

The American Oil Chemists' Society

Notes and Correspondence

Report of the Planning Committee

Your Planning Committee found that when they took office at the beginning of the year much of the work of the various committees had been planned for the coming season. Some of these plans were due to unfinished programs and other plans by direct instructions from the Society as a whole. Your committee, therefore, felt that it was not best to interfere in any way with the plans of these committees, but to study the situation during the year and make such recommendations for the 1927-28 season as their studies seemed to justify.

Some of our committees have been active practically since the birth of this Society. There are other committees which have been active in the past but have ceased to function in the past few years. We believe that in some cases this was not the best plan to follow even though methods had been standardized to a satisfactory point.

To illustrate, we will take the Ammonia Committee. In the early days of the Society, this committee worked on the various methods for the determination of nitrogen in cottonseed products. They developed a method which, for accuracy and checking, we all feel proud of. This committee, then, was followed up by the Check Meal or Smalley Foundation Committee. Active research work in the ammonia field has not been prosecuted for a number of years. We believe that the method as now standardized and set forth in our rules

should not be tampered with. We do believe, however, that there should be an Ammonia Committee to follow up other phases of ammonia determinations. For instance, there are a number of nitrogenous or ammonia chemicals on the market, the prices of which are about a quarter of that of ammonia in cotton seed meal per unit. Our present method would report the total ammonia without detecting these other ammoniates which might be present either by accident or more likely by unscrupulous admixture. We believe, therefore, that an Ammonia Committee should be appointed to investigate methods for the detection of ammoniates foreign to cottonseed. This committee should take a broad view and should keep well abreast of all information relating to ammoniates either in edible meals or fertilizers, and pass this on by published articles from time to time or by formal report. We would, therefore, recommend that the Smalley Foundation Committee be a distinct committee for the carrying on of the Check Meal work and that another committee be formed to investigate the phases of the ammonia problem outlined above.

Another point which we believe should be considered by the incoming administration, and that is the grouping of committees of one general character under a single head. To illustrate this, we believe there should be a general chairman for color investigations. Under this chairman, there should be sub-committees to investigate the various phases of the color problem which

we have and will continue to have before us. One sub-committee should study the direct reading of colors of oils and determine just how these should be handled. This committee should be in close liaison with the Refining Committee. Other committees on standardization, other sources or substitutes for standard glasses, etc.

We further think that in the refining of oil, etc., the Neutral Oil Committee, as we had this year, should be a sub-committee of the Refining Committee or else be in much closer connection with the work of the Refining Committee, at least to the extent of working on the same samples, so that better comparison of methods might be made and for the proper interpretation of results.

We also suggest, where possible, the personnel of the committees should be so selected that they can get together once or twice during the season. Nothing, in our opinion, furthers the work as much as a chance to talk things over together and, if necessary, have a laboratory demonstration. Geographical proximity of committee members will help in this respect.

To summarize, we recommend as follows:

Refining Committee

General Chairman

Sub-committee to follow up the work the past year and along the same general lines. Sub-committee to investigate "neutral oil methods" for evaluation of crude cottonseed oil. The question of F.F.A. should be handled under this general chairman.

Seed Committee

To co-operate with or as part of an Interstate Committee. This committee should follow the general

lines now being investigated. Data especially are needed showing the relation of laboratory results versus mill out turn.

Color Committee

General Chairman

Sub-committee on preparation of refined oils for color reading. Intensive research on the influence of all the various factors and strict and narrow standards evolved if possible. This committee to be in close liaison with the Refining Committee.

Sub-committee on colorimeter and standardization of members' glasses, etc.

Sub-committee on other sources of satisfactory substitutes for Lovibond glasses of same color values.

Detergents Committee

The program of this committee is well worked out and published for considerable time ahead.

Moisture Committee

We recommend this committee be continued and some means be devised by check samples or otherwise to convince certain members that their apparatus is faulty. Failing this, a single standard method and apparatus should be required of all.

Analysis of Commercial Oils and Fats

The work of this committee is up-to-date and the revised methods recently printed. No specific recommendation as to methods is suggested. Possibly some work could be done to increase the number of Produce Exchanges and other commercial bodies to formally adopt the methods.

Cake Color Committee

The work of this committee should be continued and the method

further refined as experience is gained.

Ammonia Committee

To investigate means of detecting possible adulterations in cottonseed as affecting the protein value. Give annually a general chemical survey of this field.

Committees, such as the Smalley Foundation, Basic Research, etc., we do not regard as coming within the scope of this committee.

J. J. VOLBERTSEN,
W. D. HUTCHINS,
A. W. PUTLAND,
N. C. HAMNER,
H. J. MORRISON, *Chairman.*

Uniform Methods Committee Report

While the Uniform Methods Committee held no meetings prior to our arrival in Memphis, several matters were referred to us and considered by correspondence.

The Report of Committee on Determination of Free Fatty Acid of Oil in Seed.

The Method developed by that Committee was approved and recommended to the Chemist Committee for adoption.

Report of Committee to Develop a Method for color of Cotton Seed Meal and Cake.

Having before us a definite statement that method (2) had been decided upon by the Committee as the most satisfactory for comparison in situ. The adoption of this part of the method was approved and recommended to the Chemist Committee for adoption.

It is now further recommended that a definite degree of fineness be specified, and that the Chemist Committee request the Rules Committee of the Interstate that it be

made a part of Rules 91 and 102.

If a machine is to be employed to make color comparisons, specifications for such machine should be made a part of the method.

Report of Moisture Committee

As this Committee recommends a further study of the Kingman distillation Method, your Committee does not believe that it would be advisable to make a change until definite conclusions have been reached by the Moisture Committee as to the advisability of adopting a Modified Kingman Distillation Method.

Report of the Refining Methods Committee

As this report was thoroughly discussed in an open meeting of the Chemist Committee of the Interstate, the Uniform Methods Committee simply wish to urge that definite specification for a direct-drive Refining Machine be made a part of the Method and further recommends that a Committee be appointed to secure the construction of such machine that it will be available at the beginning of the coming season.

BATTLE,
CAMPBELL,
HAMNER,
PUTLAND,
PAQUIN, *Chairman.*

Report of Refining Test Committee 1926-27

The recommendations of last year's committee were carried out and other points studied. The principal items in this year's work were as follows:

- A. Size and shape of paddles.
- B. Co-operative work on F.F.A.
- C. Variable conditions and ef-

fect of same on present refining method.

- D. Revised present lye tables.
- E. Meeting of committee at Ivorydale in January.
- F. Co-operative samples for refining tests.
- G. Rewrite the entire refining method.

A. Paddles

This confirmed work by previous committees in 1915 to 1916 and 1921 and 1922 showing that straight blade paddles are best. A width of one inch was found much better than the present one-half inch width.

B. F. F. A. Cooperative Work

This was undertaken because errors in this test may have an important bearing on the choice of lye for refining and on the actual refining results. Results and conclusions will be published about August 1st, after all results from the tenth sample are tabulated.

C. Variable Conditions in Refining

This has been the most important part of the work this year. The Proctor and Gamble Company gave the entire time of a research chemist for six months to study those conditions and the effects of same on refining results. The principal results of this work have been published in the JOURNAL OF OIL & FAT INDUSTRY for November and December, 1926. They show that certain points which have previously been subject to modification at the discretion of individual operators

may have a very decided effect on the refining results. The optimum conditions have been determined and specified in detail in the revised method. Tentative specifications for a standard refining machine have been prepared.

D. Revised Lye Tables

Errors in the lye tables previously used have been corrected. The maximum NaOH specified for oils of high F.F.A. has been increased.

E. Meeting of Committee, January 14 and 15

All members of the committee were present at Ivorydale on these two days and had a thorough discussion of all points developed under "C," and planned further work. Also all members witnessed demonstration of the revised procedure. All are agreed that this meeting was one of the most valuable features of the year's work. More can be accomplished in one day under these conditions than in months of ordinary correspondence.

F. Cooperative Refining Samples

Five samples were sent out. The loss and color in general differed but little from the average results by the present official method, but are if anything better in both respects. The main point established however, is that results by the revised method are much more concordant than heretofore obtained by the present method. The last of these samples was sent to all refining chemists who answered a circular letter signifying their willingness to co-operate. Reports were

	Revised Method			Present Official	
	F.F.A.	Loss	Color	Loss	Color
Average . . .	9.07	22.9%	19.3 R.	24.6%	20.2 R*
Max.	9.25	23.8	20.6	28.9	37.5*
Min.	8.8	21.8	16.0	18.9	15.1

*Omitting from table one color reading reported to be "over 50 red" by official method.

received from eight chemists with the following summary of results.

Six out of eight operators report losses by the revised method checking within .8%, while the best six out of eight reports on the official method check only within 3.8% thus showing the superiority of agreement, even on a bad quality oil, by the revised method in the hands of different operators working in different laboratories.

G. Rewrite Method for Refining

The method has been completely rewritten endeavoring to specify every required condition and to leave no discretion to the operator. The conditions thus specified are those which have been found to give the best refining results. Details of the method were published in OIL & FAT INDUSTRIES for February, 1927.

Summary and Recommendations

We have developed the necessary conditions for obtaining standard refining results and have shown that different operators can get almost identical results by following the procedure as described even on oil with high F.F.A. This is a great step forward over co-operative work of previous years. Furthermore, we feel that if six out of eight operators can get almost identical results the other two should also be able to do the same, and after all operators have obtained sufficient experience with the revised procedure, we believe there should be no excuse for any one being out of line with the others.

Differences in color readings on oils from co-operative refinings are much less when read by the same individual than when read by in-

dividual operators in different laboratories. This latter discrepancy cannot be due to differences in refining, but we believe it more of a problem for the committee on color readings to handle.

We recommend that the revised procedure be adopted for regular use during the coming season.

We recommend for next year's committee the following:

1. Develop exact specifications for a standard refining machine and other apparatus to assure absolute uniformity.

2. Keep in touch with refining chemists in all sections of the country to see if the specified conditions in the revised procedure work satisfactorily on oil from all sections. Also endeavor to adjust any differences which may arise among different chemists and determine the causes of such differences in results.

3. Study especially the effect of the limited choice of lye as now prescribed, to see if any modifications should be made.

4. Send out a few co-operative samples for F.F.A. and refining tests. All referee and refining chemists should participate in this work.

5. Develop similar refining procedures for other oils than cotton seed.

C. B. CLUFF,
Chairman.

Additional Committees

President Trevithick, of the American Oil Chemists' Society announces the appointment of the following committees:

Planning Committee:

H. J. Morrison, Representing Soap Interests, Chairman, c/o Procter & Gamble Co., Cincinnati, O.

A. H. Gill, Representing Miscellaneous Oils

B. H. Thurman, Representing Linseed Oil Interests

H. Asepren, Representing Cotton Oil Interests

J. J. Vollertsen, Representing Animal Oil and Packing House Interests

A. W. Putland, Vice President.

H. P. Trevithick, Ex-officio.

Olive Oil Committee:

L. M. Roeg, Chairman, 72 Salisbury St., Worcester, Mass.

G. S. Jamieson,

C. V. Bacon,

M. F. Lauro,

W. H. Dickhart.

Metallic Extraction Thimbles

During several years work with the well known type of refractory extraction thimbles, the writer became impressed with the desirability of a non-breakable thimble for ether extraction work. While the refractory thimbles are very satisfactory in many ways, the loss by breakage and wear is quite appreciable where a large volume of work is being done.

After some investigation our attention was called to Monel Metal Filter Fabric. This comes in two grades, one is simply woven, and the other first woven and then rolled. This latter forms a fairly rigid sheet, with very fine perforations, is easily soldered, and fairly non-corrodible.

Of this material the writer made a number of cylinders, two centimeters in diameter and nine centimeters long, all free cut edges being also soldered to prevent unraveling. These have now been used in place of the refractory thimbles for several months with satisfactory re-

sults. They cost less than the refractory clay thimbles, are practically non-breakable, and if they become clogged through long usage, can be cleaned by boiling in chemical solutions or unsoldered and ignited.

JOS. D. ENAS, Chemist.
El Dorado Oil Works, Berkeley, Cal.

Uses of Olive Oil in Fish Canning

A trade note from American Commercial Attache Charles H. Cunningham, at Madrid, Spain, dated July 2, states that considerable criticism is expressed in various journals and dailies over the alleged crisis occurring in the fish canning industry, due to the fact that the law compels the use of only pure olive oil for this purpose. The canners claim that as a result they are not able to compete with the foreign producers who are allowed to use perfectly wholesome oils consisting of mixtures of the extracts of other seeds with olive oil. With the existing high price of olive oil, the producers say that they cannot hold their present position in the world market. They point to the fact that the Royal Decree of April 23 of this year, permitting the importation of 25,000 tons of seed oils, had no effect on price of olive oil. The canners further state that this importation was very small and not sufficient in any way to remedy the condition in which they find themselves. They propose a more liberal importation of cheaper oils of other seeds by means of individual permits and collective grants to associations of producers, the law to provide for the automatic cessation of such import whenever the price of olive oil descends to a reasonable level.

List of Referee Chemists

THE following is the Official list of names and addresses of Referee Chemists who are members of both the Interstate Cottonseed Crushers' Association and The American Oil Chemists' Society, as forwarded to OIL & FAT INDUSTRIES by Mr. H. P. Trevithick, President of the latter society.

ALABAMA	...Birmingham	...Picard Laboratories	.....Clark Bldg., Box 1231
		D. C. Picard, Pres.	.....
	Montgomery	...The Battle Laboratories	.....103 South Court St.
		H. P. Battle, Pres.	.....
ARKANSAS	...Little Rock	...Barrow-Agee Laboratories,	.....
		Inc.	.....
CALIFORNIA	..Los Angeles	...Geo. W. Gooch & Co.	.....218 S. Broadway
	San Francisco	...Curtis & Tompkins	.....331 California St.
GEORGIA	.....Atlanta	.....Law & Co.	.....16 Baker St., N. E.
		Thos. C. Law	.....
	Savannah	...Shuey & Co., Inc.	.....115 E. Bay St.
LOUISIANA	..New Orleans	...J. C. P. Helm	.....705 Tchoupitoulas St.
	New Orleans	...Edw. G. Williams	.....Title Guaranty Bldg.
	Shreveport	...Barrow-Agee Laboratories,	.....
		Inc.	.....
MARYLAND	..Baltimore	...Wiley & Co.	.....904 N. Calvert St.
MISSISSIPPI	..Jackson	...Barrow-Agee Laboratories,	.....
		Inc.	.....
	Meridian	...Nahum E. Katz	.....P. O. Box 243
NEW YORK	...New York	...Bureau of Chemistry	.....Produce Exchange Bldg.
		H. P. Trevithick	.....
OKLAHOMA	..Oklahoma City	...S. Lomanitz	.....234 Terminal Arcade Bldg.
S. CAROLINA	..Columbia	...Chas. W. Rice & Co.	.....Merchants Bank Bldg.
TENNESSEE	..Memphis	...Barrow-Agee Laboratories,	.....
		Inc.	.....P. O. Box 1056
	Memphis	...L. B. Forbes Laboratories	.....P. O. Box 792
	Memphis	...Johnson Laboratories	.....27 Vance Ave.
		Lehman Johnson, Pres.	.....
TEXAS	.....Dallas	...Landon C. Moore, Inc.	.....1713 Young St.
		Landon C. Moore, Pres.	.....
	Dallas	...Southwestern Laboratories	.....1812½ Main St.
		N. C. Hamner, Pres.	.....
	Fort Worth	...Fort Worth Laboratories	.....828½ Monroe St.
		Porter & Fash	.....
	Galveston	...Felix Paquin	.....Hall Bldg.
	Houston	...Houston Laboratories	.....215½ Main St.
		F. R. Robertson	.....
WASHINGTON	..Seattle	...Laucks Laboratories, Inc.	.....314 Maritime Bldg.
INDIANA	.....Hammond	...Indiana Laboratories	.....

Luther H. Bosnian has been appointed Superintendent of the Park Street Plant of the Chain Belt Company, Milwaukee Manufacturers of REX Conveyors, Travelling Water Screens, Chain and Concrete Mixers. Mr. Bosnian is a graduate of the Sheffield Scientific School, Yale University, and has been connected with the Chain Belt Company's Production Department for the past eight years. Previous to this he was with the Westinghouse Electric and Manufacturing Company and came to the Chain Belt Company in 1919 as a time study man.

MR. A. A. JACKSON has announced

his resignation, on October 18, as Vice President of Darco Sales Corporation, with which he has been associated since its organization in May, 1922. Mr. Jackson has not yet made any definite decision as to his future activities. For the present his address is 140 Claremont Avenue, New York City.

WANTED: Young man, to assist superintendent in vegetable oil refinery. Experience in coconut oil essential, in other oils desirable. Graduate chemist preferred. Good salary and advancement. Apply Box F. G. 234, c/o Editor OIL & FAT INDUSTRIES, 220 W. 42nd st., New York City.