.69, 25.14]
Total Fat (% DW)	4.67 (0.68) [3.80 - 5.99]	5.39 (0.68) [4.02 - 6.12]	-0.71 (0.54) [-1.80 - -0.13]	-3.05, 1.62	0.318	(4.15 - 7.02) [1.46, 9.88]

¹DW = dry weight; FW = fresh weight; S.E. = standard error; CI = Confidence Interval.²With 95% confidence, interval contains 99% of the values expressed in the population of commercial substances. Negative limits were set to zero.

Table 8. Statistical Summary of Site MI Soybean Seed Amino Acid, Fatty Acid, Fiber, Proximate, Vitamin, Antinutrient and Isoflavone Content for Test (MON 87769) vs. the Conventional Control (A3525)

Analytical Component (Units) ¹	MON 87769 Mean (S.E.) [Range]	A3525 Mean (S.E.) [Range]	Difference (Test minus Control)			Commercial (Range) [99% Tolerance Interval ²]
			Mean (S.E.) [Range]	95% CI (Lower, Upper)	p-Value	
Amino Acid (% DW)						
Alanine (% DW)	1.79 (0.021) [1.76 - 1.83]	1.72 (0.021) [1.69 - 1.76]	0.068 (0.030) [0.0015 - 0.11]	-0.062, 0.20	0.152	(1.63 - 1.86) [1.45, 2.02]
Arginine (% DW)	3.32 (0.10) [3.16 - 3.61]	2.94 (0.10) [2.91 - 2.98]	0.39 (0.14) [0.19 - 0.68]	-0.23, 1.01	0.114	(2.61 - 3.15) [2.13, 3.62]
Aspartic Acid (% DW)	4.57 (0.064) [4.48 - 4.73]	4.29 (0.064) [4.21 - 4.37]	0.28 (0.090) [0.11 - 0.43]	-0.10, 0.67	0.087	(4.01 - 4.71) [3.45, 5.29]
Cystine (% DW)	0.58 (0.011) [0.56 - 0.60]	0.57 (0.011) [0.56 - 0.58]	0.012 (0.015) [-0.024 - 0.037]	-0.054, 0.077	0.528	(0.55 - 0.62) [0.49, 0.68]
Glutamic Acid (% DW)	7.62 (0.11) [7.47 - 7.87]	7.16 (0.11) [7.03 - 7.32]	0.46 (0.15) [0.15 - 0.76]	-0.20, 1.12	0.094	(6.67 - 7.99) [5.51, 9.04]
Glycine (% DW)	1.78 (0.019) [1.76 - 1.83]	1.70 (0.019) [1.67 - 1.72]	0.086 (0.027) [0.034 - 0.14]	-0.032, 0.20	0.088	(1.61 - 1.86) [1.39, 2.05]
Histidine (% DW)	1.09 (0.017) [1.07 - 1.13]	1.04 (0.017) [1.02 - 1.07]	0.048 (0.024) [0.0020 - 0.090]	-0.053, 0.15	0.176	(0.98 - 1.13) [0.86, 1.27]
Isoleucine (% DW)	1.82 (0.048) [1.75 - 1.94]	1.75 (0.048) [1.70 - 1.80]	0.068 (0.068) [-0.052 - 0.24]	-0.23, 0.36	0.422	(1.62 - 2.00) [1.34, 2.28]

Table 8. Statistical Summary of Site MI Soybean Seed Amino Acid, Fatty Acid, Fiber, Proximate, Vitamin, Antinutrient and Isoflavone Content for Test (MON 87769) vs. the Conventional Control (A3525) (cont.)

Analytical Component (Units) ¹	MON 87769 Mean (S.E.) [Range]	A3525 Mean (S.E.) [Range]	Difference (Test minus Control)			Commercial (Range) [99% Tolerance Interval ²]
			Mean (S.E.) [Range]	95% CI (Lower, Upper)	p-Value	
Amino Acid (% DW)						
Leucine (% DW)	3.19 (0.047) [3.13 - 3.28]	3.06 (0.047) [3.01 - 3.15]	0.13 (0.066) [-0.019 - 0.26]	-0.15, 0.41	0.189	(2.86 - 3.37) [2.45, 3.76]
Lysine (% DW)	2.67 (0.033) [2.62 - 2.75]	2.56 (0.033) [2.51 - 2.61]	0.11 (0.047) [0.013 - 0.19]	-0.092, 0.31	0.142	(2.42 - 2.78) [2.13, 3.06]
Methionine (% DW)	0.56 (0.011) [0.54 - 0.59]	0.56 (0.011) [0.56 - 0.57]	0.00074 (0.016) [-0.030 - 0.033]	-0.068, 0.069	0.967	(0.52 - 0.61) [0.48, 0.66]
Phenylalanine (% DW)	2.16 (0.032) [2.11 - 2.24]	2.05 (0.032) [2.02 - 2.10]	0.11 (0.046) [0.013 - 0.20]	-0.086, 0.31	0.135	(1.92 - 2.29) [1.61, 2.55]
Proline (% DW)	2.09 (0.039) [2.03 - 2.19]	1.94 (0.039) [1.91 - 1.98]	0.14 (0.055) [0.056 - 0.25]	-0.091, 0.38	0.119	(1.81 - 2.16) [1.53, 2.45]
Serine (% DW)	2.23 (0.022) [2.23 - 2.23]	2.12 (0.022) [2.06 - 2.17]	0.11 (0.030) [0.067 - 0.17]	-0.020, 0.23	0.067	(1.97 - 2.27) [1.75, 2.51]
Threonine (% DW)	1.63 (0.023) [1.60 - 1.65]	1.55 (0.023) [1.49 - 1.58]	0.082 (0.032) [0.023 - 0.15]	-0.057, 0.22	0.125	(1.45 - 1.65) [1.30, 1.82]
Tryptophan (% DW)	0.48 (0.014) [0.45 - 0.51]	0.46 (0.014) [0.44 - 0.47]	0.018 (0.011) [-0.00067 - 0.037]	-0.030, 0.065	0.253	(0.43 - 0.52) [0.35, 0.59]

Table 8. Statistical Summary of Site MI Soybean Seed Amino Acid, Fatty Acid, Fiber, Proximate, Vitamin, Antinutrient and Isoflavone Content for Test (MON 87769) vs. the Conventional Control (A3525) (cont.)

Analytical Component (Units) ¹	MON 87769 Mean (S.E.) [Range]	A3525 Mean (S.E.) [Range]	Difference (Test minus Control)			Commercial (Range) [99% Tolerance Interval ²]
			Mean (S.E.) [Range]	95% CI (Lower, Upper)	p-Value	
Amino Acid (% DW)						
Tyrosine (% DW)	1.42 (0.049) [1.29 - 1.50]	1.35 (0.049) [1.32 - 1.40]	0.072 (0.048) [-0.020 - 0.14]	-0.14, 0.28	0.275	(1.21 - 1.49) [1.03, 1.67]
Valine (% DW)	1.92 (0.054) [1.84 - 2.06]	1.86 (0.054) [1.79 - 1.91]	0.065 (0.076) [-0.063 - 0.26]	-0.26, 0.39	0.485	(1.70 - 2.11) [1.42, 2.41]
Fatty Acid (% Total FA)						
16:0 Palmitic (% Total FA)	12.11 (0.057) [12.03 - 12.19]	11.79 (0.057) [11.70 - 11.92]	0.31 (0.044) [0.26 - 0.40]	0.12, 0.50	0.019	(9.88 - 12.33) [7.28, 14.20]
18:0 Stearic (% Total FA)	3.87 (0.054) [3.73 - 3.98]	3.90 (0.054) [3.85 - 3.94]	-0.022 (0.070) [-0.16 - 0.059]	-0.32, 0.28	0.779	(3.68 - 4.89) [2.87, 5.85]
18:1 Total 18:1 Cis (% Total FA)	12.92 (0.13) [12.66 - 13.16]	17.44 (0.13) [17.24 - 17.59]	-4.53 (0.097) [-4.66 - -4.34]	-4.94, -4.11	<0.001	(16.70 - 23.16) [12.56, 27.98]
18:2 9c,12c Linoleic (% Total FA)	18.40 (0.71) [16.46 - 19.58]	55.60 (0.71) [55.36 - 56.04]	-37.21 (0.90) [-38.90 - -35.83]	-41.08, -33.33	<0.001	(53.36 - 57.39) [50.46, 59.96]
18:3 Linolenic (% Total FA)	11.76 (0.029) [11.72 - 11.80]	10.59 (0.029) [10.54 - 10.66]	1.16 (0.038) [1.09 - 1.22]	1.00, 1.33	0.001	(6.95 - 10.58) [3.72, 13.46]
20:0 Arachidic (% Total FA)	0.32 (0.0037) [0.31 - 0.32]	0.29 (0.0037) [0.28 - 0.29]	0.030 (0.0052) [0.019 - 0.042]	0.0074, 0.052	0.029	(0.27 - 0.36) [0.20, 0.45]

Table 8. Statistical Summary of Site MI Soybean Seed Amino Acid, Fatty Acid, Fiber, Proximate, Vitamin, Antinutrient and Isoflavone Content for Test (MON 87769) vs. the Conventional Control (A3525) (cont.)

Analytical Component (Units) ¹	MON 87769 Mean (S.E.) [Range]	A3525 Mean (S.E.) [Range]	Difference (Test minus Control)			Commercial (Range) [99% Tolerance Interval ²]
			Mean (S.E.) [Range]	95% CI (Lower, Upper)	p-Value	
Fatty Acid (% Total FA)						
20:1 Eicosenoic (% Total FA)	0.081 (0.014) [0.077 - 0.084]	0.096 (0.014) [0.069 - 0.14]	-0.015 (0.020) [-0.058 - 0.013]	-0.10, 0.072	0.535	(0.071 - 0.19) [0, 0.31]
22:0 Behenic (% Total FA)	0.30 (0.0096) [0.27 - 0.31]	0.29 (0.0096) [0.29 - 0.30]	0.0060 (0.012) [-0.016 - 0.022]	-0.044, 0.056	0.656	(0.30 - 0.41) [0.22, 0.49]
Fiber						
Acid Detergent Fiber (% DW)	17.27 (0.32) [16.91 - 17.59]	16.77 (0.32) [15.98 - 17.35]	0.50 (0.21) [0.23 - 0.93]	-0.42, 1.43	0.143	(14.57 - 18.85) [10.36, 22.77]
Neutral Detergent Fiber (% DW)	17.30 (0.55) [16.15 - 18.17]	17.34 (0.55) [16.42 - 18.11]	-0.038 (0.78) [-1.34 - 1.75]	-3.38, 3.30	0.965	(15.03 - 18.92) [10.91, 22.59]
Proximate						
Ash (% DW)	5.46 (0.10) [5.23 - 5.66]	5.51 (0.10) [5.35 - 5.61]	-0.051 (0.15) [-0.34 - 0.31]	-0.68, 0.58	0.763	(5.59 - 6.20) [5.16, 6.64]
Carbohydrates (% DW)	39.11 (1.09) [38.34 - 39.93]	39.75 (1.09) [37.70 - 42.60]	-0.63 (1.54) [-4.26 - 2.23]	-7.27, 6.00	0.720	(33.50 - 40.22) [26.76, 45.99]
Moisture (% FW)	7.15 (0.13) [7.01 - 7.31]	7.15 (0.13) [6.84 - 7.39]	0 (0.13) [-0.25 - 0.17]	-0.55, 0.55	1.000	(6.68 - 8.16) [5.23, 9.56]
Protein (% DW)	41.86 (0.67) [41.08 - 43.29]	39.10 (0.67) [38.22 - 40.31]	2.76 (0.95) [0.90 - 5.07]	-1.33, 6.86	0.100	(37.52 - 42.37) [33.37, 46.00]

Table 8. Statistical Summary of Site MI Soybean Seed Amino Acid, Fatty Acid, Fiber, Proximate, Vitamin, Antinutrient and Isoflavone Content for Test (MON 87769) vs. the Conventional Control (A3525) (cont.)

Analytical Component (Units) ¹	MON 87769 Mean (S.E.) [Range]	A3525 Mean (S.E.) [Range]	Difference (Test minus Control)			Commercial (Range) [99% Tolerance Interval ²]
			Mean (S.E.) [Range]	95% CI (Lower, Upper)	p-Value	
Proximate						
Total Fat (% DW)	13.57 (0.77) [13.14 - 14.20]	15.65 (0.77) [13.61 - 16.96]	-2.08 (0.81) [-3.01 - -0.47]	-5.56, 1.40	0.123	(13.99 - 20.56) [11.04, 25.03]
Vitamin						
Vitamin E (mg/100g DW)	1.26 (0.087) [1.22 - 1.34]	0.86 (0.087) [0.70 - 1.09]	0.40 (0.12) [0.14 - 0.55]	-0.13, 0.93	0.083	(0.27 - 2.93) [0, 4.65]
Antinutrient						
Lectin (H.U./mg DW)	1.49 (0.63) [0.55 - 2.14]	3.44 (0.63) [1.95 - 4.39]	-1.95 (0.28) [-2.25 - -1.40]	-3.14, -0.77	0.019	(0.81 - 9.73) [0, 16.00]
Phytic Acid (% DW)	0.86 (0.063) [0.81 - 0.92]	0.88 (0.063) [0.75 - 1.03]	-0.017 (0.061) [-0.10 - 0.10]	-0.28, 0.25	0.811	(0.81 - 1.27) [0.51, 1.59]
Raffinose (% DW)	0.34 (0.0085) [0.32 - 0.36]	0.32 (0.0085) [0.32 - 0.33]	0.021 (0.012) [-0.0059 - 0.044]	-0.031, 0.073	0.225	(0.31 - 0.42) [0.19, 0.52]
Stachyose (% DW)	2.43 (0.066) [2.28 - 2.53]	2.52 (0.066) [2.45 - 2.63]	-0.093 (0.094) [-0.35 - 0.080]	-0.50, 0.31	0.425	(2.23 - 3.29) [1.61, 4.05]
Trypsin Inhibitor (TIU/mg DW)	25.92 (2.94) [24.30 - 27.94]	27.17 (2.94) [21.34 - 34.89]	-1.24 (4.16) [-10.58 - 6.60]	-19.15, 16.67	0.793	(24.29 - 46.29) [8.09, 57.27]
Isoflavone						
Daidzein (µg/g DW)	1662.22 (99.21) [1389.19 - 1838.91]	2750.13 (99.21) [2705.02 - 2775.08]	-1087.92 (140.30) [-1385.89 - -866.12]	-1691.59, -484.25	0.016	(783.49 - 1691.97) [0, 2594.50]

Table 8. Statistical Summary of Site MI Soybean Seed Amino Acid, Fatty Acid, Fiber, Proximate, Vitamin, Antinutrient and Isoflavone Content for Test (MON 87769) vs. the Conventional Control (A3525) (cont.)

Analytical Component (Units) ¹	MON 87769 Mean (S.E.) [Range]	A3525 Mean (S.E.) [Range]	Difference (Test minus Control)			Commercial (Range) [99% Tolerance Interval ²]
			Mean (S.E.) [Range]	95% CI (Lower, Upper)	p-Value	
Isoflavone						
Genistein (µg/g DW)	1000.90 (59.25) [841.05 - 1118.40]	1683.74 (59.25) [1662.89 - 1706.74]	-682.83 (70.98) [-821.84 - -588.34]	-988.25, -377.41	0.010	(741.53 - 1580.48) [254.31, 1976.30]
Glycitein (µg/g DW)	83.59 (17.61) [65.37 - 101.09]	114.34 (17.61) [84.16 - 158.73]	-30.75 (24.91) [-93.36 - 0.95]	-137.92, 76.41	0.342	(74.87 - 189.64) [0, 243.40]

¹DW = dry weight; FW = fresh weight; FA = fatty acid; S.E. = standard error; CI = Confidence Interval.

²With 95% confidence, interval contains 99% of the values expressed in the population of commercial substances. Negative limits were set to zero.

Table 9. Statistical Summary of Site OH Soybean Forage Fiber and Proximate Content for Test (MON 87769) vs. the Conventional Control (A3525)

Analytical Component (Units) ¹	MON 87769 Mean (S.E.) [Range]	A3525 Mean (S.E.) [Range]	Difference (Test minus Control)			Commercial (Range) [99% Tolerance Interval ²]
			Mean (S.E.) [Range]	95% CI (Lower, Upper)	p-Value	
Fiber						
Acid Detergent Fiber (% DW)	32.29 (0.91) [30.74 - 33.95]	28.31 (0.91) [26.53 - 29.41]	3.99 (0.40) [3.21 - 4.54]	2.28, 5.70	0.009	(24.31 - 31.73) [19.24, 38.36]
Neutral Detergent Fiber (% DW)	32.93 (1.50) [29.20 - 35.58]	31.22 (1.50) [29.79 - 32.90]	1.70 (1.80) [-1.78 - 4.22]	-6.04, 9.45	0.443	(24.37 - 38.09) [19.01, 46.73]
Proximate						
Ash (% DW)	6.67 (0.24) [6.05 - 7.07]	6.59 (0.24) [6.44 - 6.88]	0.078 (0.25) [-0.40 - 0.44]	-0.99, 1.14	0.782	(5.33 - 7.77) [3.73, 9.32]
Carbohydrates (% DW)	67.50 (0.78) [66.33 - 69.34]	66.87 (0.78) [65.73 - 67.76]	0.64 (0.90) [-0.91 - 2.22]	-3.26, 4.53	0.553	(64.94 - 72.18) [60.10, 76.68]
Moisture (% FW)	70.87 (0.56) [69.90 - 72.40]	71.27 (0.56) [71.00 - 71.60]	-0.40 (0.80) [-1.70 - 1.40]	-3.82, 3.02	0.664	(71.10 - 74.90) [67.41, 78.15]
Protein (% DW)	19.77 (0.58) [18.74 - 20.87]	20.08 (0.58) [19.07 - 20.87]	-0.32 (0.81) [-1.58 - 1.80]	-3.82, 3.19	0.734	(16.96 - 21.65) [13.69, 25.14]
Total Fat (% DW)	6.06 (0.34) [5.40 - 6.90]	6.46 (0.34) [6.13 - 6.72]	-0.40 (0.48) [-1.33 - 0.37]	-2.45, 1.65	0.490	(4.15 - 7.02) [1.46, 9.88]

¹DW = dry weight; FW = fresh weight; S.E. = standard error; CI = Confidence Interval.²With 95% confidence, interval contains 99% of the values expressed in the population of commercial substances. Negative limits were set to zero.

Table 10. Statistical Summary of Site OH Soybean Seed Amino Acid, Fatty Acid, Fiber, Proximate, Vitamin, Antinutrient and Isoflavone Content for Test (MON 87769) vs. the Conventional Control (A3525)

Analytical Component (Units) ¹	MON 87769 Mean (S.E.) [Range]	A3525 Mean (S.E.) [Range]	Difference (Test minus Control)			Commercial (Range) [99% Tolerance Interval] ²
			Mean (S.E.) [Range]	95% CI (Lower, Upper)	p-Value	
Amino Acid (% DW)						
Alanine (% DW)	1.77 (0.0068) [1.76 - 1.78]	1.74 (0.0068) [1.72 - 1.75]	0.031 (0.0096) [0.0084 - 0.043]	-0.010, 0.073	0.083	(1.63 - 1.86) [1.45, 2.02]
Arginine (% DW)	3.11 (0.020) [3.07 - 3.15]	2.86 (0.020) [2.82 - 2.89]	0.25 (0.028) [0.21 - 0.32]	0.13, 0.37	0.012	(2.61 - 3.15) [2.13, 3.62]
Aspartic Acid (% DW)	4.43 (0.017) [4.41 - 4.47]	4.27 (0.017) [4.25 - 4.29]	0.16 (0.024) [0.12 - 0.22]	0.056, 0.26	0.021	(4.01 - 4.71) [3.45, 5.29]
Cystine (% DW)	0.60 (0.0030) [0.60 - 0.60]	0.59 (0.0030) [0.58 - 0.59]	0.015 (0.0043) [0.0058 - 0.021]	-0.0037, 0.033	0.075	(0.55 - 0.62) [0.49, 0.68]
Glutamic Acid (% DW)	7.51 (0.034) [7.42 - 7.59]	7.17 (0.034) [7.16 - 7.19]	0.33 (0.048) [0.23 - 0.43]	0.13, 0.54	0.020	(6.67 - 7.99) [5.51, 9.04]
Glycine (% DW)	1.76 (0.0055) [1.76 - 1.77]	1.71 (0.0055) [1.70 - 1.73]	0.049 (0.0078) [0.030 - 0.064]	0.015, 0.083	0.024	(1.61 - 1.86) [1.39, 2.05]
Histidine (% DW)	1.07 (0.0021) [1.06 - 1.07]	1.03 (0.0021) [1.03 - 1.04]	0.033 (0.0021) [0.031 - 0.037]	0.024, 0.042	0.003	(0.98 - 1.13) [0.86, 1.27]
Isoleucine (% DW)	1.87 (0.024) [1.84 - 1.90]	1.75 (0.024) [1.70 - 1.80]	0.11 (0.018) [0.095 - 0.15]	0.035, 0.19	0.025	(1.62 - 2.00) [1.34, 2.28]

Table 10. Statistical Summary of Site OH Soybean Seed Amino Acid, Fatty Acid, Fiber, Proximate, Vitamin, Antinutrient and Isoflavone Content for Test (MON 87769) vs. the Conventional Control (A3525) (cont.)

Analytical Component (Units) ¹	MON 87769 Mean (S.E.) [Range]	A3525 Mean (S.E.) [Range]	Difference (Test minus Control)			Commercial (Range) [99% Tolerance Interval] ²
			Mean (S.E.) [Range]	95% CI (Lower, Upper)	p-Value	
Amino Acid (% DW)						
Leucine (% DW)	3.16 (0.015) [3.14 - 3.18]	3.05 (0.015) [3.02 - 3.07]	0.10 (0.014) [0.080 - 0.13]	0.046, 0.16	0.016	(2.86 - 3.37) [2.45, 3.76]
Lysine (% DW)	2.62 (0.0092) [2.61 - 2.63]	2.56 (0.0092) [2.54 - 2.58]	0.063 (0.0091) [0.045 - 0.074]	0.024, 0.10	0.020	(2.42 - 2.78) [2.13, 3.06]
Methionine (% DW)	0.59 (0.0038) [0.59 - 0.60]	0.59 (0.0038) [0.58 - 0.59]	0.0064 (0.0027) [0.0028 - 0.012]	-0.0052, 0.018	0.141	(0.52 - 0.61) [0.48, 0.66]
Phenylalanine (% DW)	2.12 (0.0068) [2.12 - 2.13]	2.05 (0.0068) [2.04 - 2.06]	0.076 (0.0096) [0.053 - 0.099]	0.034, 0.12	0.015	(1.92 - 2.29) [1.61, 2.55]
Proline (% DW)	2.05 (0.0089) [2.03 - 2.06]	1.95 (0.0089) [1.94 - 1.96]	0.097 (0.010) [0.085 - 0.12]	0.052, 0.14	0.011	(1.81 - 2.16) [1.53, 2.45]
Serine (% DW)	2.16 (0.028) [2.08 - 2.21]	2.13 (0.028) [2.11 - 2.14]	0.029 (0.028) [-0.023 - 0.075]	-0.092, 0.15	0.412	(1.97 - 2.27) [1.75, 2.51]
Threonine (% DW)	1.57 (0.0094) [1.56 - 1.58]	1.56 (0.0094) [1.54 - 1.58]	0.013 (0.013) [-0.012 - 0.032]	-0.043, 0.068	0.432	(1.45 - 1.65) [1.30, 1.82]
Tryptophan (% DW)	0.46 (0.0059) [0.45 - 0.47]	0.45 (0.0059) [0.45 - 0.46]	0.0084 (0.0084) [-0.011 - 0.026]	-0.028, 0.045	0.421	(0.43 - 0.52) [0.35, 0.59]

Table 10. Statistical Summary of Site OH Soybean Seed Amino Acid, Fatty Acid, Fiber, Proximate, Vitamin, Antinutrient and Isoflavone Content for Test (MON 87769) vs. the Conventional Control (A3525) (cont.)

Analytical Component (Units) ¹	MON 87769 Mean (S.E.) [Range]	A3525 Mean (S.E.) [Range]	Difference (Test minus Control)			Commercial (Range) [99% Tolerance Interval ²]
			Mean (S.E.) [Range]	95% CI (Lower, Upper)	p-Value	
Amino Acid (% DW)						
Tyrosine (% DW)	1.40 (0.032) [1.36 - 1.44]	1.34 (0.032) [1.28 - 1.41]	0.059 (0.044) [-0.024 - 0.13]	-0.13, 0.25	0.312	(1.21 - 1.49) [1.03, 1.67]
Valine (% DW)	1.96 (0.030) [1.94 - 2.01]	1.84 (0.030) [1.78 - 1.90]	0.12 (0.021) [0.096 - 0.16]	0.033, 0.21	0.027	(1.70 - 2.11) [1.42, 2.41]
Fatty Acid (% Total FA)						
16:0 Palmitic (% Total FA)	11.74 (0.11) [11.56 - 12.02]	11.63 (0.11) [11.58 - 11.71]	0.11 (0.15) [-0.080 - 0.44]	-0.53, 0.75	0.544	(9.88 - 12.33) [7.28, 14.20]
18:0 Stearic (% Total FA)	4.46 (0.056) [4.32 - 4.53]	4.37 (0.056) [4.32 - 4.44]	0.088 (0.048) [0.0019 - 0.17]	-0.12, 0.29	0.208	(3.68 - 4.89) [2.87, 5.85]
18:1 Total 18:1 Cis (% Total FA)	18.10 (0.49) [16.73 - 18.80]	20.65 (0.49) [20.41 - 20.79]	-2.54 (0.57) [-3.68 - -1.95]	-5.00, -0.084	0.046	(16.70 - 23.16) [12.56, 27.98]
18:2 9c,12c Linoleic (% Total FA)	25.37 (0.16) [25.06 - 25.75]	54.50 (0.16) [54.38 - 54.67]	-29.13 (0.22) [-29.61 - -28.70]	-30.07, -28.19	<0.001	(53.36 - 57.39) [50.46, 59.96]
18:3 Linolenic (% Total FA)	11.63 (0.11) [11.41 - 11.75]	8.02 (0.11) [7.85 - 8.21]	3.61 (0.15) [3.19 - 3.89]	2.95, 4.28	0.001	(6.95 - 10.58) [3.72, 13.46]
20:0 Arachidic (% Total FA)	0.36 (0.0043) [0.35 - 0.36]	0.33 (0.0043) [0.32 - 0.33]	0.028 (0.0031) [0.024 - 0.034]	0.015, 0.041	0.011	(0.27 - 0.36) [0.20, 0.45]

Table 10. Statistical Summary of Site OH Soybean Seed Amino Acid, Fatty Acid, Fiber, Proximate, Vitamin, Antinutrient and Isoflavone Content for Test (MON 87769) vs. the Conventional Control (A3525) (cont.)

Analytical Component (Units) ¹	MON 87769 Mean (S.E.) [Range]	A3525 Mean (S.E.) [Range]	Difference (Test minus Control)			Commercial (Range) [99% Tolerance Interval ²]
			Mean (S.E.) [Range]	95% CI (Lower, Upper)	p-Value	
Fatty Acid (% Total FA)						
20:1 Eicosenoic (% Total FA)	0.18 (0.0029) [0.17 - 0.19]	0.17 (0.0029) [0.17 - 0.18]	0.0072 (0.0032) [0.0019 - 0.013]	-0.0064, 0.021	0.150	(0.071 - 0.19) [0, 0.31]
22:0 Behenic (% Total FA)	0.29 (0.015) [0.28 - 0.30]	0.33 (0.015) [0.31 - 0.37]	-0.037 (0.018) [-0.071 - -0.014]	-0.11, 0.039	0.172	(0.30 - 0.41) [0.22, 0.49]
Fiber						
Acid Detergent Fiber (% DW)	17.96 (0.36) [17.78 - 18.31]	17.65 (0.36) [16.69 - 18.15]	0.31 (0.51) [-0.35 - 1.62]	-1.88, 2.51	0.601	(14.57 - 18.85) [10.36, 22.77]
Neutral Detergent Fiber (% DW)	16.70 (0.75) [15.06 - 18.13]	17.25 (0.75) [16.10 - 17.88]	-0.55 (1.06) [-2.82 - 2.03]	-5.13, 4.02	0.655	(15.03 - 18.92) [10.91, 22.59]
Proximate						
Ash (% DW)	5.83 (0.040) [5.78 - 5.93]	5.71 (0.040) [5.68 - 5.77]	0.12 (0.019) [0.099 - 0.16]	0.041, 0.20	0.022	(5.59 - 6.20) [5.16, 6.64]
Carbohydrates (% DW)	34.40 (0.53) [33.55 - 35.89]	36.24 (0.53) [36.17 - 36.33]	-1.83 (0.70) [-2.67 - -0.43]	-4.86, 1.20	0.121	(33.50 - 40.22) [26.76, 45.99]
Moisture (% FW)	7.59 (0.15) [7.20 - 7.87]	7.27 (0.15) [7.15 - 7.43]	0.32 (0.18) [-0.040 - 0.56]	-0.47, 1.11	0.222	(6.68 - 8.16) [5.23, 9.56]
Protein (% DW)	41.37 (0.24) [40.92 - 41.70]	39.54 (0.24) [39.11 - 39.96]	1.83 (0.17) [1.54 - 2.14]	1.09, 2.57	0.008	(37.52 - 42.37) [33.37, 46.00]

Table 10. Statistical Summary of Site OH Soybean Seed Amino Acid, Fatty Acid, Fiber, Proximate, Vitamin, Antinutrient and Isoflavone Content for Test (MON 87769) vs. the Conventional Control (A3525) (cont.)

Analytical Component (Units) ¹	MON 87769 Mean (S.E.) [Range]	A3525 Mean (S.E.) [Range]	Difference (Test minus Control)			Commercial (Range) [99% Tolerance Interval ²]
			Mean (S.E.) [Range]	95% CI (Lower, Upper)	p-Value	
Proximate						
Total Fat (% DW)	18.40 (0.42) [17.26 - 18.97]	18.51 (0.42) [18.20 - 18.80]	-0.12 (0.59) [-1.54 - 0.76]	-2.67, 2.44	0.860	(13.99 - 20.56) [11.04, 25.03]
Vitamin						
Vitamin E (mg/100g DW)	2.06 (0.18) [1.68 - 2.33]	1.90 (0.18) [1.64 - 2.22]	0.17 (0.092) [0.040 - 0.34]	-0.23, 0.56	0.213	(0.27 - 2.93) [0, 4.65]
Antinutrient						
Lectin (H.U./mg DW)	4.17 (1.51) [2.76 - 6.67]	4.15 (1.51) [2.08 - 7.56]	0.016 (2.13) [-4.80 - 4.60]	-9.14, 9.18	0.994	(0.81 - 9.73) [0, 16.00]
Phytic Acid (% DW)	1.10 (0.039) [1.02 - 1.20]	1.01 (0.039) [0.97 - 1.04]	0.085 (0.033) [0.049 - 0.15]	-0.058, 0.23	0.124	(0.81 - 1.27) [0.51, 1.59]
Raffinose (% DW)	0.35 (0.020) [0.32 - 0.39]	0.35 (0.020) [0.32 - 0.38]	0.0081 (0.028) [-0.067 - 0.069]	-0.11, 0.13	0.801	(0.31 - 0.42) [0.19, 0.52]
Stachyose (% DW)	2.74 (0.10) [2.61 - 3.01]	2.64 (0.10) [2.54 - 2.70]	0.099 (0.14) [-0.087 - 0.47]	-0.52, 0.72	0.562	(2.23 - 3.29) [1.61, 4.05]
Trypsin Inhibitor (TIU/mg DW)	31.30 (2.41) [26.11 - 36.42]	28.18 (2.41) [25.71 - 31.34]	3.12 (3.41) [-5.23 - 8.93]	-11.55, 17.79	0.456	(24.29 - 46.29) [8.09, 57.27]
Isoflavone						
Daidzein (µg/g DW)	1125.54 (39.70) [1094.38 - 1183.11]	1668.07 (39.70) [1583.20 - 1750.03]	-542.53 (26.89) [-571.84 - -488.82]	-658.22, -426.83	0.002	(783.49 - 1691.97) [0, 2594.50]

Table 10. Statistical Summary of Site OH Soybean Seed Amino Acid, Fatty Acid, Fiber, Proximate, Vitamin, Antinutrient and Isoflavone Content for Test (MON 87769) vs. the Conventional Control (A3525) (cont.)

Analytical Component (Units) ¹	MON 87769	A3525	Difference (Test minus Control)			Commercial
	Mean (S.E.) [Range]	Mean (S.E.) [Range]	Mean (S.E.) [Range]	95% CI (Lower, Upper)	p-Value	(Range) [99% Tolerance Interval ²]
Isoflavone						
Genistein (µg/g DW)	760.07 (20.50) [750.00 - 773.91]	1143.19 (20.50) [1110.39 - 1199.09]	-383.12 (21.06) [-425.19 - -360.39]	-473.72, -292.52	0.003	(741.53 - 1580.48) [254.31, 1976.30]
Glycitein (µg/g DW)	82.62 (3.92) [74.89 - 90.42]	96.62 (3.92) [90.63 - 101.88]	-14.00 (5.55) [-26.98 - -0.22]	-37.86, 9.86	0.127	(74.87 - 189.64) [0, 243.40]

¹DW = dry weight; FW = fresh weight; FA = fatty acid; S.E. = standard error; CI = Confidence Interval.

²With 95% confidence, interval contains 99% of the values expressed in the population of commercial substances. Negative limits were set to zero.

Table 11. Statistical Summary of Combined Site Soybean Forage Fiber and Proximate Content for Test (MON 87769) vs. the Conventional Control (A3525)

Analytical Component (Units) ¹	MON 87769 Mean (S.E.) [Range]	A3525 Mean (S.E.) [Range]	Difference (Test minus Control)			Commercial (Range) [99% Tolerance Interval ²]
			Mean (S.E.) [Range]	95% CI (Lower, Upper)	p-Value	
Fiber						
Acid Detergent Fiber (% DW)	31.06 (1.36) [24.91 - 36.39]	30.13 (1.36) [24.39 - 37.06]	0.93 (0.93) [-9.14 - 5.67]	-1.06, 2.92	0.332	(24.31 - 31.73) [19.24, 38.36]
Neutral Detergent Fiber (% DW)	33.89 (1.37) [28.06 - 42.44]	33.22 (1.37) [25.48 - 42.62]	0.67 (1.27) [-9.33 - 7.60]	-2.05, 3.39	0.605	(24.37 - 38.09) [19.01, 46.73]
Proximate						
Ash (% DW)	6.58 (0.24) [5.29 - 7.30]	6.56 (0.24) [5.38 - 7.75]	0.020 (0.081) [-0.49 - 0.53]	-0.20, 0.24	0.814	(5.33 - 7.77) [3.73, 9.32]
Carbohydrates (% DW)	67.41 (1.32) [62.88 - 72.79]	67.04 (1.32) [61.18 - 71.51]	0.37 (0.61) [-3.30 - 4.45]	-1.32, 2.06	0.575	(64.94 - 72.18) [60.10, 76.68]
Moisture (% FW)	72.28 (0.64) [69.50 - 75.90]	72.20 (0.64) [70.10 - 74.70]	0.080 (0.46) [-2.20 - 3.10]	-0.90, 1.06	0.863	(71.10 - 74.90) [67.41, 78.15]
Protein (% DW)	20.71 (1.05) [17.05 - 24.53]	20.67 (1.05) [18.09 - 24.98]	0.040 (0.34) [-2.01 - 2.21]	-0.69, 0.77	0.908	(16.96 - 21.65) [13.69, 25.14]
Total Fat (% DW)	5.30 (0.29) [3.80 - 6.90]	5.72 (0.29) [4.02 - 6.72]	-0.43 (0.30) [-2.09 - 0.96]	-1.26, 0.41	0.226	(4.15 - 7.02) [1.46, 9.88]

¹DW = dry weight; FW = fresh weight; S.E. = standard error; CI = Confidence Interval.²With 95% confidence, interval contains 99% of the values expressed in the population of commercial substances. Negative limits were set to zero.

Table 12. Statistical Summary of Combined Site Soybean Seed Amino Acid, Fatty Acid, Fiber, Proximate, Vitamin, Antinutrient and Isoflavone Content for Test (MON 87769) vs. the Conventional Control (A3525)

Analytical Component (Units) ¹	MON 87769 Mean (S.E.) [Range]	A3525 Mean (S.E.) [Range]	Difference (Test minus Control)			Commercial (Range) [99% Tolerance Interval ²]
			Mean (S.E.) [Range]	95% CI (Lower, Upper)	p-Value	
Amino Acid (% DW)						
Alanine (% DW)	1.78 (0.0084) [1.76 - 1.84]	1.74 (0.0084) [1.68 - 1.81]	0.044 (0.011) [-0.018 - 0.11]	0.021, 0.066	0.001	(1.63 - 1.86) [1.45, 2.02]
Arginine (% DW)	3.23 (0.056) [3.00 - 3.61]	2.95 (0.056) [2.80 - 3.15]	0.28 (0.037) [0.0027 - 0.68]	0.20, 0.35	<0.001	(2.61 - 3.15) [2.13, 3.62]
Aspartic Acid (% DW)	4.54 (0.035) [4.41 - 4.73]	4.36 (0.035) [4.21 - 4.60]	0.18 (0.036) [-0.034 - 0.43]	0.077, 0.28	0.007	(4.01 - 4.71) [3.45, 5.29]
Cystine (% DW)	0.62 (0.0098) [0.56 - 0.65]	0.60 (0.0098) [0.56 - 0.64]	0.019 (0.0038) [-0.024 - 0.037]	0.011, 0.027	<0.001	(0.55 - 0.62) [0.49, 0.68]
Glutamic Acid (% DW)	7.63 (0.059) [7.42 - 7.90]	7.29 (0.059) [7.03 - 7.71]	0.34 (0.055) [-0.0052 - 0.76]	0.22, 0.46	<0.001	(6.67 - 7.99) [5.51, 9.04]
Glycine (% DW)	1.79 (0.012) [1.76 - 1.87]	1.73 (0.012) [1.67 - 1.81]	0.062 (0.0098) [0.0039 - 0.14]	0.035, 0.090	0.003	(1.61 - 1.86) [1.39, 2.05]
Histidine (% DW)	1.09 (0.0073) [1.06 - 1.14]	1.05 (0.0073) [1.02 - 1.10]	0.036 (0.0074) [-0.013 - 0.090]	0.021, 0.051	<0.001	(0.98 - 1.13) [0.86, 1.27]
Isoleucine (% DW)	1.87 (0.018) [1.75 - 1.97]	1.78 (0.018) [1.70 - 1.86]	0.088 (0.018) [-0.052 - 0.24]	0.050, 0.13	<0.001	(1.62 - 2.00) [1.34, 2.28]

Table 12. Statistical Summary of Combined Site Soybean Seed Amino Acid, Fatty Acid, Fiber, Proximate, Vitamin, Antinutrient and Isoflavone Content for Test (MON 87769) vs. the Conventional Control (A3525) (cont.)

Analytical Component (Units) ¹	MON 87769 Mean (S.E.) [Range]	A3525 Mean (S.E.) [Range]	Difference (Test minus Control)			Commercial (Range) [99% Tolerance Interval ²]
			Mean (S.E.) [Range]	95% CI (Lower, Upper)	p-Value	
Amino Acid (% DW)						
Leucine (% DW)	3.19 (0.017) [3.13 - 3.32]	3.09 (0.017) [3.01 - 3.19]	0.10 (0.020) [-0.019 - 0.26]	0.059, 0.14	<0.001	(2.86 - 3.37) [2.45, 3.76]
Lysine (% DW)	2.67 (0.020) [2.61 - 2.75]	2.60 (0.020) [2.51 - 2.73]	0.070 (0.016) [-0.059 - 0.19]	0.036, 0.10	<0.001	(2.42 - 2.78) [2.13, 3.06]
Methionine (% DW)	0.60 (0.0067) [0.54 - 0.62]	0.58 (0.0067) [0.56 - 0.60]	0.017 (0.0057) [-0.030 - 0.038]	0.0015, 0.033	0.038	(0.52 - 0.61) [0.48, 0.66]
Phenylalanine (% DW)	2.14 (0.011) [2.08 - 2.24]	2.06 (0.011) [1.99 - 2.15]	0.075 (0.015) [-0.016 - 0.20]	0.038, 0.11	0.002	(1.92 - 2.29) [1.61, 2.55]
Proline (% DW)	2.09 (0.018) [2.03 - 2.19]	1.99 (0.018) [1.91 - 2.09]	0.10 (0.015) [0.016 - 0.25]	0.070, 0.13	<0.001	(1.81 - 2.16) [1.53, 2.45]
Serine (% DW)	2.20 (0.016) [2.08 - 2.25]	2.14 (0.016) [2.00 - 2.29]	0.055 (0.023) [-0.11 - 0.21]	0.0020, 0.11	0.043	(1.97 - 2.27) [1.75, 2.51]
Threonine (% DW)	1.60 (0.0095) [1.54 - 1.65]	1.57 (0.0095) [1.49 - 1.62]	0.030 (0.013) [-0.058 - 0.15]	0.0022, 0.057	0.035	(1.45 - 1.65) [1.30, 1.82]
Tryptophan (% DW)	0.47 (0.0064) [0.45 - 0.51]	0.46 (0.0064) [0.44 - 0.50]	0.010 (0.0053) [-0.019 - 0.059]	-0.00097, 0.022	0.069	(0.43 - 0.52) [0.35, 0.59]

Table 12. Statistical Summary of Combined Site Soybean Seed Amino Acid, Fatty Acid, Fiber, Proximate, Vitamin, Antinutrient and Isoflavone Content for Test (MON 87769) vs. the Conventional Control (A3525) (cont.)

Analytical Component (Units) ¹	MON 87769 Mean (S.E.) [Range]	A3525 Mean (S.E.) [Range]	Difference (Test minus Control)			Commercial (Range) [99% Tolerance Interval ²]
			Mean (S.E.) [Range]	95% CI (Lower, Upper)	p-Value	
Amino Acid (% DW)						
Tyrosine (% DW)	1.40 (0.016) [1.27 - 1.50]	1.34 (0.016) [1.26 - 1.44]	0.059 (0.021) [-0.072 - 0.21]	0.014, 0.10	0.013	(1.21 - 1.49) [1.03, 1.67]
Valine (% DW)	1.98 (0.019) [1.84 - 2.08]	1.88 (0.019) [1.78 - 1.96]	0.096 (0.021) [-0.063 - 0.26]	0.053, 0.14	<0.001	(1.70 - 2.11) [1.42, 2.41]
Fatty Acid (% Total FA)						
16:0 Palmitic (% Total FA)	12.06 (0.13) [11.53 - 12.54]	11.77 (0.13) [11.14 - 12.08]	0.29 (0.052) [-0.080 - 0.75]	0.19, 0.40	<0.001	(9.88 - 12.33) [7.28, 14.20]
18:0 Stearic (% Total FA)	4.19 (0.10) [3.73 - 4.53]	4.15 (0.10) [3.85 - 4.44]	0.042 (0.031) [-0.16 - 0.19]	-0.044, 0.13	0.245	(3.68 - 4.89) [2.87, 5.85]
18:1 Total 18:1 Cis (% Total FA)	15.18 (0.95) [12.66 - 18.80]	19.19 (0.95) [17.24 - 21.17]	-4.02 (0.52) [-5.38 - -1.95]	-5.46, -2.57	0.001	(16.70 - 23.16) [12.56, 27.98]
18:2 9c,12c Linoleic (% Total FA)	22.78 (1.64) [16.46 - 30.81]	54.93 (1.64) [54.05 - 56.04]	-32.16 (2.32) [-38.90 - -23.68]	-37.50, -26.81	<0.001	(53.36 - 57.39) [50.46, 59.96]
18:3 Linolenic (% Total FA)	11.18 (0.46) [10.20 - 11.80]	9.20 (0.46) [7.42 - 10.66]	1.98 (0.50) [0.82 - 3.89]	0.60, 3.36	0.016	(6.95 - 10.58) [3.72, 13.46]
20:0 Arachidic (% Total FA)	0.34 (0.0090) [0.31 - 0.37]	0.31 (0.0090) [0.28 - 0.34]	0.031 (0.0027) [0.017 - 0.058]	0.025, 0.036	<0.001	(0.27 - 0.36) [0.20, 0.45]

Table 12. Statistical Summary of Combined Site Soybean Seed Amino Acid, Fatty Acid, Fiber, Proximate, Vitamin, Antinutrient and Isoflavone Content for Test (MON 87769) vs. the Conventional Control (A3525) (cont.)

Analytical Component (Units) ¹	MON 87769 Mean (S.E.) [Range]	A3525 Mean (S.E.) [Range]	Difference (Test minus Control)			Commercial (Range) [99% Tolerance Interval ²]
			Mean (S.E.) [Range]	95% CI (Lower, Upper)	p-Value	
Fatty Acid (% Total FA)						
20:1 Eicosenoic (% Total FA)	0.14 (0.023) [0.075 - 0.20]	0.13 (0.023) [0.069 - 0.19]	0.012 (0.0094) [-0.058 - 0.072]	-0.014, 0.038	0.282	(0.071 - 0.19) [0, 0.31]
22:0 Behenic (% Total FA)	0.29 (0.0069) [0.26 - 0.31]	0.32 (0.0069) [0.28 - 0.37]	-0.026 (0.0087) [-0.11 - 0.022]	-0.047, -0.0050	0.023	(0.30 - 0.41) [0.22, 0.49]
Fiber						
Acid Detergent Fiber (% DW)	16.77 (0.42) [14.38 - 18.31]	16.90 (0.42) [13.80 - 18.15]	-0.14 (0.50) [-1.91 - 2.65]	-1.51, 1.24	0.794	(14.57 - 18.85) [10.36, 22.77]
Neutral Detergent Fiber (% DW)	16.84 (0.38) [15.06 - 19.15]	17.18 (0.38) [14.43 - 19.37]	-0.34 (0.41) [-2.82 - 2.32]	-1.19, 0.50	0.411	(15.03 - 18.92) [10.91, 22.59]
Proximate						
Ash (% DW)	5.72 (0.092) [5.23 - 6.17]	5.63 (0.092) [5.24 - 6.07]	0.098 (0.057) [-0.34 - 0.62]	-0.024, 0.22	0.106	(5.59 - 6.20) [5.16, 6.64]
Carbohydrates (% DW)	36.45 (0.99) [33.23 - 39.93]	38.68 (0.99) [35.30 - 42.60]	-2.24 (0.53) [-6.24 - 2.23]	-3.32, -1.15	<0.001	(33.50 - 40.22) [26.76, 45.99]
Moisture (% FW)	7.47 (0.17) [6.71 - 8.21]	7.41 (0.17) [6.84 - 8.11]	0.063 (0.10) [-0.66 - 0.84]	-0.22, 0.35	0.572	(6.68 - 8.16) [5.23, 9.56]
Protein (% DW)	41.92 (0.27) [40.92 - 43.36]	39.75 (0.27) [38.22 - 41.58]	2.18 (0.31) [0.90 - 5.07]	1.51, 2.84	<0.001	(37.52 - 42.37) [33.37, 46.00]

Table 12. Statistical Summary of Combined Site Soybean Seed Amino Acid, Fatty Acid, Fiber, Proximate, Vitamin, Antinutrient and Isoflavone Content for Test (MON 87769) vs. the Conventional Control (A3525) (cont.)

Analytical Component (Units) ¹	MON 87769 Mean (S.E.) [Range]	A3525 Mean (S.E.) [Range]	Difference (Test minus Control)			Commercial (Range) [99% Tolerance Interval ²]
			Mean (S.E.) [Range]	95% CI (Lower, Upper)	p-Value	
Proximate						
Total Fat (% DW)	15.91 (1.05) [12.95 - 19.03]	15.94 (1.05) [12.73 - 18.80]	-0.037 (0.61) [-3.01 - 3.27]	-1.74, 1.66	0.955	(13.99 - 20.56) [11.04, 25.03]
Vitamin						
Vitamin E (mg/100g DW)	1.56 (0.26) [0.86 - 2.54]	1.43 (0.26) [0.70 - 2.22]	0.13 (0.10) [-0.35 - 0.55]	-0.16, 0.42	0.271	(0.27 - 2.93) [0, 4.65]
Antinutrient						
Lectin (H.U./mg DW)	3.55 (0.80) [0.55 - 8.07]	3.73 (0.80) [0.71 - 11.32]	-0.18 (0.81) [-7.01 - 5.13]	-2.43, 2.07	0.836	(0.81 - 9.73) [0, 16.00]
Phytic Acid (% DW)	1.05 (0.059) [0.81 - 1.34]	1.02 (0.059) [0.75 - 1.26]	0.031 (0.030) [-0.13 - 0.16]	-0.052, 0.11	0.357	(0.81 - 1.27) [0.51, 1.59]
Raffinose (% DW)	0.37 (0.019) [0.32 - 0.45]	0.35 (0.019) [0.29 - 0.45]	0.022 (0.011) [-0.067 - 0.099]	-0.00076, 0.045	0.057	(0.31 - 0.42) [0.19, 0.52]
Stachyose (% DW)	2.83 (0.11) [2.28 - 3.27]	2.75 (0.11) [2.43 - 3.21]	0.081 (0.070) [-0.46 - 0.47]	-0.064, 0.23	0.259	(2.23 - 3.29) [1.61, 4.05]
Trypsin Inhibitor (TIU/mg DW)	33.81 (2.81) [24.30 - 54.80]	31.10 (2.81) [21.34 - 41.69]	2.71 (2.01) [-10.58 - 29.14]	-1.44, 6.87	0.190	(24.29 - 46.29) [8.09, 57.27]
Isoflavone						
Daidzein (µg/g DW)	1187.81 (188.32) [957.23 - 1838.91]	1807.36 (188.32) [1380.05 - 2775.08]	-619.55 (120.04) [-1385.89 - -186.51]	-952.84, -286.26	0.006	(783.49 - 1691.97) [0, 2594.50]

Table 12. Statistical Summary of Combined Site Soybean Seed Amino Acid, Fatty Acid, Fiber, Proximate, Vitamin, Antinutrient and Isoflavone Content for Test (MON 87769) vs. the Conventional Control (A3525) (cont.)

Analytical Component (Units) ¹	MON 87769 Mean (S.E.) [Range]	A3525 Mean (S.E.) [Range]	Difference (Test minus Control)			Commercial (Range) [99% Tolerance Interval ²]
			Mean (S.E.) [Range]	95% CI (Lower, Upper)	p-Value	
Isoflavone						
Genistein (µg/g DW)	733.64 (114.81) [576.70 - 1118.40]	1136.52 (114.81) [770.81 - 1706.74]	-402.88 (80.11) [-821.84 - -86.03]	-625.30, -180.45	0.007	(741.53 - 1580.48) [254.31, 1976.30]
Glycitein (µg/g DW)	82.73 (5.66) [65.37 - 106.72]	102.18 (5.66) [65.51 - 158.73]	-19.45 (6.25) [-93.36 - 1.49]	-32.35, -6.55	0.004	(74.87 - 189.64) [0, 243.40]

¹DW = dry weight; FW = fresh weight; FA = fatty acid; S.E. = standard error; CI = Confidence Interval.

²With 95% confidence, interval contains 99% of the values expressed in the population of commercial substances. Negative limits were set to zero.

Table 13. Summary of Differences (p<0.05) for the Comparison of Soybean Component Levels for Test (MON 87769) vs. the Conventional Control (A3525) and Commercial Reference Substances

Component (Units) ¹	Site	MON 87769 Mean	A3525 Mean	Mean Difference (Test minus Control)		Test Range	Commercial Tolerance Interval ²
				Mean Difference (% of A3525)	Signif. (p-Value)		
Statistical Differences Observed in Combined-Site Analysis							
Seed Amino Acid (% DW)							
Alanine (% DW)	Combined Site	1.78	1.74	2.51	0.001	[1.76 - 1.84]	[1.45, 2.02]
Arginine (% DW)	Combined Site	3.23	2.95	9.35	<0.001	[3.00 - 3.61]	[2.13, 3.62]
Aspartic Acid (% DW)	Combined Site	4.54	4.36	4.04	0.007	[4.41 - 4.73]	[3.45, 5.29]
Cystine (% DW)	Combined Site	0.62	0.60	3.23	<0.001	[0.56 - 0.65]	[0.49, 0.68]
Glutamic Acid (% DW)	Combined Site	7.63	7.29	4.70	<0.001	[7.42 - 7.90]	[5.51, 9.04]
Glycine (% DW)	Combined Site	1.79	1.73	3.60	0.003	[1.76 - 1.87]	[1.39, 2.05]
Histidine (% DW)	Combined Site	1.09	1.05	3.42	<0.001	[1.06 - 1.14]	[0.86, 1.27]
Isoleucine (% DW)	Combined Site	1.87	1.78	4.95	<0.001	[1.75 - 1.97]	[1.34, 2.28]
Leucine (% DW)	Combined Site	3.19	3.09	3.28	<0.001	[3.13 - 3.32]	[2.45, 3.76]
Lysine (% DW)	Combined Site	2.67	2.60	2.69	<0.001	[2.61 - 2.75]	[2.13, 3.06]
Methionine (% DW)	Combined Site	0.60	0.58	2.99	0.038	[0.54 - 0.62]	[0.48, 0.66]
Phenylalanine (% DW)	Combined Site	2.14	2.06	3.63	0.002	[2.08 - 2.24]	[1.61, 2.55]

Table 13. Summary of Differences (p<0.05) for the Comparison of Soybean Component Levels for Test (MON 87769) vs. the Conventional Control (A3525) and Commercial Reference Substances (cont.)

Component (Units) ¹	Site	MON 87769 Mean	A3525 Mean	Mean Difference (Test minus Control)		Test Range	Commercial Tolerance Interval ²
				Mean Difference (% of A3525)	Signif. (p-Value)		
Statistical Differences Observed in Combined-Site Analysis							
Seed Amino Acid (% DW)							
Proline (% DW)	Combined Site	2.09	1.99	5.13	<0.001	[2.03 - 2.19]	[1.53, 2.45]
Serine (% DW)	Combined Site	2.20	2.14	2.55	0.043	[2.08 - 2.25]	[1.75, 2.51]
Threonine (% DW)	Combined Site	1.60	1.57	1.90	0.035	[1.54 - 1.65]	[1.30, 1.82]
Tyrosine (% DW)	Combined Site	1.40	1.34	4.43	0.013	[1.27 - 1.50]	[1.03, 1.67]
Valine (% DW)	Combined Site	1.98	1.88	5.08	<0.001	[1.84 - 2.08]	[1.42, 2.41]
Seed Fatty Acid (% Total FA)							
16:0 Palmitic (% Total FA)	Combined Site	12.06	11.77	2.50	<0.001	[11.53 - 12.54]	[7.28, 14.20]
18:1 Total 18:1 Cis (% Total FA)	Combined Site	15.18	19.19	-20.92	0.001	[12.66 - 18.80]	[12.56, 27.98]
18:2 9c,12c Linoleic (% Total FA)	Combined Site	22.78	54.93	-58.53	<0.001	[16.46 - 30.81]	[50.46, 59.96]
18:3 Linolenic (% Total FA)	Combined Site	11.18	9.20	21.51	0.016	[10.20 - 11.80]	[3.72, 13.46]
20:0 Arachidic (% Total FA)	Combined Site	0.34	0.31	9.88	<0.001	[0.31 - 0.37]	[0.20, 0.45]
22:0 Behenic (% Total FA)	Combined Site	0.29	0.32	-8.30	0.023	[0.26 - 0.31]	[0.22, 0.49]
Seed Proximate							
Carbohydrates (% DW)	Combined Site	36.45	38.68	-5.78	<0.001	[33.23 - 39.93]	[26.76, 45.99]

Table 13. Summary of Differences (p<0.05) for the Comparison of Soybean Component Levels for Test (MON 87769) vs. the Conventional Control (A3525) and Commercial Reference Substances (cont.)

Component (Units) ¹	Site	MON 87769 Mean	A3525 Mean	Mean Difference (Test minus Control)		Test Range	Commercial Tolerance Interval ²
				Mean Difference (% of A3525)	Signif. (p-Value)		
Statistical Differences Observed in Combined-Site Analysis							
Seed Proximate							
Protein (% DW)	Combined Site	41.92	39.75	5.47	<0.001	[40.92 - 43.36]	[33.37, 46.00]
Seed Isoflavone							
Daidzein (µg/g DW)	Combined Site	1187.81	1807.36	-34.28	0.006	[957.23 - 1838.91]	[0, 2594.50]
Genistein (µg/g DW)	Combined Site	733.64	1136.52	-35.45	0.007	[576.70 - 1118.40]	[254.31, 1976.30]
Glycitein (µg/g DW)	Combined Site	82.73	102.18	-19.04	0.004	[65.37 - 106.72]	[0, 243.40]
Statistical Differences Observed in More than One Individual Site							
Seed Amino Acid (% DW)							
Arginine (% DW)	Site IA-2	3.42	3.11	10.03	0.003	[3.36 - 3.50]	[2.13, 3.62]
	Site OH	3.11	2.86	8.67	0.012	[3.07 - 3.15]	
Cystine (% DW)	Site IA-2	0.62	0.60	4.05	0.005	[0.62 - 0.63]	[0.49, 0.68]
	Site IL	0.63	0.61	3.21	0.010	[0.62 - 0.64]	
Glycine (% DW)	Site IA-1	1.80	1.72	4.38	0.046	[1.79 - 1.80]	[1.39, 2.05]
	Site OH	1.76	1.71	2.87	0.024	[1.76 - 1.77]	
Phenylalanine (% DW)	Site IA-1	2.13	2.03	5.18	0.024	[2.08 - 2.16]	[1.61, 2.55]
	Site OH	2.12	2.05	3.69	0.015	[2.12 - 2.13]	

Table 13. Summary of Differences (p<0.05) for the Comparison of Soybean Component Levels for Test (MON 87769) vs. the Conventional Control (A3525) and Commercial Reference Substances (cont.)

Component (Units) ¹	Site	MON 87769 Mean	A3525 Mean	Mean Difference (Test minus Control)		Test Range	Commercial Tolerance Interval ²
				Mean Difference (% of A3525)	Signif. (p-Value)		
Statistical Differences Observed in More than One Individual Site							
Seed Amino Acid (% DW)							
Proline (% DW)	Site IA-1	2.12	2.00	5.77	0.039	[2.11 - 2.13]	[1.53, 2.45]
	Site IA-2	2.12	2.06	2.94	0.014	[2.09 - 2.15]	
	Site OH	2.05	1.95	4.98	0.011	[2.03 - 2.06]	
Seed Fatty Acid (% Total FA)							
16:0 Palmitic (% Total FA)	Site IL	12.31	12.00	2.51	0.024	[12.24 - 12.39]	[7.28, 14.20]
	Site MI	12.11	11.79	2.66	0.019	[12.03 - 12.19]	
18:1 Total 18:1 Cis (% Total FA)	Site IA-1	13.42	18.45	-27.29	0.001	[13.14 - 13.80]	[12.56, 27.98]
	Site IA-2	13.56	18.53	-26.84	0.003	[12.93 - 14.36]	
	Site IL	17.89	20.89	-14.35	0.010	[17.52 - 18.18]	
	Site MI	12.92	17.44	-25.95	<0.001	[12.66 - 13.16]	
	Site OH	18.10	20.65	-12.31	0.046	[16.73 - 18.80]	
18:2 9c,12c Linoleic (% Total FA)	Site IA-1	18.46	54.90	-66.39	<0.001	[18.24 - 18.68]	[50.46, 59.96]
	Site IA-2	21.19	55.33	-61.70	<0.001	[20.36 - 22.78]	

Table 13. Summary of Differences (p<0.05) for the Comparison of Soybean Component Levels for Test (MON 87769) vs. the Conventional Control (A3525) and Commercial Reference Substances (cont.)

Component (Units) ¹	Site	MON 87769 Mean	A3525 Mean	Mean Difference (Test minus Control)		Test Range	Commercial Tolerance Interval ²
				Mean Difference (% of A3525)	Signif. (p-Value)		
Statistical Differences Observed in More than One Individual Site							
Seed Fatty Acid (% Total FA)							
18:2 9c,12c Linoleic (% Total FA)	Site IL	30.48	54.33	-43.90	<0.001	[30.26 - 30.81]	
	Site MI	18.40	55.60	-66.92	<0.001	[16.46 - 19.58]	
	Site OH	25.37	54.50	-53.45	<0.001	[25.06 - 25.75]	
18:3 Linolenic (% Total FA)	Site IA-1	11.11	9.85	12.85	<0.001	[11.08 - 11.13]	[3.72, 13.46]
	Site IA-2	11.14	9.96	11.84	0.018	[11.10 - 11.18]	
	Site IL	10.27	7.59	35.25	0.002	[10.20 - 10.38]	
	Site MI	11.76	10.59	10.99	0.001	[11.72 - 11.80]	
	Site OH	11.63	8.02	45.05	0.001	[11.41 - 11.75]	
20:0 Arachidic (% Total FA)	Site IA-1	0.33	0.30	10.66	0.005	[0.32 - 0.34]	[0.20, 0.45]
	Site IL	0.36	0.34	8.18	0.025	[0.36 - 0.37]	
	Site MI	0.32	0.29	10.39	0.029	[0.31 - 0.32]	
	Site OH	0.36	0.33	8.57	0.011	[0.35 - 0.36]	

Table 13. Summary of Differences (p<0.05) for the Comparison of Soybean Component Levels for Test (MON 87769) vs. the Conventional Control (A3525) and Commercial Reference Substances (cont.)

Component (Units) ¹	Site	MON 87769 Mean	A3525 Mean	Mean Difference (Test minus Control)		Test Range	Commercial Tolerance Interval ²
				Mean Difference (% of A3525)	Signif. (p-Value)		
Statistical Differences Observed in More than One Individual Site							
Seed Fatty Acid (% Total FA)							
22:0 Behenic (% Total FA)	Site IA-1	0.29	0.31	-8.90	0.018	[0.26 - 0.31]	[0.22, 0.49]
	Site IL	0.31	0.33	-6.71	0.046	[0.30 - 0.31]	
Seed Isoflavone							
Daidzein (µg/g DW)	Site IA-1	995.39	1550.96	-35.82	0.001	[978.37 - 1026.28]	[0, 2594.50]
	Site IA-2	1076.04	1583.00	-32.03	0.002	[999.02 - 1130.31]	
	Site MI	1662.22	2750.13	-39.56	0.016	[1389.19 - 1838.91]	
	Site OH	1125.54	1668.07	-32.52	0.002	[1094.38 - 1183.11]	
Genistein (µg/g DW)	Site IA-1	594.53	973.04	-38.90	<0.001	[584.75 - 612.91]	[254.31, 1976.30]
	Site IA-2	656.80	1044.68	-37.13	0.001	[612.27 - 687.55]	
	Site MI	1000.90	1683.74	-40.55	0.010	[841.05 - 1118.40]	
	Site OH	760.07	1143.19	-33.51	0.003	[750.00 - 773.91]	
Statistical Differences Observed in One Site							
Forage Fiber							
Acid Detergent Fiber (% DW)	Site OH	32.29	28.31	14.09	0.009	[30.74 - 33.95]	[19.24, 38.36]
Forage Proximate							
Total Fat (% DW)	Site IA-2	4.87	6.27	-22.39	0.037	[4.40 - 5.28]	[1.46, 9.88]

Table 13. Summary of Differences (p<0.05) for the Comparison of Soybean Component Levels for Test (MON 87769) vs. the Conventional Control (A3525) and Commercial Reference Substances (cont.)

Component (Units) ¹	Site	MON 87769 Mean	A3525 Mean	Mean Difference (Test minus Control)		Test Range	Commercial Tolerance Interval ²
				Mean Difference (% of A3525)	Signif. (p-Value)		
Statistical Differences Observed in One Site							
Seed Amino Acid (% DW)							
Aspartic Acid (% DW)	Site OH	4.43	4.27	3.72	0.021	[4.41 - 4.47]	[3.45, 5.29]
Glutamic Acid (% DW)	Site OH	7.51	7.17	4.67	0.020	[7.42 - 7.59]	[5.51, 9.04]
Histidine (% DW)	Site OH	1.07	1.03	3.20	0.003	[1.06 - 1.07]	[0.86, 1.27]
Isoleucine (% DW)	Site OH	1.87	1.75	6.53	0.025	[1.84 - 1.90]	[1.34, 2.28]
Leucine (% DW)	Site OH	3.16	3.05	3.42	0.016	[3.14 - 3.18]	[2.45, 3.76]
Lysine (% DW)	Site OH	2.62	2.56	2.46	0.020	[2.61 - 2.63]	[2.13, 3.06]
Valine (% DW)	Site OH	1.96	1.84	6.62	0.027	[1.94 - 2.01]	[1.42, 2.41]
Seed Fiber							
Acid Detergent Fiber (% DW)	Site IL	16.16	17.76	-9.00	0.005	[15.91 - 16.61]	[10.36, 22.77]
Neutral Detergent Fiber (% DW)	Site IL	17.06	17.87	-4.52	0.043	[16.72 - 17.25]	[10.91, 22.59]
Seed Proximate							
Ash (% DW)	Site OH	5.83	5.71	2.12	0.022	[5.78 - 5.93]	[5.16, 6.64]
Protein (% DW)	Site OH	41.37	39.54	4.63	0.008	[40.92 - 41.70]	[33.37, 46.00]
Seed Antinutrient							
Lectin (H.U./mg DW)	Site MI	1.49	3.44	-56.79	0.019	[0.55 - 2.14]	[0, 16.00]

Table 13. Summary of Differences (p<0.05) for the Comparison of Soybean Component Levels for Test (MON 87769) vs. the Conventional Control (A3525) and Commercial Reference Substances (cont.)

Component (Units) ¹	Site	MON 87769 Mean	A3525 Mean	Mean Difference (Test minus Control)		Test Range	Commercial Tolerance Interval ²
				Mean Difference (% of A3525)	Signif. (p-Value)		
Statistical Differences Observed in One Site							
Seed Antinutrient							
Phytic Acid (% DW)	Site IA-1	1.28	1.17	9.49	0.041	[1.22 - 1.34]	[0.51, 1.59]
Seed Isoflavone							
Glycitein (µg/g DW)	Site IL	84.86	120.49	-29.57	0.044	[83.23 - 87.74]	[0, 243.40]

¹DW = dry weight; FA = fatty acid.

²With 95% confidence, interval contains 99% of the values expressed in the population of commercial substances. Negative limits were set to zero.

Table 14. Statistical Summary of Soybean 18:3 9c,12c,15t (Trans ALA), 18:3 Gamma Linolenic, 18:4 6c,9c,12c,15t (Trans SDA) and 18:4 Stearidonic Fatty Acid Content for Test (MON 87769)

Analytical Component (Units) ¹	MON 87769 Mean (S.E.)	MON 87769 (Range)
Site IA-1 Seed Fatty Acid (% Total FA)		
18:3 9c,12c,15t (Trans ALA) (% Total FA)	0.47 (0.0087)	[0.46 - 0.48]
18:3 Gamma Linolenic (% Total FA)	7.26 (0.010)	[7.25 - 7.28]
18:4 6c,9c,12c,15t (Trans SDA) (% Total FA)	0.24 (0.0081)	[0.23 - 0.26]
18:4 Stearidonic (% Total FA)	31.93 (0.23)	[31.51 - 32.28]
Site IA-2 Seed Fatty Acid (% Total FA)		
18:3 9c,12c,15t (Trans ALA) (% Total FA)	0.43 (0.012)	[0.41 - 0.45]
18:3 Gamma Linolenic (% Total FA)	7.99 (0.033)	[7.92 - 8.03]
18:4 6c,9c,12c,15t (Trans SDA) (% Total FA)	0.20 (0.010)	[0.19 - 0.22]
18:4 Stearidonic (% Total FA)	28.77 (1.09)	[26.60 - 30.14]
Site IL Seed Fatty Acid (% Total FA)		
18:3 9c,12c,15t (Trans ALA) (% Total FA)	0.38 (0.0054)	[0.38 - 0.39]
18:3 Gamma Linolenic (% Total FA)	6.22 (0.062)	[6.15 - 6.34]
18:4 6c,9c,12c,15t (Trans SDA) (% Total FA)	0.061 (0.0022)	[0.058 - 0.065]
18:4 Stearidonic (% Total FA)	17.11 (0.26)	[16.83 - 17.64]

Table 14. Statistical Summary of Soybean 18:3 9c,12c,15t (Trans ALA), 18:3 Gamma Linolenic, 18:4 6c,9c,12c,15t (Trans SDA) and 18:4 Stearidonic Fatty Acid Content for Test (MON 87769) (cont.)

Analytical Component (Units) ¹	MON 87769 Mean (S.E.)	MON 87769 (Range)
Site MI Seed Fatty Acid (% Total FA)		
18:3 9c,12c,15t (Trans ALA) (% Total FA)	0.47 (0.0081)	[0.45 - 0.48]
18:3 Gamma Linolenic (% Total FA)	7.64 (0.14)	[7.36 - 7.78]
18:4 6c,9c,12c,15t (Trans SDA) (% Total FA)	0.24 (0.0090)	[0.22 - 0.25]
18:4 Stearidonic (% Total FA)	31.91 (1.03)	[30.49 - 33.92]
Site OH Seed Fatty Acid (% Total FA)		
18:3 9c,12c,15t (Trans ALA) (% Total FA)	0.43 (0.0025)	[0.43 - 0.44]
18:3 Gamma Linolenic (% Total FA)	6.33 (0.24)	[6.07 - 6.82]
18:4 6c,9c,12c,15t (Trans SDA) (% Total FA)	0.14 (0.0074)	[0.14 - 0.16]
18:4 Stearidonic (% Total FA)	20.95 (0.65)	[20.14 - 22.25]
Combined Site Seed Fatty Acid (% Total FA)		
18:3 9c,12c,15t (Trans ALA) (% Total FA)	0.44 (0.0091)	[0.38 - 0.48]
18:3 Gamma Linolenic (% Total FA)	7.09 (0.19)	[6.07 - 8.03]
18:4 6c,9c,12c,15t (Trans SDA) (% Total FA)	0.18 (0.019)	[0.058 - 0.26]
18:4 Stearidonic (% Total FA)	26.13 (1.64)	[16.83 - 33.92]

¹FA = fatty acid; S.E. = standard error.

Listing 1. Components Excluded from Summary and Analysis Due to Excessive Observations Below the Assay's Limit of Quantitation

Tissue	Category	Analyte	(N) Below LOQ	(N) Total	(%)
Seed	Fatty Acid	10:0 Capric	45	45	100.0
		12:0 Lauric	45	45	100.0
		14:0 Myristic	45	45	100.0
		14:1 Myristoleic	45	45	100.0
		15:0 Pentadecanoic	45	45	100.0
		15:1 Pentadecenoic	45	45	100.0
		16:1 Palmitoleic	45	45	100.0
		17:0 Heptadecanoic	44	45	97.8
		17:1 Heptadecenoic	45	45	100.0
		18:1T Total 18:1 Trans	45	45	100.0
		18:2 6c,9c (Isolinoleic Acid)	45	45	100.0
		18:2T Total 18:2 Trans	45	45	100.0
		18:3 9c,12c,15t (Trans ALA)	30	45	66.7
		18:3 Gamma Linolenic	30	45	66.7
		18:3 Other 18:3 Trans	45	45	100.0
		18:4 6c,9c,12c,15t (Trans SDA)	33	45	73.3
		18:4 Stearidonic	27	45	60.0

Listing 1. Components Excluded from Summary and Analysis Due to Excessive Observations Below the Assay's Limit of Quantitation

Tissue	Category	Analyte	(N) Below LOQ	(N) Total	(%)
		20:2 Eicosadienoic	45	45	100.0
		20:3 Eicosatrienoic	45	45	100.0
		20:4 Arachidonic	45	45	100.0
		20:5 Eicosapentaenoic	45	45	100.0
		22:1 Erucic	45	45	100.0
		22:5 Docosapentaenoic	45	45	100.0
		22:6 Docosahexaenoic	45	45	100.0
		24:0 Lignoceric	39	45	86.7
		8:0 Caprylic	45	45	100.0

Listing 2. Components with Observations Below the Assay's Limit of Quantitation Not Excluded from Summaries and Analysis

Tissue	Category	Analyte	Material	Site	Rep	Original Value	Value Assigned
Seed	Fatty Acid	18:4 6c,9c,12c,15t (Trans SDA)	MON 87769	Site IL	1	< 0.0200	0.010
				Site IL	2	< 0.0200	0.010
				Site IL	3	< 0.0200	0.010
			A2804	Site MI	1	< 0.0200	0.010
		20:1 Eicosenoic	A3244	Site IA-1	1	< 0.0200	0.010
			A3525	Site IA-1	1	< 0.0200	0.010
					2	< 0.0200	0.010
					3	< 0.0200	0.010
				Site IA-2	1	< 0.0200	0.010
					2	< 0.0200	0.010
					3	< 0.0200	0.010
				Site MI	2	< 0.0200	0.010
					3	< 0.0200	0.010
			Lewis 372	Site IA-2	1	< 0.0200	0.010
			MON 87769	Site IA-1	1	< 0.0200	0.010
					2	< 0.0200	0.010
				Site IA-2	1	< 0.0200	0.010
					1	< 0.0200	0.010
				Site MI	2	< 0.0200	0.010
					3	< 0.0200	0.010
	Vitamin	Vitamin E	ST3300	Site IA-2	1	< 0.500	0.25