

# Report of the Smalley Foundation Committee, 1951-1952

FOLLOWING the custom initiated three years ago, the reports of the four subcommittees of the Smalley Foundation Committee are combined into one report. In doing this, it appears best to discuss the activities of the various subcommittees individually and briefly. Individual detailed reports covering grades and methods of grading, etc., have been mailed to the collaborators by the subcommittee chairman. About 3,000 samples were distributed and the results tabulated.

SMALLEY FOUNDATION COMMITTEE  
 R. T. DOUGHTIE JR.  
 W. C. AULT  
 A. S. RICHARDSON  
 R. W. BATES, chairman

## Subcommittee on Oil Seed Meal

We are presenting herewith the 34th report of the subcommittee on oil seed meal. This year 15 samples were distributed to 117 collaborators. The samples were sent to 27 states, five Canadian provinces, and two South American countries. A graph has been prepared, showing the number of collaborators (based upon the percentage of the total) who were within the recognized tolerance of the accepted average. The general average of all samples was also calculated. The values for the past five seasons are listed:

	'47-'48	'48-'49	'49-'50	'50-'51	'51-'52
Per cent collaborators within tolerance (Moisture).....	48.13	60.63	60.63	60.00	57.20
Per cent collaborators within tolerance (Oil).....	53.86	58.44	53.50	50.70	56.20
Per cent collaborators within tolerance (Nitrogen).....	52.76	51.12	50.98	48.40	50.50

The customary tolerance was used, viz.:  
 ±0.1% on moisture  
 ±0.03% on oil  
 ±0.02% on nitrogen.

Last year we adopted a policy of having the winner of the Smalley Cup serve a two-year term on the subcommittee.

We also adopted a rule in mid-season to eliminate the large number of certificates given for second place on the determination of moisture due to ties. The "Points off" of those tied for second place are recalculated, using no tolerance. A certificate is given to the one having the fewest points off.

The winning collaborators for 1951-52 were:

1. The award of the American Oil Chemists' Society Cup for the highest proficiency in the determination of oil and nitrogen will be awarded to: P. D. Cretien, No. 4, Texas Testing Laboratory, Dallas, Tex., and E. H. Tenent, No. 11, Woodson-Tenent Laboratory, Memphis, Tenn., with a proficiency of 99.990.

This is the third time Mr. Tenent has won a cup so he will be given permanent possession of one. He won in 1924-25 and 1927-28. Mr. Cretien won the cup last year so he will retain the present one for the current year. The other winners were:

### 2. Determination of Oil

	Percentage of Proficiency
1. W. G. Wadlington (25), Woodson-Tenent Lbty., Decatur, Ill.....	100.00
1. Wales Newby (26), Cotton Products Co., Opelousas, La.....	100.00
1. G. R. Thompson (27), Southern Cotton Oil Co., Savannah, Ga.....	100.00
1. D. B. McIsaac (61), Kershaw Oil Company, Kershaw, S. C.....	100.00

### 3. Determination of Nitrogen

1. P. D. Cretien (4), Texas Testing Lbty., Dallas, Texas ..... 99.991
1. E. H. Tenent (11), Woodson-Tenent Lbty., Memphis, Tenn. .... 99.991

### 4. Determination of Moisture

1. H. L. Craig (62), The Procter and Gamble Co., Cincinnati, Ohio..... 100.00
2. A. G. Thompson (33), Southern Cotton Oil Co., Columbia, S. C. .... 99.907

### 5. Honorable Mention

- On Oil and Nitrogen:  
 A. G. Thompson Jr. (33), Southern Cotton Oil Co., Columbia, S. C.  
 B. H. Bruce (96), Southland Cotton Oil Co., Waxahachie, Tex.  
 Their proficiencies were 99.975%.

#### On Oil:

- P. D. Cretien (4), Texas Testing Lbty., Dallas, Tex.  
 E. H. Tenent (11), Woodson-Tenent Lbty., Memphis, Tenn.  
 H. Tamborini (68), California Cotton Oil Co., Los Angeles  
 B. H. Bruce (96), Southland Cotton Oil Co., Waxahachie, Tex.  
 W. N. Kesler (12), Woodson-Tenent Lbty., Little Rock, Ark.  
 A. G. Thompson Jr. (33), Southern Cotton Oil Co., Columbia, S. C.  
 W. F. Beedle (15), Geo. W. Gooch Lbty., Los Angeles, Calif.  
 All had a proficiency of 99.988%.

#### On Nitrogen:

- Edward R. Hahn (7), Hahn Lbty., Columbia, S. C.  
 C. E. Worthington (82), Barrow-Agee Lbty., Cairo, Ill.  
 A. C. Summers (91), State Chemist, Columbia, S. C.  
 All had a proficiency of 99.981%.

#### On Moisture:

- R. R. Haire (30), Planters Mfg. Co., Clarksdale, Miss.  
 B. H. Bruce (96), Southland Cotton Oil Co., Waxahachie, Tex.  
 R. C. Pope (20), Pope Testing Laboratories, Dallas, Tex.  
 All had a proficiency of 99.907%.

Certificates of proficiency will be awarded to the winning collaborators. A complete report listing all standings of the collaborators, previous cup winners, etc., has been mailed to all who took part in the work.

We again wish to express our appreciation on behalf of the American Oil Chemists' Society to Law and Company of Atlanta, Ga. Only through their efficient efforts in the preparation of the samples would the work be possible.

R. W. BARTLETT  
 R. R. HAIRE  
 R. T. DOUGHTIE JR.  
 T. C. LAW  
 T. L. RETTGER  
 P. D. CRETIEEN  
 H. C. BLACK  
 R. W. BATES, chairman

## Subcommittee on Oilseeds

During the 1951-52 season the subcommittee on oil seeds handled three separate series of samples, namely, cottonseed, peanuts, and soybeans. The number of collaborators on each series of samples was 44 on cottonseed, 17 on peanuts, and 23 on soybeans. Overall there were eight less collaborators than during the previous season.

Grades obtained by the collaborators compared very favorably with those of previous seasons. Certificates for proficiency in the analyses will be awarded to the following chemists:

*On the Cottonseed Series:*

First place to A. G. Thompson Jr., Southern Cotton Oil Company, Columbia, S. C., with a grade of 99.40.

Second place to Thomas C. Law, Law and Company, Atlanta, Ga., with a grade of 99.16.

*On the Peanut Series:*

First place to Thomas B. Caldwell, Law and Company, Wilmington, N. C., with a grade of 99.60.

Second place to A. H. Preston, Houston Laboratories, Houston, Tex., with a grade of 99.36.

*On the Soybean Series:*

First place (tie) to William Kesler, Woodson-Tenent Laboratories, Little Rock, Ark., and W. D. Simpson, Woodson-Tenent Laboratories, Des Moines, Ia. Both had a grade of 100.

A complete report showing all grades were mailed to the collaborators.

EDW. R. HAHN  
G. CONNER HENRY  
R. T. DOUGHTIE JR.,  
chairman

**Subcommittee on Tallow and Grease**

Five samples of tallow and grease were distributed to 51 collaborators. Twenty-nine reported moisture, f.f.a., color, titer, insoluble, unsaponifiable material, and the refined and bleached color. The collaborators were not graded on the refined and bleached color.

The color and titer were used as a basis for classifying the material. Accordingly they were classified as follows:

- Sample No. 1—Prime Tallow
- Sample No. 2—No. 1 Tallow
- Sample No. 3—Ex. Choice White Grease
- Sample No. 4—Special Tallow
- Sample No. 5—Yellow Grease

A summary of the refined and bleached color results are as follows:

Sample No.	Mean R & B Color	Standard Deviation
1	3.3 red	0.59 red units
2	15.3	3.2
3	1.6	0.38
4	3.2	1.16
5	(The f.f.a. was too high to allow a proper test)	

Sample No. 5 contained 1% of a relatively non-volatile, white mineral oil, and the recovery was excellent.

The results were excellent in all categories except the color. The F.A.C. colors do not make a clear-cut differentiation between such grades as special and prime tallow.

It is suggested that the color committee give some thought to a better method of measuring color on materials of this type.

Certificates of proficiency will be given to two chemists, viz.:

	Grade
1st. Theodore Biermann, Lever Bros. Co., St. Louis, Mo. ....	99.37%
2nd. R. O. Fosmire, Procter & Gamble Co., Kansas City, Kas. ....	98.74%

The grading system used was that adopted in 1950, viz.:

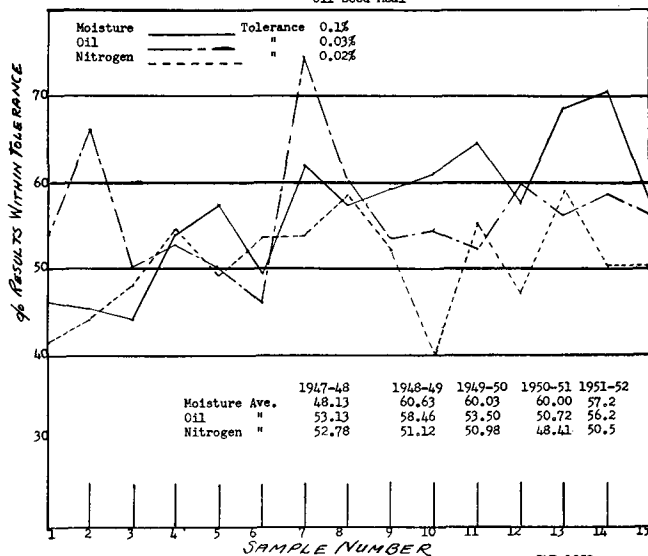
$$\text{Grade} = 100 - \frac{\text{Points off} \times 100}{\text{No. determinations} \times \text{No. of Samples}}$$

A complete detailed report has been sent to all collaborators.

J. L. TRAUTH  
DAN LEE HENRY  
J. E. MARONEY  
K. H. FINK  
R. J. HOULE  
W. C. AULT, chairman

## AMERICAN OIL CHEMISTS SOCIETY

SMALLEY FOUNDATION  
1951-52  
Oil Seed Meal



Geographical Distribution			
Tex.	21	Iowa	4
Ill.	11	Ohio	3
Calif.	9	Ariz.	3
Ga.	8	Minn.	2
Ala.	5	Kas.	2
S.C.	5	N.C.	2
Mo.	4	Wis.	1
Miss.	4	Ind.	1
Ia.	4	Conn.	1
Tenn.	4	Wash.	1
Ark.	4	Va.	1
Okla.	4	Neb.	1
		Pa.	1
		N.H.	1
		N.Y.	1
		Canada	8
		Brazil	1
		Argentina	1
		<b>Total</b>	<b>117</b>

**Subcommittee on Crude Vegetable Oils**

Six samples of crude vegetable oil were distributed to 80 collaborators. Three were cottonseed, and three were soybean oil. Over 60% of the collaborators reported all the results on all of the samples.

As usual, the grades on the cottonseed oil were based on refining loss, refined color, and free fatty acid. The spectrophotometric method was used on the refined oil colors.

On the soybean oils the grades were based on the refining loss, bleached color, and free fatty acid. In general, both Lovibond and spectrophotometric colors were reported and in these cases the color deduction was the average of the deductions by the two methods.

We believe the results in general were as good as those in previous years. A complete tabulation is being mailed to all collaborators.

The collaborators receiving the highest grades were:

	Grade
1st. W. D. Simpson (37), Woodson-Tenent Lbty., Des Moines, Ia. ....	100.00%
2nd. Edward R. Hahn, Hahn Lbty., Columbia, S. C. ....	99.94%

Certificates will be awarded to the winners.

For many years the Procter and Gamble Company has prepared and distributed the vegetable oil samples. Next year it is planned to distribute the samples from a more centrally located point, where a better choice of crude oil is available. The Society is deeply grateful to Procter and Gamble for allowing the time and effort necessary to the extremely successful handling of this phase of the work.

A. A. KIESS  
F. G. DOLLEAR  
F. R. EARLE  
A. S. RICHARDSON,  
chairman