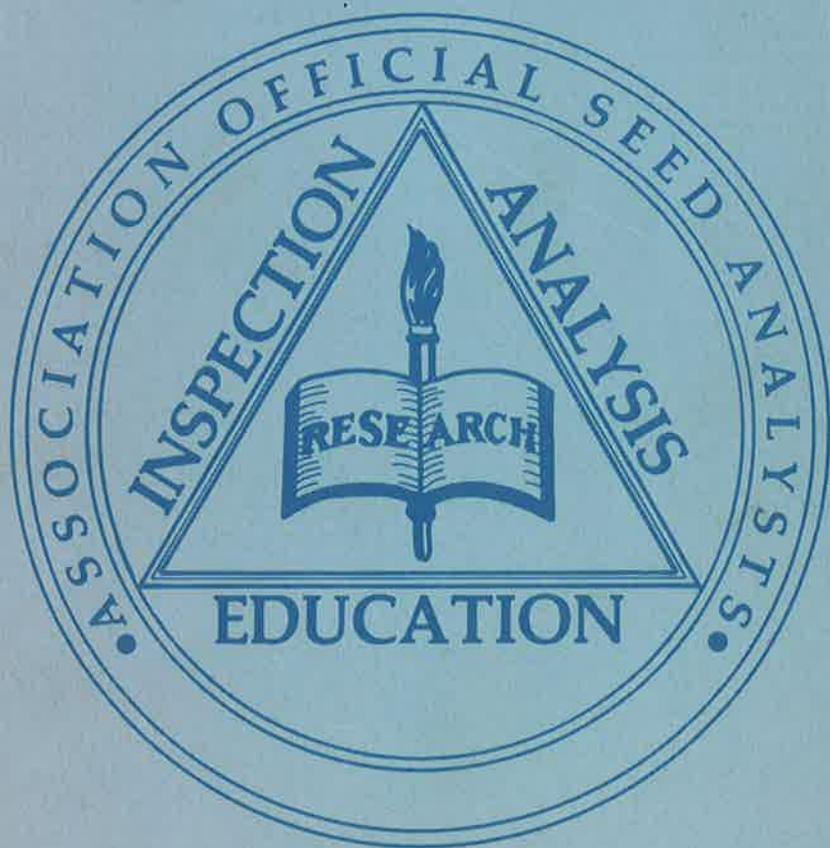


# JOURNAL OF SEED TECHNOLOGY

Volume 3

1978

Number 1



# JOURNAL OF SEED TECHNOLOGY

Volume 3 • Number 1

1978

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Association of Official Seed Analysts

L. O. Copeland, Editor  
Dept. of Crop and Soil Sciences  
Michigan State University  
East Lansing, MI 48824

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## SUGGESTIONS TO CONTRIBUTORS TO THE JOURNAL OF SEED TECHNOLOGY

**General Requirements.** Articles should be original reports covering some area of seed science and technology not previously or simultaneously published in any other scientific or technical journal. Three kinds of articles may be considered for publication: (1) research papers, (2) brief communications covering new techniques or developments, and (3) review articles by special arrangement with the editor.

**Page Charges.** Eight pages of each article accepted will be printed free of charge. Page charges in excess of eight pages will be based on the actual printing costs.

**Manuscripts.** The manuscript must be typed on good-grade bond paper approximately 21 x 28 cm. The lines of type must be numbered on each page. Two carbon or xeroxed copies, also on line-numbered paper, are required. The entire manuscript must be double spaced. Each table must be typed on a separate sheet. An Abstract and list of Additional Index Words must be included at the beginning.

**Order.** Assemble the manuscript in the following order: Title (no separate title page), Author(s), Abstract, Additional Index Words, Text, Literature Cited (begin on a new page), Tables, Captions for Figures (begin on a new page), and Figures. Although the text is most commonly divided into the following sections: Introduction, Materials and Methods, Results and Discussion, and Acknowledgements, the specific arrangement for articles submitted to the *Journal of Seed Technology* will vary. Place headings in the center of the page and capitalize throughout. Begin the subsection headings at the left hand margin (do not indent), capitalize the first letter, underline, and follow with a period. Begin the first sentence on the following line with the first word indented five spaces. Do not include a summary or list of conclusions.

**Numbers.** Use arabic numerals for all numbers with two or more digits and for all measurements such as time, weight, or degrees except when the number is the first word in a sentence. Spell out numbers when they are the first word in a sentence or when they are less than 10 and not measurements, except when in a series in which one figure has two or more digits.

**Author(s).** Place the name(s) of the author(s) in full caps below the title and footnote with a superscript arabic two (2). In listing the authors, do not leave a space between the period after each initial and the next letter. Give the place where the study was conducted and the title and address including the zip code of each author in footnote two at the bottom of the page.

**Footnotes.** Footnotes are *numbered* consecutively and typed at the bottom of the pages. Number 1 should contain identification of the article or research project. It includes the "date received" supplied by the editor. Number 2 identifies the author(s).

**Tables.** Tables are numbered consecutively. Use the following symbols for footnotes, in this order: a, b, c, d, etc. Use asterisks (\*, \*\*, etc.) to indicate statistical significance (5%, 1%, etc.). Do not duplicate matter that is presented in charts or graphs.

**Figures.** Photographs for half-tone reproduction should be glossy prints with good dark and light contrast. Prepare drawings for graphs and charts with India ink on white drawing paper or blue tracing cloth. Typewritten matter should be avoided on graphs and charts. Label each figure with name of author, title of author, and number of figure. Do not use figures which duplicate matter presented in tables.

**Style Manual.** The *Style Manual for Biological Journals* prepared by the Committee on Form and Style of the Council of Biology Editors and published by the American Institute of Biological Sciences (AIBS) shall be followed for writing papers submitted to the *Journal of Seed Technology*.

**Abbreviations.** Use standard abbreviations listed in the AIBS Style Manual without definition. Other abbreviations should be defined at first usage and may be used thereafter without further definition. State names should be abbreviated following city names, using the two letter abbreviations of the U.S. Post Office Department.

**Nomenclature.** The Latin binomial or trinomial and authority must be shown for all plants, insects, and pathogens at first listing) In title, abstract, or text). Crop varieties should be identified by single quotations marks at first listing only, e.g., 'Ranger' alfalfa (*Medicago sativa* L. ) or *Medicago sativa* L. 'Ranger'; *Bothriochloa ischaemum* var. *songarica* (Rupr.) cel. et Harl, 'King Ranch.'

**Units of Measure.** Metric units must be used for all measurements.

**References.** All citations whether to published literature or to unpublished work are to be listed alphabetically by senior authors at the end of the manuscript. Citations to published works should include names of all authors, the year, complete title, publication, volume number, and inclusive pages, as appropriate.

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# MINUTES OF THE ASSOCIATION OF OFFICIAL SEED ANALYSTS MEETINGS

## Sixty-Eighth Annual Meeting

Lincoln, Nebraska

June 10-15, 1978

## EXECUTIVE BOARD MEETING

June 10, 1978

The Executive Board Meeting was called to order by President R. H. Hofmann at 10:30 a.m., Saturday, June 10, 1978; recessed for lunch at 12:35 p.m.; reconvened at 1:30 p.m.; recessed for dinner at 6:05 p.m. and reconvened again at 9:10 p.m., after the SCST President's Coffee Hour. The meeting adjourned at 11:45 p.m. and was reconvened again at 9:20 p.m., June 13th and adjourned at 11:05 p.m.

### *Board Members Present*

R. H. Hofmann  
C. C. Abbott  
J. A. Bloodgood  
T. W. Still  
L. O. Copeland

J. C. Delouche  
L. E. Everson  
F. W. S. Dale  
A. L. Larsen  
G. R. Wilson

### *Observers Present*

R. Danielson  
E. W. Belcher  
D. V. Baxter  
D. W. Lambert  
W. H. Rice  
G. E. Spain

M. H. Day  
A. B. Ednie  
W. M. Lowry  
J. F. Harrington  
L. E. Wiesner  
L. N. Bass  
W. P. Ditmer

President Hofmann made the following appointments to committees:

- Resolutions . . . . . Chairman—E. E. Hardin  
 J. A. Bloodgood  
 M. H. Day  
 J. Lang  
 C. M. Christenson
- Auditing . . . . . Chairman—A. L. Larsen  
 G. R. Wilson  
 W. N. Rice

Reports of the President, Secretary and Treasurer were presented and approved. Minutes of the Executive Board and business meetings held in Amherst, Mass., on June 18 and 23 respectively, were read and approved.

Reports were given by the chairmen of standing and special committees. These reports were discussed and approved for presentation to the AOSA business meeting.

#### IT WAS MOVED

1. That \$9 per copy be charged for Volume 1, No. 2; Volume 2, No. 1, and Volume 2, No. 2 of the *Journal of Seed Technology*.
2. That \$5 per copy be charged for Volume 3, No. 3 of the journal issue entitled *Rules for Seed Testing, 1978*.
3. That one free copy of the *Rules* be sent to the journal distribution list and those laboratories of the SCST and the CSAAC which do not receive the journal.
4. That five hundred rules binders be purchased at a cost of \$1.80 per binder, leaving off year and volume references. Instead decals providing this information should be used on the binders. The editor should obtain the necessary decals in an appropriate color and format.
5. That the cost of the binder, decal, and postage be established at \$2.50.
6. That reference to the Ames, South Dakota, and Hearson blowers be left out of the forthcoming handbook on uniform blowing procedures.
7. That M. H. Day be reimbursed the \$50 registration fee charged for his attendance at the NASDA winter meeting in Washington D. C. at which he represented AOSA.
8. That a policy be established by AOSA to extend to the representatives of allied organizations appearing on our program, an invitation with complimentary registration to the AOSA-SCST annual meeting. This

motion is subject to the concurrence of the SCST. Invitations should be extended jointly by the Presidents of both societies.

9. That the list of persons recommended for honorary membership be accepted.
10. That the Board recommend acceptance of Joe Lamb, Scott McNab, Joan Opolka, and Bangalore Phaneendranath for Associate Members.
11. That a subcommittee of the Research Committee be established to investigate problems associated with native browse shrubs and forbes.
12. That two issues of the *Journal* be published annually on a specific schedule.
13. That we reaffirm to the Federal Seed Act Task Force our previous resolution calling for the continued participation by officers in charge of the Seed Enforcement Branch Federal Field offices in activities of the AOSA.
14. That the proposed tentative rules for testing pelleted seed be referred back to the Rules Committee for further clarification.

Charles C. Abbott, *Secretary-Treasurer*

**ASSOCIATION MEETING**

June 15, 1978

Lincoln, Nebraska

The sixty-eighth annual business meeting of the Association was called to order by President R. H. Hofmann at 8:10 a.m. in the Grand Ball Room of the Hilton Hotel, Lincoln, Nebraska. Roll Call was taken by the Secretary-Treasurer and the following member laboratories were recorded present:

**CANADIAN LABORATORIES-4**

Plant Products Seed Laboratory, Winnipeg, Manitoba  
 Seed Biology Laboratory, Ottawa, Ontario  
 Plant Products Seed Laboratory, Montreal, Quebec  
 Plant Products Seed Laboratory, Saskatoon, Saskatchewan

**USDA LABORATORIES-8**

Federal Seed Laboratory, Montgomery, Alabama  
 Federal Seed Laboratory, Sacramento, California  
 National Seed Storage Laboratory, Fort Collins, Colorado  
 Eastern Tree Seed Laboratory, Macon, Georgia  
 National Seed Testing Standardization Laboratory, Beltsville, MD  
 Federal Seed Laboratory, Minneapolis, Minnesota  
 Forest Tree Seed Laboratory, State College, Mississippi  
 Federal Seed Laboratory, North Brunswick, New Jersey

**STATE LABORATORIES-39**

Alaska	Montana
Alabama	Nebraska State Lab.
California	Nebraska, C.I.A.
Colorado	New Jersey
Florida	New York
Georgia	North Carolina
Illinois	North Dakota
Indiana	Ohio
Iowa, Ames	Oklahoma
Kansas	Oregon
Kentucky	Pennsylvania
Louisiana	South Carolina
Maryland	South Dakota

Massachusetts	Texas
Michigan	Utah
Minnesota	Virginia
Mississippi State Lab.	Washington, Pullman
Mississippi Seed Tech. Lab.	Wisconsin
Missouri, Columbia	Wyoming
Missouri, Jefferson City	

## ASSOCIATE MEMBERS-5

C. C. Baskin	M. B. McDonald
L. O. Copeland	Ann Tucker
J. F. Harrington	

Mr. G. M. Moore was appointed by the President to act as Parliamentarian for the duration of the meeting.

The minutes of the Executive Board Meeting held on June 10, 1978, in a morning, afternoon and evening session and reconvened again on the evening of June 13, 1978, were presented by Vice-President Delouche and accepted.

The reports of the Secretary-Treasurer were presented and approved.

The report of the Auditing Committee was given by Dr. Arnold Larsen and approved.

Reports of the following standing committees, special committees and subcommittees were accepted:

*Standing Committees*

Editorial Committee	Membership
News Letter	Public Service
Handbook	Referee
Bibliographies	Seed Standardization Branch
Science Education	Advisory Committee
Legislative	Research
Liaison	Rules

*Special Committees*

Budget	Accreditation of Laboratories
C.A.S.T.	Nomenclature
Constitution	Teaching and Training
Meeting Place	Program
Merit Award	Resolutions
Necrology	Nominations

The report of the Membership Committee was read and approved. It was voted to grant Honorary Membership to:

Mr. Stanley E. Rollin

Mrs. Jane L. Skinner.

It was voted to grant Associate Membership to:

Mr. Joe Lamb

Mr. Scott McNab

Ms. Joan Opolka

Mr. B. R. Phaneendranath

The Research Committee report was read and approved. The establishment of a new Research subcommittee to investigate problems associated with testing native browse shrubs and forbes was announced. It was also recommended that Dr. Miller McDonald serve for a five-year term as Chairman of the Seed Vigor Testing Committee.

Following the report of the Rules Committee, it was voted to adopt the approved changes effective October 1, 1978.

The Meeting Place Committee reported invitations for the 1981 Meeting from Alaska, California, Florida and Hawaii.

Dr. Don Grabe was chosen to receive the Merit Award this year.

The Necrology Committee report was read and approved. A moment of reverent silence was observed in memory of William Alsen, Robert N. Flint and Bette Cullinan Nelson.

As a part of the Program Committee report, Bill Dale reminded us that the meeting dates for next year's meeting in Saskatchewan are June 15-22.

The Nominations Committee reported that Dr. Arnold L. Larsen had been elected Vice-President and that Miss Jennie A. Bloodgood and Mr. Russell K. Marx were elected to the Executive Board for a three-year term.

Under the heading of New Business the presentation of reports was discussed. It was generally concluded that reports should be shortened, with more effective visual presentation. In future years, guidelines for preparation and use of visuals will be distributed along with annual requests for papers.

Dr. James C. Delouche accepted the gavel and office of President along with the congratulations of the assembled members. After making a number of committee appointments, he adjourned the meeting at 11:40 a.m.

Charles C. Abbott, *Secretary-Treasurer*

## SECRETARY'S REPORT

I think it is reasonable to state that your secretary has had a busy year. There has been a steady stream of requests for publications and information, many of which could not be completely filled or answered. First, we ran out of ring binders for the *Rules*; then we ran out of *Rules*. I have filled 548 orders for publications ranging in value from \$0.50 to \$180.00. I have been very slow in filling some orders and I apologize for that. I have a number to fill yet and some still have to be billed, so please be patient. If your letter got to me, I'll reply as soon as I can.

Continuing in a negative vein, I have not been able to satisfy the many requests I've had for career information from school counselors and I think this must be remedied.

Another vexing and time-consuming problem is that of advance payment of Newsletter and Journal subscriptions. Often the money sent is the wrong amount which involves more billing or letter writing. I have current price lists to send to anyone who wants one and I keep them as up-to-date as possible, but we can't price a new publication until we know the cost of printing plus the number of free copies whose cost must be absorbed.

Early in May, I sent invitations to our forty honorary members and have had a number of replies expressing best wishes for our meeting and regrets for not being able to attend.

Finally, I owe a considerable number of thank-you's to President Hofmann, Editors Copeland and Ditmer and "Librarian" Dwight Lambert for much assistance through the year.

C. C. Abbott, *Secretary-Treasurer*

**TREASURER'S REPORT**

June 1, 1977 - May 31, 1978

*Cash on Hand, May 31, 1977* \$16,533.62

*Receipts:*

Dues:

2 Active memberships, 1977 . . . . .	\$ 100.00	
69 Active memberships, 1978 . . . . .	3,450.00	
1 Half-Active membership, 1978* . . . . .	25.00	
1 Associate membership, 1977 . . . . .	10.00	
1 Associate membership (in advance), 1978 . . . . .	15.00	
26 Associate memberships, 1978 . . . . .	390.00	3,990.00

Publications:

Handbook . . . . .	324.55	
Newsletter . . . . .	1,741.00	
Journal . . . . .	1,733.50	
Rules . . . . .	352.64	4,151.69

Interest:

Certificate of Deposit . . . . .	544.93	
Savings Account . . . . .	255.71	
Meeting Account . . . . .	73.40	874.04

Miscellaneous Receipts:

Return of Meeting Advance . . . . .	500.00	
Share of 1977 Meeting Profits . . . . .	252.68	
AIBS dividend . . . . .	7.00	
Over-Payments . . . . .	4.05	
Postage paid . . . . .	2.50	
Sales Tax . . . . .	.36	766.59

TOTAL RECEIPTS: \$26,315.94

Unaccounted-for income: .50

\*W. Va. \$26,316.44

*Disbursements:*

## Publications:

Journal, Vol. 1, No. 1 . . . . .	\$3,399.57	
Journal art work . . . . .	39.84	
Newsletter indexing . . . . .	300.00	
Newsletter Vol. 51, No. 4 . . . . .	471.50	
Newsletter Vol. 51, No. 5 . . . . .	790.10	
Newsletter Vol. 52, No. 1 . . . . .	576.00	
Newsletter Vol. 52, No. 2 . . . . .	952.80	
1 copy of Journal returned . . . . .	9.00	
Over-payment returned . . . . .	11.50	\$ 6,550.31

Office Assistance & Supplies: 606.93

Postage: 1,249.62

## Miscellaneous:

Surety bond—Treasurer . . . . .	25.00	
Meeting advance . . . . .	1,000.00	
ASA book display . . . . .	37.50	
CAST dues . . . . .	140.00	
Exchange rate loss . . . . .	.82	<u>1,203.32</u>
		9,610.18

## Cash:

Checking account . . . . .	4,693.06	
Certificate of deposit . . . . .	8,000.00	
Savings account . . . . .	3,952.52	
Savings account, special . . . . .	60.68	<u>\$16,706.26</u>
		\$26,316.44

Charles C. Abbott, *Secretary-Treasurer*

**RESOLUTIONS COMMITTEE**

- I. WHEREAS the 68th annual meeting of the Association of Official Seed Analysts (AOSA) has been outstanding in every way and that it is evident the success has been due to the efforts of many,

BE IT RESOLVED that we express our appreciation to all who made it possible and enjoyable and that the Secretary be instructed to send appreciation letters to a list provided by Mr. Gene Sedivy of those who contributed toward this successful meeting.

- II. WHEREAS USDA Handbook 30 and Handbook 219 have been extremely useful resource material in promoting uniformity within and between laboratories, and

WHEREAS these two publications are out of print,

BE IT RESOLVED that the Director of the Seed Standardization Branch assume the responsibility of seeing that these publications are revised and published at the earliest possible date.

- III. WHEREAS it is evident that no action has been taken on the last two-years resolutions regarding the AOSA request that the United States Department of Agriculture amend its policy to include officers in charge of Regional Seed Laboratories among the USDA representation at AOSA Meetings,

BE IT RESOLVED that the President of AOSA appoint or designate a committee to meet with appropriate USDA administrators to impress on them the concern the association has with regard to its policy on attendance and participation of USDA personnel at AOSA Meetings.

E. E. Hardin, *Chairman*

## REPORTS OF STANDING COMMITTEES AND SUBCOMMITTEES

### EDITORIAL COMMITTEE

#### Report of the Committee Chairman and Editor, Journal of Seed Technology

This has been the most productive period in recent years by the Editorial Committee, during which we have had four publications in progress. First, the 1976 AOSA Vigor Symposium papers were printed as Volume 1, No. 2 of the Journal of Seed Technology (JOST). Second, the 1977 Biosystematics Symposium papers were printed as JOST Volume 2, No. 2. Third, the regular issue of the JOST, Volume 2, No. 1. containing research papers and the 1977 AOSA meetings proceedings is in the final publication stages. Fourth, a new edition of the AOSA Rules is nearing the final completion stages. Special recognition is made to the long hours and invaluable input made by the members of the Rules and Nomenclature committees, and especially to their Chairmen, Loren Wiesner and C. R. Gunn. Special recognition is also due to Mr. Warren Kyes and the members of Stone Printing Company, Lansing, Michigan, for their friendliness, patience and cooperation.

Six hundred copies of the Journal of Seed Technology are being printed and will be mailed to the following:

	<u>No. Copies</u>
AOSA member laboratories . . . . .	70
AOSA associate members . . . . .	22
ISTA stations (other than U.S. and Canada) . . . . .	123
AOSA officers, senior authors and abstracting series . . . . .	26
U. S. subscriptions . . . . .	91
Canada subscriptions . . . . .	9
Foreign subscriptions . . . . .	62
Duplicate copies (subscriptions) . . . . .	<u>9</u>
Total	412

Five AOSA publications were sent for display in the Book Exhibits at the American Society of Agronomy meetings in Los Angeles in November 1977.

L. O. Copeland, *Editor*

### Bibliographer

During the past year, I listed a total of papers that pertained to some aspect of seed science. These papers were classified as follows:

<i>Category</i>	<i>No. in Category</i>
Seed Physiology and Biochemistry	264
Seed Pathology	54
Identification of Cultivars and Species	17
Seed Anatomy & Morphology	<u>10</u>
Total:	345

Martin M. Kulik, *Bibliographer*

### Handbook Editor

Two projects are near completion. The first is the Seed X-Ray Handbook being prepared by Dr. Earl Belcher at the Eastern Tree Seed Laboratory. The manuscript of the X-Ray handbook has been reviewed by members of AOSA and the Forest Service. The only work left is to put the narrative with the photographs. The manuscript should go to press no later than August.

The second project is the preparation of the AOSA Handbook 24 regarding the uniform blowing procedure. The manuscript has been sent out for a second review. It will be necessary to get the advice of the AOSA Executive Board regarding the exclusion of Ames, South Dakota and Hearson blowers from the text. Also some advice is needed regarding the availability of calibration samples for the species involved.

Plans for other AOSA Handbooks have not been considered at this time.

Arnold L. Larsen, *Handbook Editor*

### Newsletter

The response from individual laboratories and other individuals has not been overwhelming this past year. Articles from these people help keep the newsletter of a more personal interest to the membership.

Printing costs are not expected to rise, but paper cost will probably rise. Postage rates in the United States, Central America and South America did go up this past fiscal year.

Cost for printing and mailing 77-78 Newsletter:

	Vol. 51		Vol. 52		Total
	No. 4	No. 5	No. 1	No. 2	
Printing	\$471.50	\$790.10	\$576.00	\$952.80	\$2,790.40
Typing	43.50	39.00	33.00	63.50	178.50
Envelopes	13.48	13.48	13.48	13.48	53.92
Postage	146.04	148.18	149.21	167.26	610.69
Total	\$674.52	\$990.76	\$771.69	\$1,196.54	\$3,633.51
Copies printed	560	560	660	575	
Copies mailed	543	551	554	556	
Pages	40	60	39	79	

One copy of the CAST Newsletter was mailed with each issue except Vol. 51, No. 4—2 issues were mailed. The Directory Vol. 51, No. 3 was mailed with Vol. 51, No. 4. The Index Vol. 51 No. 6 was mailed with Vol. 52, No. 2.

There was no cost for the Directory issue. The Index cost was \$300.00 for compilation and \$75.00 for typing. Total cost for the Index was \$375.00. The information from Vol. 51, Nos. 4 and 5 and Vol. 52, Nos. 1 and 2 is on index cards.

W. P. Ditmer, *Editor*

### Science Education Editor

The Science Education Editor prepared a post-meeting write-up which was published in full or in part by the three major seed trade publications.

Numerous letters were written to prospective employees and employers in response to employment information requests. The number of people looking for jobs exceeded the number of available positions. However, the number of experienced seed analysts looking for positions was totally inadequate to meet the demand for experienced analysts. Both employees and employers are very poor at reporting back when their needs are met. Consequently, names frequently remain on the availability list longer than necessary.

Revision of the brochure "Seed Technology, Seed Analysis, and You," originally scheduled for 1977, was delayed to 1978, but still has not been completed. A request for suggestions addressed to the membership drew very little response. Responses received are, however, very helpful.

Louis N. Bass, *Science Education Editor*

## LEGISLATIVE COMMITTEE

The Legislative Committee met during the 1977 AOSA June meeting in Amherst, MA. Proposed Procedure for Legislative Advisory Committee to AASCO was approved for use at the 1977 AASCO meeting, Tucson, AZ. The committee also reviewed a listing of Flower, Tree and Shrub Seed which appears in the Rules for Testing, but does not appear in RUSSL. Dr. Clark said that Standards of Germination for Flower Seed would be necessary before adding them to RUSSL but that none had been established and he knew of no one working on such standards.

The Joint Legislative Advisory Committee of AASCO, composed of representatives from ASTA, AOSCA, and AOSA, with Richard Countryman, AASCO, as Chairman, met Sept. 21, 1977 in Tucson, AZ. The AOSA Legislative Committee was represented by Gail Fenderson, Ed Hardin, Russell Marx and Ammon Swope. Two proposed amendments to RUSSL were discussed for recommendation.

## ITEM 1—Amend RUSSL by adding:

Definition: Sec. 1. (U). A valid Grower's Declaration is a document declaring kind, variety and/or origin of seed, signed by the grower, (*who must furnish a label or invoice on the planted seed as proof of his declaration, prior to signing.*) THIS PART OF AMENDMENT TO BE STRICKEN.

Amend in part:

Exemption: Sec. 5. (B). . . . unless he has failed to obtain an invoice or *the labeler failed to obtain a valid Grower's Declaration as defined in Sec. 1 (U) and to take such other precautions to insure the identity to be that stated.*

After discussion, the definition was amended as shown above which defeated the intent and purpose of the Amendment to RUSSL so motion was withdrawn. The Legislative Advisory Committee representatives voted to recommend the proposed amendment NOT to be adopted.

ITEM 2—Amend RUSSL by adding to Sec. 2 (A) the tree and shrub seeds listed below. Testing methods have been adopted for these kinds into the Rules for Testing Seeds of AOSA. The Legislative Advisory Committee passed a motion to recommend the tree and shrub list be added to RUSSL, as follows:

<i>Aesculus pavia</i>	Red Buckeye
<i>Carya illinoensis</i>	Pecan
<i>Carya ovata</i>	Shagbark hickory

<i>Casuarina spp.</i>	Beefwood
<i>Cornus florida</i>	Flowering dogwood
<i>Cornus stolonifera</i>	Red-osier dogwood
<i>Crataegus mollis</i>	Downy hawthorn
<i>Eucalyptus deglupta</i>	
<i>Eucalyptus grandis</i>	
<i>Grevillea robusta</i>	Silk-oak
<i>Libocedrus decurrens</i>	Incense-cedar
<i>Liriodendron tulipifera</i>	Yellow-poplar
<i>Magnolia grandiflora</i>	Southern magnolia
<i>Nyssa aquatica</i>	Water tupelo
<i>Nyssa sylvatica var. sylvatica</i>	Black tupelo
<i>Pinus caribaea</i>	Caribbean Pine
<i>Pinus clausa</i>	Sand Pine
<i>Pinus serotina</i>	Pond Pine
<i>Platanus ceii dentalis</i>	American Sycamore
<i>Populus spp.</i>	Poplars
<i>Quercus spp.</i>	(Red or black oak group)
<i>Quercus alba</i>	White oak
<i>Quercus muehlenbergii</i>	Chinkapin oak
<i>Quercus virginiana</i>	Live Oak
<i>Rhododendron spp.</i>	Rhododendron
<i>Vitis vulpina</i>	Riverbank grape

In the AASCO meeting ITEM 1—"Grower's Declaration for Amendment in RUSSL" was postponed until the 1979 AASCO meeting.

The membership of AASCO approved ITEM 2—"Addition to the Tree and Shrub Listing in RUSSL".

Gail Fenderson, *Chairman*

## LIAISON COMMITTEE

Letters were written to organizations listed in the Constitution offering the services of the committee as instructed. Committee members were given the responsibility of representing or seeing that we had representation at local or regional seed related meetings within their region.

I feel that we have a pretty good working relationship with most organizations except the Association of Official Seed Certifying Agencies (AOSCA) and the American Seed Trade Association (ASTA). Better liaison should be developed where we could sit down and discuss in depth mutual problems. Increased effort is necessary to make sure we have official representation at their state and regional meetings where problems more

specific in nature are discussed in detail. Problems related to seed testing are more apt to be discussed at these meetings. We also need to be evident at their annual meetings and available to represent our interests whenever topics of interest to us are presented. Both organizations have assured us that we are welcome to attend their meetings and participate in most committee meetings.

Committee members and their regions or areas of responsibility are as follows:

E. E. Hardin	Western region
R. Ruud	North Central
J. Metcalf	Southern
G. Day	North Eastern
L. Everson	ISTA

E. E. Hardin, *Chairman*

## MEMBERSHIP COMMITTEE

The Membership Committee report for the year 1977-1978 is as follows:

### *Nominations for Honorary Membership:*

Jane L. Skinner  
Stanley E. Rollin

### *Applications for Associate Membership:*

Joe Lamb  
Scott McNab  
Joan Opolka  
B. R. Phaneendranath

Attached are nominations and the supporting documents for these two items. The committee recommends the acceptance of these nominations and applications.

There were three other applications for associate membership that were submitted. A difference of opinion exists among our committee members with regards to approval of membership. They will be discussed at a committee meeting at Lincoln and a recommendation will be made at the 1979 meeting.

Three other inquiries were made, applications were sent, but no further response was received.

I wish to thank the members of my committee for their excellent participation: Doris Baxter, Randy Bradley, Ben Clark, Gail Fenderson, Milton Meadows, J. M. Smith and Wayne Still.

Russell K. Marx, *Chairman*

## PUBLIC SERVICE COMMITTEE

The activity of the Public Service Committee was minimal during the past year.

The drawings by Merle Pierpoint were used by the Federal Seed Laboratory, Sacramento, California.

The slide sets were used by the North Carolina Extension Service and the W. Atle Burpee Company.

A set of slides on seed processing was prepared by the Chairman. The script for this set is in preparation and hopefully will be completed in the next few months.

Charles Baskin, *Chairman*

## REFEREE COMMITTEE

Reports were received from the five regional chairmen. These reports will be made orally by each chairman during the joint AOSA/SCST referee program on Monday, June 12, at 2:30 p.m. and will appear in either the Proceedings or Newsletter.

Of major concern to myself and past referee chairmen is an apparent lack of follow-up in dealing with laboratories whose results vary widely from the expected tolerances. I am instructing regional chairmen to contact these laboratories and try to determine the reasons for any test variation. Often, laboratories participate in referees involving species they are not familiar with and thereby contribute to wide variations. I believe these laboratories can benefit from the referee experience and that we should not be overly concerned about this kind of variation.

One important function of the referee program is to isolate and overcome problems involving lack of uniformity between test results among laboratories. We have the mechanics within AOSA to help in this regard. Often, variation simply reflects a need for a rules clarification, in which case the matter should be routed to the Rules Chairman. Often, methodology is the cause for variation. In these cases, the problem can be routed to such committees as the Germination Methodology or Research Committee. Still other problems may need a more detailed study, in which case the problem could be routed to the NSTSL Advisory Committee for consideration as a project by that laboratory. Both Mary Tarr, the current SCST Research Chairman, and I feel that it is our job to isolate the problems and then help route them to the proper place where appropriate action can occur.

This year's referees are briefly summarized below:

Region I, chaired by Sharon Dobbins dealt with pelleted seed of sugar beets and onions. There was good agreement between laboratories when determining the purity of pelleted sugar beet seeds according to ISTA rules. Pure pellets ranged from 99.96 to 100%. Wide variation existed, however, when pelleted sugar beet seeds were germinated. This variation was reduced when the seeds were washed (depelleted) prior to germination. Germination results of pelleted and depelleted onion seeds did not show this variation.

The Rules Committee Chairman has been advised of the variation in germination tests results for pelleted sugar beet seeds because of the pending adoption of new rules for testing pelleted seeds.

Region II was chaired by Russell Marx. One referee examined media types for soybean germination. Sand gave the highest average percent germination. Of the three types most widely used in the referee (towels, kimpak, sand), sand gave the lowest variation between laboratories.

A second referee compared vacuum and hand planting of timothy seeds. Little difference was observed between these methods.

Region III was chaired by A. B. Ednie and involved a grass seed mixture purity and identification of weed seeds. Both projects showed a great deal of variation between laboratories, indicating a need for follow-up by the regional chairman.

Region IV was chaired by Kenneth Boatwright. One referee involved the separation of giant and common bermudagrass. There was generally good agreement, but some laboratories showed a need for continued practice with this separation.

A second referee involved purity and germination of three lots of Kentucky bluegrass. Four of the twelve laboratories were out of tolerance with either purity or germination results for two of the lots. All laboratories had results which were in tolerance for the third lot.

Region V was chaired by Billy Walls. One referee project involved germination and TZ testing of peanut seeds. Variation between laboratories existed and the regional chairman hopes to plan a workshop to help standardize testing of peanuts.

The second referee was a *Bromus spp.* identification involving six species and 25 seeds. Eleven of the twelve laboratories misplaced only two seeds or less, indicating that there was no problem identifying these species.

Rodger Danielson, *Chairman*

## RESEARCH COMMITTEE

Due to the pressure of other business the chairman of the Research Committee has not communicated with other members of the Research Commit-

tee during the year. He has asked for reports of the subcommittees, but by a date too late to receive reports from them for this report. It may be to the benefit of the AOSA to appoint a more aggressive chairman.

The Chairman did contact all subcommittees at the beginning of the year, obtaining chairmen and determining members interested in serving on each subcommittee. Some subcommittees have been extremely active this year under able chairmen.

Miller McDonald has done an outstanding job directing the Vigor subcommittee, and the presentation of the results of the efforts of his subcommittee will be a big part of the Lincoln meeting.

Norah Van Kleek and Doris Baxter have actively led the Analysis of Pelleted and Coated Seeds subcommittee with definite conclusions about part of the problems.

Frank Bonner has submitted an annual report of the Tree and Shrub Seed subcommittee showing it as an active subcommittee this year.

R. C. Payne of the Cultivar Purity subcommittee is having an open session of his subcommittee at Lincoln.

The Research Committee at its closed meeting at Lincoln will have a busy agenda including a decision on what to do with the bibliographic material collected but not compiled by the Germination Methodology subcommittee and the need for, or formation of, a Native Browse Shrubs and Forbs subcommittee as suggested by G. R. Wilson of Utah. Both these matters should have been taken care of by the Chairman prior to the Lincoln meeting.

James F. Harrington, *Chairman*

## RULES COMMITTEE

Two proposals for changing the "Rules for Testing Seeds" were received. These proposals and one other proposal which had been received the previous year were reviewed by the committee. The committee recommended that two of these proposals be submitted to the Association for consideration at the 1978 meeting. These proposals consisted of germination procedures for flat pea and germination and purity testing procedures for bluejoint. These changes were mailed to Association members 90 days prior to the meeting. The committee recommended that the pelleted seed proposal be submitted to the Executive Committee for consideration as a tentative rule.

With the help of Dr. C. R. Gunn, a complete revision of the Rules For Testing Seed was completed and submitted to editor Larry Copeland for publishing. We are hopeful that the printing of the revised Rules will be completed and ready for distribution by our annual meeting in Lincoln, Nebraska. The committee would like to thank Dr. Gunn and his staff for

helping with the revision of scientific names. This was a very detailed and time consuming task.

Mr. Terry Turner has been working on Appendix 1, Seedling Descriptions. He is attempting to clarify the terminology in this section and to improve the clarity of the description.

Loren Wiesner, *Chairman*

BUDGET COMMITTEE (1978-79)

*Receipts*

Interest . . . . .	\$ 400.00	
Dues . . . . .	3,950.00	
Newsletter . . . . .	1,700.00	
Journals . . . . .	6,500.00	
Rules . . . . .	2,000.00	
Rule Binders . . . . .	250.00	
Handbooks . . . . .	<u>500.00</u>	
		15,300
Meeting Account . . . . .	\$ 1,000.00	
Reserve Deposit . . . . .	8,000.00	
Passbook Account . . . . .	4,000.00	
Checking . . . . .	<u>4,700.00</u>	
		<u>17,700</u>
		\$33,000

*Expenditures*

Newsletter . . . . .	4,400.00	
Journals (4 Nos., 600 copies each) . . . . .	10,750.00	
Rules (2,000) . . . . .	4,200.00	
Rules Binders and Decals (500) . . . . .	1,000.00	
Handbooks (2) . . . . .	3,000.00	
Cast Dues . . . . .	140.00	
Travel . . . . .	300.00	
Postage . . . . .	1,500.00	
Office Assistance and Supplies . . . . .	800.00	
Miscellaneous . . . . .	<u>400.00</u>	
		26,490

Meeting Account . . . . .	\$ 1,000.00	
Reserve . . . . .	2,000.00	
Passbook Account . . . . .	2,000.00	
Checking Account . . . . .	<u>1,510.00</u>	
		<u>6,510</u>
		\$33,000

James C. Delouche, *Chairman*

## CONSTITUTION COMMITTEE

The following additions and/or changes to the Constitution and By-Laws have been approved by the Constitution Committee. These following changes are to be submitted to the membership for action:

- (1) In all instances where the term "Proceedings" appears in the Constitution and By-Laws, this term is to be changed to "Journal of Seed Technology".
- (2) By-Law II—Membership. Number 3. The fourth sentence after the word approved insert "by the Executive Board". The last four sentences will then read: Any associate member may nominate a person for Honorary Membership. Such nominations shall be submitted to the Membership Committee. If approved *by the Executive Board*, the name will be presented to the delegates at the annual meeting. They shall be declared elected upon a two-thirds majority vote.
- (3) By-Law V—Standing Committees. Number 7. The second sentence after the word "names" insert "to the Executive Board". The first two sentences will then read: The membership committee shall receive and make recommendations concerning applications for membership in the Association. The committee has the privilege of submitting names *to the Executive Board* for honorary membership for election at the annual meeting.
- (4) By-Law XIII—Referee Regions—Region 1: Add the State of Alaska to this region.

Gurnia M. Moore, *Chairman*

## ADVISORY COMMITTEE TO THE SEED STANDARDIZATION BRANCH

On August 23, 1977, the chairman of the AOSA Advisory Committee to NSTSL distributed a letter about the anticipated reorganization within USDA. Staff appointments of particular interest to the Advisory Committee included: William Manley, Acting Administrator of the "Marketing Service and Regulatory Division;" John Pierce, Director of "Livestock, Poultry, Grain and Seed Division;" Thomas Porter, Acting Deputy Director of the "Livestock, Poultry, Grain and Seed Division;" and Barbara Schlei, Agricultural Marketing Service (AMS) Administrator.

On September 28, 1977, the National Association of State Departments of Agriculture (NASDA) passed the following resolutions relative to NSTSL:

1. That before new tasks are initiated by NSTSL, they should be reviewed by the AOSA Advisory Committee to NSTSL and with designated representatives of American Seed Trade Association (ASTA), Society of Commercial Seed Technologists (SCST), Association of Official Seed Certifying Agencies (AOSCA), and Association of American Seed Control Officials (AASCO).
2. That the preparation of resource materials and the training of state and commercial seed laboratory analysts for the purpose of elimination of test differences among laboratories be given top priority by the NSTSL staff.

On February 17, 1978, a letter was received from Barbara Schlei, AMS Administrator indicating that Seed Standardization had been made a separate branch with its own budget in the Livestock, Poultry, Grain and Seed Division. John Pierce is the Director within the Division. Branch chiefs of particular interest are as follows:

Seed Standardization Branch	Dwight Lambert
Seed Regulatory Branch	Clyde Edwards
Plant Variety Protection Branch	Bernard Leese

The name of the National Seed Testing Standardization Laboratory has been changed to Seed Standardization Branch (SSB). This name should be used in future communications.

Suggestions have been received indicating that we should re-evaluate tasks priorities for SSB, that we should receive regular reports from SSB that would confirm that the priorities adopted are being observed and that reports include information concerning budgeted funds.

L. E. Everson, *Chairman*

## NECROLOGY COMMITTEE

*Robert N. Flint*

Mr. Robert N. Flint was born in Rayville, Louisiana in October, 1904. He graduated from Attala County High School in McAdams, Mississippi, and received an M.S. degree in Entomology from Mississippi State University in 1932. He was a Vocational Agricultural Teacher in Philadelphia, Mississippi, and in 1935 was appointed as Head of the Department of Agriculture at East Central Junior College in Decatur, Mississippi, where he served in that capacity for 10 years.

He served as Chief Inspector for the Mississippi Crop Improvement Association after which he became the Louisiana State Seed Analyst and Director of the Louisiana State Seed Testing Laboratory. Bob left the Louisiana State Seed Laboratory in 1960 to work as an Agronomist at the Northeast Louisiana Experiment Station in St. Joseph, Louisiana. He was also active in the Association of American Seed Control Officials and the Association of Seed Control Officials of the Southern States. Death came March, 1977.

Mr. Flint is survived by his wife, Vivian, two sons, Jones and Charles, one daughter, Alice, and several grandchildren.

R. K. Marx, *Chairman*

## AUDITING COMMITTEE

The Auditing Committee of the Association of Official Seed Analysts has inspected the financial records of the Association on June 14, 1978 and found them to be in proper order.

Arnold L. Larsen, *Chairman*

## MEETING PLACE COMMITTEE

Written invitations to host the 1981 AOSA/SCST Annual Meeting were received from Hawaii and Florida. Oral invitations received from Alaska and California.

The Meeting Place Committee presented these invitations to the Executive Board for review with suggestion that no action be taken on them at the Nebraska meeting.

This committee will solicit additional invitations for 1981 and subsequent meetings.

W. R. Vaughan, *Chairman*

## NOMINATIONS COMMITTEE

The 1978 Nominations Committee is proud to present, following a very close election, the following officers who have been duly elected for their representative terms.

Vice-President:

Arnold L. Larsen

Executive Board (3-year term):

Jennie Bloodgood

Russell K. Marx

G. R. Wilson, *Chairman*

## NOMENCLATURE COMMITTEE

The Association of Official Seed Analysts accepted the 1976-1977 AOSA Nomenclature Committee Report at the Amherst meeting and in so doing permitted major revisions in the nomenclature of the 1978 printing of the Rules. This printing will bring the Rules into close accord with the Federal Seed Act and the International Seed Testing Association Rules. This can be done for the first time, because the Chairman of the AOSA Nomenclature Committee revised the nomenclature of the Federal Seed Act and is a member of the ISTA Nomenclature Committee.

Correcting the galley of the 1978 printing of the AOSA Rules proved to be an unexpectedly major task involving over 300 corrections of scientific and common names. Most of these changes were located and made by Lydia Poole and Bill Jones. The care with which they reviewed the galley and page proofs is reflected in your clean copy of the 1978 Rules.

The Committee will accept suggestions for name changes, evaluating each as they are proposed. Nomenclatural changes in the Rules will be coordinated with changes in the Federal Seed Act and the ISTA Rules.

Charles R. Gunn, *Chairman*

## PROGRAM COMMITTEE

The 1978 AOSA/SCST Program for Lincoln, Nebraska features fifteen volunteer papers. Six abstracts are reported in the May issue of the AOSA Newsletter. Mr. D. W. Lambert has organized and will chair the Symposium on Cultivar Verification. Including Mr. Lambert, there will be six speakers. Mr. D. McClure will moderate a panel of three speakers on the topic "Quality Control in the Seed Industry." Dr. L. N. Bass has prepared a

program on Range Grasses and will present five speakers. The matter of seed vigor is of considerable interest to many and Dr. M. B. McDonald, Jr. has agreed to preside at the sessions on vigor. A workshop on *Bromus spp.* and *Agropyron spp.* has been promised by Joe Charmella, assisted by Betty Butler and Emma Kay. A demonstration on range grasses is to be set up by Ms. Barbara Atkins.

The AOSA roll call for the joint AOSA/SCST Joint Session has been deleted. The meeting will come to a close on Thursday.

Aside from attempting to keep the contributors to our program reasonably happy, there were no real difficulties in arranging the program.

*Suggestions:*

The Program Committee should meet during the annual meeting for preliminary planning of program features for next year's meeting and to review the current meeting. Some guidance and clarification is needed on the matters of: length of program, matters of Symposia.

F. W. S. Dale, *Chairman*

## TEACHING AND TRAINING COMMITTEE

For the 1978 annual meeting a two-hour program has been arranged as follows:

### Range Grasses

Wednesday PM, June 14, 1978

- 3:00 Opening Remarks.  
Louis N. Bass, Presiding.
- 3:05 Harvesting and Processing Problems.  
Art Armbrust—Sharp Brothers Seed Company.
- 3:30 Purity Rules Changes.  
Floyd Wiesner—Cenex Seed Company.
- 3:55 Germination Testing and Prechilling.  
Luther Butler—Texas Department of Agriculture.
- 4:20 Dormancy and TZ Testing.  
Arnold Larsen—Colorado State University.
- 4:45 Discussion.

Also, Barbara Atkins, Nebraska Crop Improvement Association, will have demonstration materials set up for study and discussion.

Plans have been finalized and State approval has been granted for the initiation of a new seed technology training program at the Larimer County Voc-Tech Center at Fort Collins, Colorado. If sufficient financing and a suitable instructor can be obtained, the seed technology training program will be initiated this fall (1978).

L. N. Bass, *Chairman*

### MERIT AWARD COMMITTEE

There were seven nominations for the 1978 AWARD OF MERIT. Dr. Don F. Grabe, Oregon State University, was unanimously selected for the award.

James C. Delouche, *Chairman*

### SYMPOSIUM COMMITTEE

The Symposium Committee met June 14, 1978, during the AOSA meeting in Lincoln, Nebraska. Committee members are C. C. Baskin, A. B. Ednie, and L. Wiesner, together with L. O. Copeland, editor, and R. H. Hofmann, program chairman, as *ex officio* members. J. C. Delouche and A. L. Larsen will succeed Mr. Hofmann in 1979 and 1980.

A list of potential symposium topics was compiled. From the list, topics for the next three AOSA meetings were selected, together with symposium organizers as follows:

- 1979—Seed Pathology, A. B. Ednie
- 1980—Seed Processing, C. C. Baskin
- 1981—Seed Dormancy, L. E. Wiesner

Each symposium organizer will be responsible for the specific subject matter to be discussed under each topic and for selecting speakers.

The Committee suggests that each Symposium be a half day in duration with four or five speakers. The exact place on the program is to be decided by the symposium organizer and the program chairman. The program chairman will handle the publicity. No funds are being requested of the Executive Board at this time.

The Committee suggests the Symposium papers be published in the Journal of Seed Technology. Whether the papers will be published separately or as part of regular issues of JOST shall be at the discretion of the Editor.

The Committee will meet again during the 1979 AOSA meeting in Saskatoon to evaluate the 1979 Symposium and confirm arrangements for the 1980 Symposium.

Don F. Grabe, *Chairman*

## AOSA REPRESENTATIVE TO CAST

All member laboratories apparently receive copies of *News from CAST*. Therefore, each member has an opportunity to keep informed about CAST activities. However, I would like to emphasize some of CAST's accomplishments during the past year.

Three new scientific societies, the Entomological Society of America, Society for Range Management, and Institute of Food Technologists joined CAST in 1977 bringing the total number on December 31, 1977 to 22. All other classes of membership increased from the beginning to the end of 1977. Supporting members increased from 80 to 95, sustaining members from 54 to 118, subscriber members from 47 to 88 and individual members from 1,250 to 2,500. Efforts to increase membership and financial support are continuing.

Eight task force reports were issued in 1977 at the request of Congress, the Environmental Protection Agency, the U.S. Department of Agriculture, The Food and Drug Administration, the Federal Energy Administration or the Energy Research and Development Administration. They included the following:

No. 66—Hormonally Active Substances in Foods: A Safety Evaluation, January 25, 1977

No. 67—Review of "Animal Waste Utilization on Crop and Pastureland", May 11, 1977.

No. 68—Energy Use in Agriculture: Now and for the Future, August 6, 1977.

No. 69—Pesticides for Minor Uses: Problems and Alternatives, August 29, 1977.

No. 70—Food Enrichment in the School Breakfast Program: Philosophy, Science, and Technology, October 12, 1977.

No. 70—Dietary Goals for the United States: A Commentary, November 30, 1977.

No. 72—Review of "Nonpoint Source Control Guidance, Agricultural Activities", December 3, 1977.

No. 73—Comments on "Health Risk and Economic Impact Assessments of Suspected Carcinogens: Interim Procedures and Guidelines", December 30, 1977.

On March 6, 1978, the following report was issued:

No. 74—Nitrite in Meat Curing: Risks and Benefits.

There were 45 persons who took part in the annual meeting of the CAST Board of Directors which was held in Washington, D. C. on February 23 and 24, 1978. These included officers, members-at-large, member society

representatives, individual member representatives and two *ex-officio* representatives from the Agricultural Council of America and the American Institute of Biological Sciences.

At the meeting, the Board approved the Northeastern Weed Science Society as the twenty-third member society and also approved five new supporting members, 17 sustaining members, 14 subscriber members, and 219 individual members. Four task forces were authorized to make studies and issue reports on the following subjects:

1. Water in Agriculture
2. Organic Farming and Gardening
3. Use of Animal Wastes in Animal Feeds
4. Aflatoxin and other Mycotoxins in Perspective in Agriculture

The CAST procedure of using multidisciplinary committees, to study and make reports on major topics of interest to agriculture has gained wide acceptance. A major concern of the Board of Directors now is to obtain adequate resources to meet the demands being made of CAST.

B. E. Clark, *Representative*

## LABORATORY ACCREDITATION COMMITTEE

The interest in laboratory accreditation has been obvious for some time. At the 1977 AOSA annual meeting, Wayne Still presented a report on a national voluntary laboratory accreditation program, administered by the U.S. Department of Commerce. A copy of that report is attached. Specifics of that program may be found in the Federal Register, Vol. 48, No. 90, Page 20092, May 8, 1975, and Federal Register, Vol. 41, No. 38, February 25, 1976.

Questionnaires were mailed to AOSA member laboratories in April, 1978, to determine their thinkings about laboratory accreditation. The questionnaire was obviously not too well developed, because the replies are much too variable to summarize. As much as is possible, this report will attempt to present the consensus of the members.

*Seed Laboratory Supervisor.* There may have been some confusion about director, or program supervisor vs. laboratory supervisor. The replies about qualifications varied from high school to M.S. degree, as far as educational background is concerned, and from 2 years to 10 years for experience.

Course work recommended included Basic and Advanced Courses in Botany, Plant Physiology, Plant Classification, Statistics, Plant Pathology, Genetics and Horticulture.

Other qualifications included good eyesight, good health, good digital dexterity, honesty, leadership ability and ability to organize and communicate.

*Seed Analysts.* The answers reflected different role images for analysts. Some replies referred to different responsibility levels for analysts, with different education and experience for each level. Some referred to specialized analysts, such as purity, germination or TZ analysts. The replies varied from high school graduation to B.S. or B.A. degree in Botany or plant sciences. Experience suggested ranged from one year to five years.

Course work and other qualifications were very much the same suggestions as for supervisor. Many replies suggested post high school training in plant sciences, and one notable suggestion for other qualifications was *patience*.

Some replies made a good case for not having a requirement for a degree as a requirement for accreditation. Most replies agreed on the benefit of accreditation in influencing salary and budget requests in state and federal laboratories.

Several replies suggested that *analyst accreditation* should be based on a standardized examination to objectively establish competency for analysts.

*Equipment.* Most respondents listed laboratory equipment in their own laboratory. Items mentioned included:

Books	Seed Herbarium
Seed Identification plates	Growth Chamber
Dividers	Vacuum Seed Counters
Blowers	Exhaust systems
Balances	X-Ray units
Microscopes	Black Light
Germinators	Ovens
Automatic Controls on germinators	Moisture testers
	Origin of water supply

There was a very definite opinion that minimum equipment should be related to that needed to test seeds by AOSA rules, depending on the kinds of seed tested, to provide safe and comfortable working conditions for the analysts.

#### *Scope of Program*

Purity—including seed identification—noxious weeds

Germination

TZ

Pathology—Treatment detection

Vigor Tests (cold, prechill, soil, sand, greenhouse)

Phenol

Variety Purity

Classified as to function (Enforcement service, research, teaching, extension)

Participate in Seed Certification and Seedsmen's Association Activities  
Stratification

X-Ray

Again, the scope of program suggestions reflected the work and experiences of each laboratory, and their responsibilities as they perceived them to be.

*Comments.* Several comments have been selected as best stating the different opinions which were obvious. They are:

"We would like to compare the adequacy of our personnel, equipment and programs. Minimum standards for accreditation would be useful, but I do not think our state would recognize AOSA authority to impose accreditation standards."

"I agree very strongly with your view on the authority of the AOSA to impose standards on member laboratories."

"AOSA should draw up guideline which will be used for self evaluation by AOSA member laboratories."

"Accreditation may be very useful in establishing criteria for budget requests."

"Perhaps the AOSA could set up a laboratory review committee. Then if a laboratory administrator wanted assistance in evaluating a laboratory, she or he could ask to have one or two experienced people visit the laboratory, review its procedures, and suggest methods for improvement.

Official laboratories differ considerably in their organization, kinds of seed they test and kinds of test they conduct. They should not be organized to fit a set pattern. They should be organized in such a way as to provide the best possible service to their constituents.

Training in the life sciences provides a good background for understanding botanical relationships and life processes. However, there are good seed analysts who have not had such training, and it should not be required."

"We think it is good to have the AOSA Rules as guidelines for the laboratories, but feel that state and federal laboratories could not be accredited."

"We have trained many high school graduates who developed into much better analysts, able to do the day after day, sample after sample testing required in seed work more than many of our college graduates we have trained. This is undoubtedly due to many factors, not the least of which involved salary and the possibility of upward mobility in responsibility and pay." (This answer also included the opinion that if educational requirements were maintained at a higher level, it might help establish, sometime in the future, higher salaries, if tied to a progression in classification over time).

“Any laboratory that hopes to become accredited should have at least one analyst with an RST.”

“There is no possible way that AOSA can set up a laboratory accreditation program and rate laboratories. Because of the political system in the different states, it is impossible for every laboratory to be the same. However, AOSA can set up standards, and hopefully, its member laboratories will work towards meeting the standards for equipment and personnel. It will probably be easier to meet equipment standards than personnel standards.”

“I would like to see the AOSA set up accreditation standards for official analysts. If we have no authority to impose such standards on the official laboratories, at least we could implement the program on a voluntary basis. The official analysts could then take the examinations, and be ‘certified’ as competent if he or she chooses.”

“It seems to me that we should give some serious consideration to developing a method of certifying or accreditation of individuals, not just laboratories. Perhaps analysts in official laboratories should become Registered Seed Technologists.”

“It is probably more important that the analyst be accredited (as is done by SCST).”

“AOSA should begin administering official seed analyst examinations for an ‘official seed analyst certificate’ similar to or the same as the examination now given to Registered Seed Technologists. This would be for all official seed analysts, both federal and state.

AOSA should authorize the Laboratory Accreditation Committee, upon request by a member laboratory, to evaluate the facilities and equipment of each member laboratory and make *recommendations* for improvements.”

“We may not have the authority, but I think a standard guide is needed, especially in the area of treated seed.” (Writer suggested some specific safety requirements.)

“As we (AOSA) move toward vigor testing, upgrading of laboratories and analysts seems to be almost essential.”

“I think accreditation would serve to help the Association come closer to meeting its major objective of uniformity of seed testing. The Canadian laboratories would have no problem in accepting this idea as we already are under a similar system with ISTA. However, if this route was taken, there would have to be a system for de-accreditation wherein poor performing laboratories would lose their status on a crop by crop basis. Accreditation should be based on minimum requirements for analysts and physical plant, and be maintained on the basis of performance.” (Writer supplied a copy of the laboratory inspection report form used in Canada to authorize commercial seed laboratories.)

*Summary of all returns.* The most obvious consensus was that we are interested in not one accreditation aspect, but two:

1. Seed analysts certification, based on merit as measured by some objective test.
2. Laboratory accreditation, based on personnel qualification, equipment and satisfactory performance of laboratory work.

Of the two, there seemed to be the strongest feeling about certification of personnel. There seemed to be a thread of philosophy among the replies that professional analysts, by training and certification, will conscientiously implement the AOSA Rules For Testing Seeds, and will somehow work out the most serious laboratory problems.

The Committee recommends that this interest be continued. Perhaps the most direct movement would be an enlarged committee, picked especially for their experience and ability, to develop objective tests by which official analysts could be evaluated for proficiency.

A continuation of interest in laboratory accreditation might also be desirable. It is suggested that in the beginning, minimum criteria could be established by which a director and laboratory staff might examine their own competence based on personnel qualifications, equipment, space and programs.

George E. Spain, *Chairman*

## PRESIDENTIAL ADDRESS

R. H. Hofmann

Before beginning, may I state that since this paper has not been approved by my superiors, that I will have to assume the responsibility for the remarks made. The comments being made are my own and in no way reflect the views of my superiors or that of the Seed Regulatory Branch or Division of Livestock, Poultry, Grain and Seed. How's that for a "disclaimer"?

With so many negative views and approaches to things by individuals in our society these days, I thought I'd take a positive approach in bringing my message to you today.

Many of you may not know that this Association was founded 70 years ago. Yes, in 1908 a group of representatives from sixteen states, the U.S. Department of Agriculture and the Department of Agriculture of Canada met and voted to form our Association. Your program says this is the 68th annual meeting. Two meetings were not held. These were in 1918 and 1934. A little before my time.

As many presidents in the past have done, and I'm sure those in the future will do; I, too, took time to review the annual messages which former presidents had delivered to our Association. I personally found it was a rewarding experience and for those of you who haven't taken the time to do so—you'll find it quite informative and interesting.

I ask myself how much of the wisdom passed on to our membership have we accepted from these messages?

Dr. Everson (1) spoke of the need for increased research, teaching, and extension. Dwight Forsyth (2) spoke of our public image; E. W. Sundermeyer (3) spoke of uniformity in testing, accreditation of laboratories, training, seedling vigor, varietal purity tests and establishing a National Standardization Laboratory. Other past messages have made similar calls for action. Have we made any progress?

As I looked over the messages and pondered this question, my answer would have to be yes. Even though progress may, to many, seem slow, we have and are, moving ahead. Our research through AOSA and other sources produced many handbooks to which we can refer. A handbook for the uniform blowing points for Kentucky bluegrass, orchardgrass, and other kinds, a TZ handbook, and the list could go on, too numerous to mention. A total of 31 to date.

By this summer, an X-Ray handbook for examination of tree seeds will be available and hopefully, in the very near future, one on vigor. A committee is working on varietal purity tests and a committee is again pursuing the accreditation of laboratories. A National Seed Standardization Laboratory has been established. We have made progress, but, it has taken, in some instances, a long time. Our efforts have not always been pursued as an Asso-

ciation, but, often, on an individual basis. Perhaps this is where we have failed each other. We should act more as a united group, both from within and with allied organizations.

This requires that better communication be established with allied associations in order to achieve our own as well as mutual goals. Elmo Winstead (4) recommended the establishment of a liaison committee. This committee was established. I personally know our liaison committee has been very, very active this year. Selected members attended both regional and national meetings from allied organization such as NASDA, AASCO and AOSCA, to mention but a few, in order to establish better communications and they have reciprocated by having representatives at this meeting.

Many years have elapsed since the groundwork of this Association was laid, implemented and expanded. We have worked with a President, Vice President, Secretary-Treasurer and Executive Board since that time. Possibly we may now be ready for a little further revision in this structure. We have had, since the Association inception, an unpaid staff and dedicated special people who gave and give their energy and time to this, one of their favorite organizations. As Dr. Isely (5) said, in the preface of *Fifty Years of Seed Testing*, "people involved in AOSA regard their responsibility to the organization not just as a job, but, as a 'way of life'."

Can this "way of life" continue? Perhaps, as discussed last year and advocated by several past presidents, we should reconsider the term of our President and our Vice President. Many felt very passive about this last year when it was suggested. From my own experience, a President barely begins his term when it's over. The groundwork he has laid never really has a chance to bear fruit. A two year term would give both the Vice President and President a chance to become familiar with their respective duties, positions, Association problems and to implement programs. All this would help ultimately to lend more continuity to our Association. Each individual elected to the Executive Board serves a three year term. The terms are staggered so there's a continuity in leadership already established here. The remainder of our structure should be set in order.

The other area of concern, which has recently arisen, is that of our Secretary-Treasurer position. As those who have held this position will attest, the position of Secretary-Treasurer is a very demanding one. It is almost like having a second full time job. Persons have recently been reluctant to accept this position because of the extra demands involved on that person and his family as well. Dr. Justice told me, when I assumed this responsibility in 1973, that many hours would be spent in the evenings and on weekends taking care of Association business. He was right!

The workload of this position has been on the increase. In 1958, there were 284 invoices. In 1966, 8 years later, 464 invoices. In 1975, 612 invoices. This, plus correspondence on delinquent accounts, inquiries for price lists and a host of other details connected with this position, all de-

mand immediate attention. Where does one draw the line and stop working on AOSA chores and begin working on his regular duties?

After reviewing this problem with past Secretary-Treasurers, this year we concluded that we could pursue one of three options open to us.

1. Leave the position as it is, with the hope that persons will be receptive to accepting nominations for the position.
2. Somehow, separate the position.
3. Create a position for an Executive Secretary-Treasurer who would be at a permanent location and would receive a small reimbursement for his work.

The Executive Board has discussed this problem at our board meeting and taken it under advisement. I'm sure your President-Elect would be receptive to any suggestions you, as members, may have.

External changes are also being experienced and could affect the AOSA. You may recall many of the "Old Guard" involved in AOSA were Federal employees who had been seed analysts and then assumed administrative roles. Persons like G. H. Hicks, Edgar Brown, Emma Sitrine, F. H. Hillman, Walter Dvidson, O. L. Justice, W. N. Allen, W. D. Hay, E. W. Sundermeyer, to mention but a few, have served as officers in AOSA. I will probably be the last Federal employee to serve our Association in any official capacity. USDA representatives from AMS will no longer be able to hold office in this Association for fear of being charged with a conflict of interest or featherbedding. The Administration also feels that this Association should be attended by seed analysts only, and therefore, it has revised its policy on our participation. Attendance by Officers-in-Charge of the Seed Regulatory Branch field offices is being phased out and seed analysts from these offices are now and will be our representatives.

There are probably more changes which will affect the structure of AOSA in the future. I have only attempted to call a few to your attention. These challenges lie ahead to keep the "New Guard" busy.

I would like to take this opportunity to personally thank all of the persons who have chaired committees and those who have served on these committees this past year. You have done a commendable job and done your share to move our Association forward. To the membership, thank you for expressing confidence in me and letting me serve as your President. It has been an honor and a rewarding experience.

I feel that seed people are "special" people. To borrow a better descriptive word from another segment of our society, you are "beautiful" people. Your dedication, friendship and energy is hard to find and match among any other groups of people with which I have been associated.

The commodity with which you deal, day in and day out, typifies the type of people who handle it. It has patience, strength, and when properly

nurtured, abounds in energy, to burst forth with new and continuing growth. I wish the members of both this Association and SCST the best of luck in their future endeavors and growth.

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