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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.

**Publication Charges.** Page charges have been established for the Journal and will become effective for volume 13 (1). Charges are \$20 per page for the first 10 pages and \$50 per page for each additional page. Authors will be billed for charges when galley proofs are received.

**Manuscripts.** The manuscript must be typed on good-grade bond paper approximately 21 by 28 cm. The lines of type must be numbered on each page. Three 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, 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.

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**Tables.** Tables are numbered consecutively. Use the following symbols for footnotes, in this order: †, ‡, §, ¶, #, etc. Use asterisks (\*, \*\*, etc.) to indicate statistical significance (5%, 1%, etc.). Do not duplicate information 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 words should be avoided on graphs and charts. Label each figure with the name of author, title of article, and number of figure. Do not use figures which duplicate information 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*. The Publications Handbook and Style Manual of the American Society of Agronomy can also be used as a guide in manuscript preparation.

**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. Names of states 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 quotation 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.

### Subscription Information

Subscription rates are \$25.00 per year for the *Journal of Seed Technology (JOST)* and may be obtained by writing to the Secretary-Treasurer, Association of Official Seed Analysts (AOSA). Back issues of the JOST, as well as other AOSA publications are also available.

Mr. Larry V. Prentice

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## THANKS TO OUR REVIEWERS

The Journal of Seed Technology would like to thank all of the individuals who reviewed articles for Volume 15 issues. A special thanks is given to the Associate Editors who worked with the reviewers and the authors to make each manuscript of the highest quality. We appreciate all the valuable time and effort each reviewer gave to improving the manuscripts they reviewed.

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EXECUTIVE BOARD MINUTES  
June 8, 1991

James Lair*	Arnold L. Larsen*	Deborah Meyer*
Rodger Danielson*	Larry Prentice	James Warren*
Dick Lawson*	Charles C. Baskin*	Steve McGuire*
Loren E. Wiesner*	Doug Ashton*	Wayne Guerke*
Miller B. McDonald	A.B. "Sandy" Ednie	Vince Synder
Richard Payne		

(\* ) Denotes Member attending on AOSA Board of Directors

The executive board session of AOSA was called to order at 8:57 AM in the Raddison Hotel, Lexington, KY on June 8, 1991, with President Wayne Guerke presiding.

The board agenda was distributed. C.C. Baskin moved and Loren Wiesner seconded that the agenda be approved as distributed. Motion Passed.

The General Session Minutes from Annapolis, Maryland were reviewed from Volume 64 #3 of the AOSA newsletter. Loren Wiesner moved and Rodger Danielson seconded that the minutes be approved as printed in the newsletter. Motion Passed.

The Secretary and Treasurer reports were reviewed from copies mailed to the board of directors. Future sources of association income were discussed along with sales of the Cultivar Purity handbook. Lair moved and James Warren seconded the secretary and treasurer reports be approved. Motion Passed.

President Guerke announced special appointments and committees for the Kentucky meeting. C.C. Baskin was appointed parliamentarian for the board sessions, Arnold Larsen was appointed Chairperson of the Resolutions Committee and Ellen Chirco Chairperson of the Audit Committee.

The Editorial Report was given by Loren Wiesner. The rotation schedule of JOST reviewers had been set at 3 years. Plans were to use the same reviewers as terms expired or appoint new reviewers as needed. Eighteen manuscripts had been submitted to JOST. The number accepted had decreased substantially, currently 60% were being accepted. JOST Volume 14 #1 had been distributed. 14 #2 was to be released shortly. 15 #1 was at the printer and would consist of up to 6 papers for publication in July. Volume 15 #2 would include symposium papers presented in Kentucky. Other handbook printings were progressing. The Cold test vigor insert was to be printed. Discussions on how to advertise AOSA publications was heard. McGuire moved and Danielson seconded that the publications list of AOSA handbooks go into future AOSA invoicing, the September Issue of the AOSA Newsletter annually and that the SCST Newsletter editor be provided a copy with a request to publish it in the SCST Newsletter. Motion Passed. Reports of other handbooks continued, Arnold Larsen presented information on the third revision of the Uniform Classification Handbook. A copy had been made available to committee members and for \$10 anyone else could obtain a copy. Dr. Gunn would assist the process by checking nomenclature on GRIN once Travis Handwerker completed a DBASE translation of the data.

The Newsletter editor's report was given. Four issues had been sent out

on time including the directory. The Directory had been an additional cost over the budget. The report showed foreign publications were charged the same rate as United States subscribers of \$20. The \$20 rate did not cover postage costs for foreign mailings. C.C. Baskin moved and Lair seconded that the Newsletter subscription rate for foreign subscribers be increased to \$25 annually to recover postage costs. Motion Passed.

After hearing additional discussion, President Guerke directed Loren Wiesner to review JOST costs on foreign subscriptions and report to the board at next year's meeting in Oklahoma City, OK. Discussion continued on distribution of special Newsletter issues such as the directory. Postage costs were causing a strain on the budget. C.C. Baskin moved and Loren Wiesner seconded that Newsletter issues made for review of the new handbook printing as rule changes be distributed only to AOSA membership and not offered for sale. Discussion was heard and the motion was amended to state regular rule changes would remain a part of Newsletter subscriptions. Arnold Larsen moved and Dick Lawson seconded that the matter be tabled to the Tuesday Board Session. Motion passed.

As part of the Editor's report, options were discussed on how to best publish AOSA minutes and reports. Options presented by the JOST editor were:

1. Delete proceedings from the JOST issues.
2. Publish reports in brief in JOST and the Newsletter.
3. Publish only the committee reports.

James Warren moved and C.C. Baskin seconded to have the Editorial committee prepare a recommendation for action at the next session by the constitution committee utilizing option #1 stated above. Motion Passed.

Wiesner announced that the American Society of Agronomy meeting in Colorado would allow for exhibits at cost. C.C. Baskin moved and Arnold Larsen seconded that AOSA participate by exhibiting Vigor, Rules, Cultivar Purity and Radiographic Analysis of Tree Seed handbooks at \$17 per book. Loren Wiesner moved and C.C. Baskin seconded that the Editors Report be accepted. Motion Passed.

The board then took a break from 10:45 am to 11:00 am.

The Public Service Report was read by Jim Lair. He had asked to be replaced as the committee chairman. Lair moved and C.C. Baskin seconded to accept the Public Service Report. Motion Passed. Discussion was heard on making up new crop reference slides. Costs and any resulting publications would be brought back to the board at the 1992 session for review.

The Seed Standardization Report was read by Wayne Guerke. A new instruction booklet had been put out on the uniform report form. Miller McDonald would replace Allen Knapp as chairman and would produce a new teaching manual. The AOSA sample standardization committee would circulate a survey on soil use to AOSA Member Laboratories. Rodney Young had been appointed the new sub-committee chairman. Sample Mediation under Jim Warren had received one sample for review this year. Rodger Danielson moved and James Warren seconded to accept the Seed Standardization Committee report. Motion Passed. Discussion was heard on including the committee functions of Seed Standardization in the constitution. Rodger Danielson was directed to provide a copy of committee

functions from Volume 9 #2 of JOST to the constitution committee chairperson, Ellen Chirco.

Deborah Meyer gave the Referee committee projects for the past year. Ten of 13 projects were completed. The AOSA regions had been realigned to match those of SCST. Regional Chairman terms had been changed to 2 years with the possibility of reappointment. The draft of Referee guidelines had been completed and the board would be asked to review them. The guidelines included report content recommendations. Data analysis using Tattersfield statistical procedures was recommended by Dan Niffenegger. The mailing lists were now updated by region and all mailings would be directed to laboratories, not individuals. A DBASE application reference of previous referees was now also available. How to follow-up with laboratories discussed. Deborah Meyer moved and Dick Lawson seconded to accepted the Referee Report. Motion Passed. Debbie stated she would report back to the board on results from the Sunday meeting.

Rodger Danielson presented information and changes to the Seed Analysis Report.

The board adjourned for lunch at 12:15 pm to reconvene at 1:30 pm.

The Seed Harmonization Report was given by A.B. Ednie. The committee had met informally in Lexington, KY to discuss progress on the 14 points brought up between AOSA and ISTA. The points and advances (\*) made were:

1. Working Sample Size for large seeded legumes.
2. Procedures for *Juncus tenuis*.
- \* 3. Uniform Blowing - ISTA was reviewing AOSA procedure.
4. Weed seed definitions versus ISTA 1/2 seed rules.
- \* 5. AOSA *Cuscuta* procedures - being resolved with EEC.
- \* 6. Large Sd Inert Classifications - ISTA was studying.
7. Chalcid Fly Damage to Legume Seeds.
- \* 8. EEC Paper Substrates - Were under joint review.
- \* 9. Sand and Soil Medias - Knapp was doing a survey.
- \* 10. Seedling Evaluations - both would finish work by 95.
- \* 11. Corn Split Coleoptile - Answer was expected by 92.
- \* 12. Primary Root Evaluation - Would finish work by 95.
- \* 13. Review of Retests - Show possible AOSA method bias.
- \* 14. Fresh Seed / Germination Temperature Requirements.

Loren Wiesner moved and Dick Lawson seconded to accept the report. Motion Passed.

With approval the board heard as new business the AASCO resolution had asked that AOSA establish procedures for mulched seed products. Seed purity procedures existed, but the main concern was obtaining a representative sample and doing noxious weed exams at a 10X working weight level. Mr. Snyder stated mulched seed was a consumer demand product. To alleviate concern over noxious weed content, O.M. Scott would have samples drawn and tested officially for sharing with other states prior to mixing. Mr. Snyder asked for input on the feasibility of this approach. Discussion was heard about if germination results should be run in the mulch for testing. Loren Wiesner moved and Lair seconded that the matter be referred to research purity sub-committee for study and a report be made to the board in 1992. Motion Passed.

The budget report for FY92 was given and distributed to the board and visitors for review. Larry Prentice, incoming-secretary treasurer asked for board input on his computer fees. Lair moved and Dick Lawson seconded that computer fees of \$4.50/hour be established for FY92 with a review by Mr. Prentice in 1992 for possible increases. Motion Passed.

Officer travel expenses had been reduced in FY91 by having members attend other Association meetings near their areas. Discussion was heard on how to incorporate the Seedling Evaluation Handbook printing into the FY92 budget. As part of the budget report, President Guerke called for AOSA to establish a Ways and Means budget review committee consisting of the JOST Editor, Association Officers and Past President. The 5 people would meet on a semi-annual basis at their own personal expense to review the budget. The board endorsed the committee and directed President Guerke to proceed. C.C. Baskin moved and Arnold Larsen seconded to accept the FY92 budget. Motion Passed.

The Board then took a break from 3:00pm to 3:15pm.

Daniel Niffenegger gave the CAST Report. He had attended the first meeting in February of 1991. CAST was changing the procedures by which they reported on topics. CAST would be an exhibitor at the Lexington, KY meeting. The latest CAST report released was Plant Breeding for Pesticide Resistance. President Guerke added correspondence he received from CAST to the report content. C.C. Baskin moved and McGuire seconded to accept the CAST Report. Motion Passed.

Dick Payne brought a pamphlet to the board for pre-approval of distribution at the Lexington meeting. The notice was for a journal being circulated by NAIB. The board granted approval for distribution.

A Seedling Evaluation Report was given by Doug Ashton. Seed drawings were to be evaluated as rule change #9 at Lexington. Mr. Ashton expressed his views on the drawings as an aid to test standardization but did not want them depicted as inflexible rules or templates for comparison. Some species would still not have drawings after the meeting. Closed and open sessions were both scheduled prior to Rules voting at Lexington. An estimate of printing expenses was discussed and use of generic binders for AOSA handbook publications. President Guerke directed Prentice to investigate binder options and report in 1992. McGuire moved and C.C. Baskin seconded to accept the Seedling Evaluation report. Motion Passed.

President Guerke announced the Merit Award would be presented at the AOSA banquet on Wednesday. C.C. Baskin moved and Steve McGuire seconded to accept the report. Motion Passed

The Necrology Report was given by Dick Lawson. Five Past Presidents of AOSA had passed away in FY91. C.C. Baskin moved and Loren Wiesner seconded to accept the report. Motion Passed.

A report from the special committee on AOSA's Non-Profit Status was given by James Warren. AOSA had applied for, and already received, non-profit status in N. Carolina. The status had been reviewed this year and AOSA would not be required to file a statement. To update the corporation tax status at the federal level, AOSA's constitution would need modifications to separate the by-laws. Once this was completed AOSA could complete

federal filings at a cost of \$370.00. Rodger Danielson moved and Dick Lawson seconded to accept the report. Motion Passed.

The Program Report was given by Steve McGuire. Changes in the program format this year were completed with the help of the Kentucky staff. It was recommended that AOSA's committee chairs and the committee members be listed in the newsletter to aid in scheduling future meetings for committee time. Steve McGuire moved and C.C. Baskin seconded to accept the Program Report. Motion Passed.

The Uniform Seed Analysis Report and materials distributed were discussed by Rodger Danielson. The report form had been in use for one year in commercial laboratories. Arnold Larsen moved and C.C. Baskin seconded to accept the report. Motion Passed.

The nominations report was read by President Guerke. C.C. Baskin moved and James Warren seconded to accept the report. Motion Passed.

The Nomenclature Report was read by President Guerke. Dick Lawson moved and Loren Wiesner seconded to accept the report. Motion Passed.

The Meeting Place Report was given by President Guerke. AOSA would meet in Oklahoma City, OK in 1992, Fort Collins, CO in 1993 and Portland Oregon in 1994. C.C. Baskin moved and Dick Lawson seconded to accept the report and invitation from Oregon in 1994. Motion Passed.

The Membership Report was given by President Guerke. Three of four Associate member applications were recommended for acceptance by the committee. All honorary member recommendations were recommended for acceptance by the committee. C.C. Baskin moved and Loren Wiesner seconded that the board accept the report and members the committee had recommended be accepted. Motion Passed.

The Board then adjourned for Dinner at 5:05 pm to reconvene at 9:05 pm, that evening.

Larry Nees was present and added comments to the membership reports along with actions that had occurred last year.

As old business the board discussed establishing membership fees for the Allied Laboratories Member Category. Discussion was heard on extending personal letters of invitation to join to potential South American Laboratories. Arnold Larsen moved and Jim Lair seconded that Allied laboratory membership fees be established at \$100.00 per year. Membership privileges would consist of one Newsletter and Journal subscription and one complimentary copy of any new AOSA publications distributed. Motion Passed.

As old business president Guerke had contacted ASTA regarding a resolution on super chaffy grasses. Since ASTA could not find the resolution for review, no action was taken by the board.

As new business President Guerke asked the board for input on topics for an AASCO panel concerning the Federal Seed Act revision. To the board's knowledge, no agenda existed for changes. Topics discussed included moving Noxious Weed Enforcement out of APHIS into the Federal Seed Branch and having the Federal Seed Act cite AOSA methodology. The board directed President Guerke to prepare comments and represent AOSA on topics relating utilization of AOSA methods and topics relating to testing standardization.

As new business the board heard materials presented by Jim Lair relating to copper sulfate methodology. Questions on the testing had been addressed in the Senate in Illinois. Action was deferred to Tuesday until the Federal

Seed Branch representative could be present.

Seed Vigor Positions of ASTA, and AOSA's reply to them were distributed to board members. President Guerke briefly commented on the AOSA response. No action was taken.

Steve McGuire moved and Jim Lair seconded to adjourn the June 8, 1991 board session and reconvene at 8 am Tuesday, June 11, 1991. Motion Passed.

Board adjourned at 10:33pm.

Secretary - James N. Lair

### Executive Board Minutes

June 11, 1991

James Lair*	Arnold L. Larsen*	Deborah Meyer*
Rodger Danielson*	Larry Prentice	James Warren*
Dick Lawson*	Charles C. Baskin*	Steve McGuire*
Loren E. Wiesner*	Doug Ashton*	Wayne Guerke*
Miller B. McDonald	A.B. "Sandy" Ednie	Richard Payne
Malcomb Sarna	Allen Knapp	David Svik
Betsy Randall Schadell	Ellen Chirco	Larry Nees
Dick Sayers	Alan Phillips	Dennis TeKrony

(\* ) - Denotes Member attending on AOSA Board of Directors

The second executive board session of AOSA was called to order at 8:07 am in the Raddison Hotel, Lexington, KY on June 11, 1991, with President Wayne Guerke presiding.

The board agenda was followed with a continuation of new business topics. Information was presented on sweetclover testing results utilizing copper sulfate tests. A letter had been addressed to the board from Illinois asking to have questions answered in regard to the test. The board had asked Dick Payne to be present since the Federal Laboratory had proposed the original rule. Discussion was heard regarding the test use by other state agencies and results being run in Canada. Growouts or questionable results had been done in 1987 to confirm Illinois test results. The board directed the federal laboratory to obtain new samples from Illinois and reevaluate the procedure with growouts and testing.

Malcomb Sarna gave the legislative report. The review of State Laws had been done in cooperation with SCST for a second year. All but 10 states had reported on their laws. Eighteen states and Canada had changed legislation from the previous year. C.C. Baskin moved and Loren Wiesner seconded the acceptance of the report. Motion passed.

Allen Knapp gave the Research report. Knapp had asked to be replaced as the committee chairman for Research. His replacement had not been confirmed at the time of the report. Sub-Committee chairmen would also change in some areas. Loren Wiesner would serve on Cultivar Purity, but Tim Gutormson was off the TZ committee, Manjiti Mishra was off conditioning and Dennis TeKrony would be off of research funding as chairman. Dr. Knapp announced that the SCST had upped their commitment to research

funding by \$500.00 to a total of \$2000.00 for FY92. Projects to be funded in FY92 amounted to a commitment of \$4050.00. This figure was below the budget estimate of \$7000.00. Loren Wiesner moved and Dick Lawson seconded that the report be accepted. Motion passed.

Dr. Knapp continued with the AOSCA Advisory Committee report. The AOSA had met with AOSCA and no concerns or appraisal of the AOSA Cultivar Purity Handbook had been expressed by AOSCA. A discussion was heard regarding the grass varietal review board and their functions. Concerns had been expressed regarding availability of ryegrass fluorescence descriptions in Rules passed this session. It was stated that the descriptions would be available in the September issue of the Newsletter.

President Guerke provided board members a copy of objectives he had received from Dick Sayers for consideration as guides for the Committee of Affiliates. Discussion would be heard later at 10 am and he asked board members to review the materials. The Symposium report was presented by Betsy Randall Schadell. The symposium had been held on Tuesday. The papers would appear in the September Newsletter along with a listing of seed health source personnel. C.C. Baskin moved and Steve McGuire seconded to accept the Symposium Report. Motion Passed. Symposium topics for next year were discussed. A suggested topic dealt with laboratory health practices and safety procedures for treated seed and materials. President Guerke directed Steve McGuire to pursue this topic for next year's program.

As new business, Malcomb Sarna updated the board on ryegrass fluorescence and the status of the moratorium. His committee was recommending that the moratorium cease with adoption of new rules. A request regarding extension of the moratorium had come from Oregon Seed Growers. President Guerke directed Malcomb to have his committee consider Vera Colbry ryegrass evaluations/descriptions as a possible rule change for the next year. Malcomb stated the committee also would utilize work Don Grabe of Oregon had under way in preparing any rule changes.

The board took a break at 9:15am to reconvene at 9:30am.

The Rules Committee report was given in abbreviated form by David Svik. Eighteen rule proposals would be voted on in the general session. The open session to discuss changes had been moved to Thursday so participants would still have any changes made on their mind when voting took place. Mark Miller had replaced Jeff Reprecht as the SCST representative to the Rules Committee. Malcomb Sarna would replace the representative from the Eastern United States. This year the Rules committee was establishing an October 15th deadline to have rule proposals submitted by. That deadline would continue in the future. Doug Ashton moved and Loren Wiesner seconded to accept the report. Motion passed.

Letters on blower conversion factors had been referred by President Guerke to the Rules committee for comment. The recommendation that Svik made called for the purity sub-committee headed by Arnold Larsen to study the proposals presented. President Guerke stated he would direct a letter to the author of the conversion factors stating the board actions being taken.

The Audit committee report was given by Ellen Chrico. On June 9th the Vice President, Steve McGuire, herself and the secretary-treasurer had audited the books. All accounts were found to be in order for the incoming

secretary-treasurer. C.C. Baskin moved and James Warren seconded to accept the report. Motion passed.

Ms. Chirco continued with the Constitution committee report. One area of the constitution had been inquired about in the last year. Changes to make for the next year would involve:

1. Recommendations for separation of by-laws.
2. Insertion of Accreditation committee as a standing committee.
3. Deleting printing requirements of the Minutes in JOST.
4. Addition of Seed Standardization Committee functions.

The current version of the constitution had been typed up and would be printed in the September Newsletter. Arnold Larsen moved and Steve McGuire seconded to accept the constitution report. Motion passed.

President Guerke gave a verbal report on the Committee of Affiliates meeting in Lexington. Dick Sayers, ASTA representative, and Alan Phillips, AOSCA representative, were invited to the board session to explain their proposed objectives for the committee to improve intercommunication. The objectives were read and President Guerke commented on their merit. President Guerke felt proposed items 1, 2 and 3 were being addressed by publication in the Newsletter or through correspondence. President Guerke felt Item 4 of the objectives could be acted on with the Committee of Affiliates. Dick Sayers commented that he wanted to continue to improve communications between AOSA and ASTA. Mr. Sayers was not in favor of utilizing committees outside of AOSA. It was felt some documentation would be beneficial to help distribute communications from the meeting. Such communication would not necessarily consist of a set of formal minutes. Loren Wiesner commented that the meetings timing and having an advanced distribution of an agenda would help assist communication. The AOSA Board and President Guerke recommended that a regular report using presented objectives as a guide be prepared by Wayne Guerke. Lair moved and C.C. Baskin seconded that President Guerke draw up objectives for the Committee of Affiliates and include the objectives in the administrative practices handbook of AOSA. Motion passed.

Wayne Guerke moved and C.C. Baskin seconded that the Committee of Affiliates report be accepted. Motion passed.

The Research Funding Committee report was given by Dennis TeKrony. Efforts were under way to have seed testing recognized as a valid federal grant bidder. In the meantime, research funding for projects totaling \$4050.00 had been awarded for FY92. The paper session held Wednesday was discussed. TeKrony recommended that the format utilized continue for future programs. Lair moved and Guerke seconded to accept the report. Motion passed.

The Liaison Report was given by T. Wayne Still. The President had utilized AOSA personnel in areas where meetings were held to represent AOSA or gone on behalf of the Association himself. C.C. Baskin moved and Loren Wiesner seconded to accept the report. Motion passed.

Mr. Still continued with the Certification of Analysts Report. Four of 5 regions had administered exams this year. Region exams given were Central - 10, NE - 7, NW - 9 and SE - 5. Forty-one certificates would be issued this year but no new states had obtained certification of staff. The committee recommendations brought to the board were:

1. Combine regional lists into one master list.
2. Have Dr. Gunn review botanical nomenclature for updating.
3. Change Analyst Certification constitutionally to a standing committee.

A new chairman for the committee would be needed as Wayne Still was retiring. Regional replacements in the NW and Central regions were already lined up. Since Wayne Guerke expressed interest in chairing the committee but had time constraints, Roger Danielson moved and C.C. Baskin seconded that Wayne Still be assigned as a co-chairman to assist President Guerke until his term as President expired. Motion passed. James Warren moved and Loren Wiesner seconded to accept the report. Motion passed.

The board adjourned for lunch at 11:33 am to reconvene at 1:05 pm.

The meeting continued with topics that had been brought to the board as a result of committee meetings held in Lexington, KY.

Arnold Larsen reported that AOSA and SCST had established at Lexington, KY, a joint Computer Committee. The committee was based on interest from a survey conducted by the SCST. The committee would work to catalog computer programs which could be held on the Federal ALPHA bulletin board. This was a bulletin board where information could be selectively uploaded or downloaded by authorized personnel. AOSA members currently designated to serve on the committee were Jim Lair, representatives from the Iowa Seed Science Center and Dixie Yockley from the Lexington Seed Laboratory. Lair moved and Steve McGuire seconded that computer access to bulletin board materials be available only to committee members in the first year and that documents such as the rules be reviewed on individual machines of committee members for FY92. A report of committee activities would be made to the board next year. Motion passed.

As new business, a request had been made to have the old statement for vigor test uses reviewed and updated for joint distribution by AOSA and ASTA as a joint educational document. Final distribution would be subject to content approval by both Associations. No action or directions to the Vigor committee were recommended by the board.

As budget items for consideration, insert charges for the cold test update were discussed. Jim Lair stated that by board action last year the cost of all inserts had been frozen at current levels. As such, all vigor inserts would require a charge of \$5.00. No action was taken by the board to change the FY91 policy.

The costs of providing complimentary subscriptions was reviewed. It was mentioned that ISTA publications which AOSA received in exchange still were at a substantially higher cost than our Newsletter and Journal. As such, no action was recommended to discontinue the exchange agreement with ISTA.

Discussion was heard on possible program changes that would help alleviate meeting costs for both AOSA and SCST. Arnold Larsen moved and James Warren seconded the AOSA board endorse the use of a SCST/AOSA joint banquet to reduce future meeting costs. Motion passed.

Loren Wiesner proposed an amendment to the motion to include utilization of a joint SCST/AOSA symposium for future meetings. Motion to amend was accepted by the author and seconded. Motion passed.

How to best utilize a Ways and Means committee was reviewed with

the board. Possible meeting sites were discussed. SCST currently meets in Las Vegas since that area offered good hotel rates and discount air fares to a central airport hub. No action to set a meeting location was taken by the board. The board directed President Guerke to proceed with a Ways and Means Committee meeting this year.

Cultivar purity handbook sales and costs of publication were reviewed from treasury information. Dick Lawson moved and Steve McGuire seconded to reduce the price of Cultivar Purity handbooks to \$25.00 per issue. Motion Passed.

Doug Ashton reviewed methods he had been presented with by Jim Lair on completing the seedling evaluation handbook for timely distribution following Rules voting in Lexington. Discussion was heard on utilizing a pre-subscription pricing and pre-order receipts to finance the printing costs. The pre-subscription price could be announced in the Newsletter. Action by the full board was deferred to those officers represented at the mid-winter session on the Ways and Means Committee.

Having no further business to consider, Roger Danielson moved and Deborah Meyer seconded that the AOSA Board of Directors adjourn. Motion Passed. Board adjourned on June 11, 1991, at the Raddison Hotel in Lexington, KY at 2:20pm.

Secretary - James N. Lair.

**ASSOCIATION MEETING MINUTES  
81ST ANNUAL MEETING**

**AOSA Roll Call — 1991**

Raddison Hotel  
Lexington, Kentucky

AOSA Full Member Labs(\*) in Attendance

- |                               |  |
|-------------------------------|--|
| 1. Arkansas State Laboratory  | 18. North Carolina State Lab               |
| 2. California State Lab       | 19. North Dakota State Lab                 |
| 3. Colorado State Lab         | 20. Ohio State Lab                         |
| 4. Georgia State Lab          | 21. Oklahoma State Lab                     |
| 5. Idaho State Lab            | 22. Oregon State Lab                       |
| 6. Illinois State Lab         | 23. South Carolina State Lab               |
| 7. Indiana State Lab          | 24. South Dakota State Lab                 |
| 8. Iowa Seed Science Center   | 25. Texas State Lab                        |
| 9. Kansas State Lab           | 26. Virginia State Lab                     |
| 10. Kentucky State Lab        | 27. Wisconsin State Lab                    |
| 11. Louisiana State Lab       | 28. Wyoming State Lab                      |
| 12. Maryland State Lab        | 29. Federal Seed Testing Lab / Beltsville  |
| 13. Michigan State Lab        | 30. National Seed Storage Lab / CO         |
| 14. Minnesota State Lab       | 31. National Tree Seed Lab / GA            |
| 15. Mississippi Seed Tech Lab | 32. Forestry Sciences Lab / MS             |
| 16. Nebraska State Lab        | 33. Central Seed Lab / Ag Canada/Ottawa    |
| 17. New York State Lab        | 34. Eastern Canada Lab / Ag Canada/Toronto |

\* See the list of attendees for individuals representing each of these facilities, page 122-129.

**GENERAL SESSION MINUTES**

6/13/1991

The meeting was called to order 1:01 PM with President Wayne Guerke presiding. The roll call was taken, 34 of 52 member laboratories were attending for a quorum. David Svik was announced as the parliamentarian.

The Executive Board minutes were read by Jim Lair. Sessions had been held on 6/8/91 and 6/11/91. After the reading of the minutes, changes to the 14 points being discussed with ISTA were made by Sandy Ednie and the word photos changed to drawings for Seed Evaluations. C.C. Baskin moved and Svik seconded to adopt the minutes as amended. Motion passed.

The Secretary and Treasurer reports were presented in brief by Jim Lair. As part of the report Jim thanked both AOSA and SCST members for their patience and assistance during his 2 terms as Secretary-Treasurer. Lair moved and C.C. Baskin seconded to accept the report. Motion passed.

The Editorial report was summarized by Loren Wiesner. Loren read off the names of current reviewers for the Journal of Seed Technology and updated members on the printing schedule for the rest of the year. Wiesner moved and Arnold Larsen seconded to accept the report. Motion passed.

The Legislative report was given by Malcomb Sarna. AOSA and SCST Legislative committees had cooperated over the last year to do survey work together. The results of the survey indicated 18 states had instituted fee increases and/or law changes. Sarna moved and Steve McGuire seconded to accept the report. Motion passed.

The Liaison report was given verbally by T. Wayne Still. AOSA had been represented at all Association meetings by the President or his designee over the last year. Still moved and Deborah Meyer seconded to accept the report. Motion passed.

The membership report was given by Larry Nees. Four applications for Associate membership were received from Grace O'Keefe, Neal Foster, V. Fritz and D. Knutson. The committee recommended all but Mr. Knutson for Associate membership. Rejection of Mr. Knutson was due to his self-employment and not affiliated with a government agency facility. Two nominations for Honorary membership had been received for J.F. Harrington and H.E. Buckland. The committee recommended both Honorary membership nominations be accepted. Steve McGuire moved and Bob Karrafelt seconded that the report be accepted. Motion passed. Votes were then taken on individual memberships as follows:

Grace O'Keefe

Baskin moved, Ednie seconded to accept - Motion Adopted

Neal Foster

Willey moved, Wiesner seconded to accept - Motion Adopted

V. Fritz

Svik moved, M. Sarna seconded to accept - Motion Adopted

D. Knutson

Baskin moved, Danielson seconded to reject - Motion Adopted

J.F. Harrington

Baskin moved, Meyer seconded to accept - Motion Adopted

H.E. Buckland

Chirco moved, Sarna seconded to accept - Motion Adopted

The Public Service report was given by Jim Lair. Larry Prentice would replace Jim as new chairman since most correspondence came through the Secretary-Treasurer. Lair moved and Steve McGuire seconded to accept the report. Motion passed.

The Referee report of AOSA were summarized by Deborah Meyer. All FY91 Referee projects had been run jointly with SCST. Ten of 13 projects for the year had been completed. Referee tolerances that were to be used to evaluate referee tests in the future would be Tattersfield method. Meyer moved and Kathy Willey seconded to accept the report. Motion passed.

The Research committee and sub-committee reports were summarized by Wayne Guerke for Dr. Allen Knapp. A new committee head had been appointed for the next year. Subcommittee projects were read by title. Dr. Guerke asked for comments. Hearing none Baskin moved and Bob Karrafelt seconded to accept the Research report. Motion passed.

No ESCOP committee activities were presented at the general session.

The Rules committee report was given by David Svik. Eighteen rule proposals as presented in the February Newsletter were to be voted on at the meeting. Svik moved and C.C. Baskin seconded to accept the report. Motion Passed. The body then considered each of the rule proposals. Rules proposals considered at the Lexington, Kentucky meeting were as follows:

Rules proposal #1 on reducing final counts for sand dropseed to 14 days was read by Svik. Svik moved and Kathy Willey seconded to adopt the proposal. Motion passed/rule adopted.

Rules proposal #2 on reducing final counts for yellow bluestem to 14 days was read by Svik. Svik moved and Mark Hafdahl seconded to adopt the proposal. Motion passed/rule adopted.

Rules proposal #3 the addition of "p" substrate in table 3 to the germination prescription for birdsfoot trefoil was read by Svik. Svik moved and Tim Gutormson seconded to adopt the proposal. Motion passed/rule adopted.

Rules proposal #4 on the addition of galletagrass to AOSA rules was read by Svik. Svik moved and Debbie Meyer seconded to adopt the proposal. Motion passed/rule adopted.

Rules proposal #5 on the use of calcium nitrate for retesting of garden beans was read by Svik. Amendments from the floor in the Rules open session had been made. Svik moved and Steve McGuire seconded to adopt the proposal as amended. Motion passed/rule adopted as amended.

Rules proposal #6 on addition of intermediate ryegrass into the rules was read by Svik. Svik moved and Malcomb Sarna seconded to adopt the proposal. Motion passed/rule adopted.

Rules proposal #7 on changing the fluorescence formulas for ryegrass evaluation was read by Svik. Amendments from the open rules session had been made to make formulas mathematically correct. Svik moved and Malcomb Sarna seconded to adopt the proposal as amended. Motion passed/rule adopted as amended.

Rules proposal #8 on the use of 400-1000 seed tolerance tables in conjunction with fluorescence testing was read by Svik. Amendments from the open rules session had been made to make formulas mathematically correct. Svik moved and Malcomb Sarna seconded to adopt the proposal as amended. Motion passed/rule adopted as amended.

Due to the extent of Rules proposal #9, it was held for consideration last by the body.

Rules proposal #10 on addition of lesion assessments in dicotyledons was summarized by Svik. Svik moved and Kathy Willey seconded to adopt the proposal. Motion passed/rule adopted.

Rules proposal #11 on changes to abnormal seedling descriptions for cereal grains was read by Svik. Svik moved and Tim Gutormson seconded to adopt the proposal. Motion passed/rule adopted.

Rules proposal #12 on changes to seedling descriptions for *poaceae* species and including the term "mesocotyl" was read by Svik. Svik moved and Deborah Meyer seconded to adopt the proposal. Motion passed/rule adopted.

Rules proposal #13 on creating full seedling descriptions for *polygonaceae* was read by Svik. Svik moved and Tim Gutormson seconded to adopt the proposal. Motion passed/rule adopted.

Rules proposal #14 on splitting seedling descriptions for tree seeds into three categories was read by Svik. Amendments from the open rules session had been made to the descriptions. Svik moved and Bob Karrafelt seconded to adopt the proposal as amended. Motion passed/rule adopted.

Rules proposal #15 on adding sorghum-sudan to AOSA testing procedures was read by Svik. Svik moved and Kathy Willey seconded to adopt the proposal. Motion passed/rule adopted.

Rules proposal #16 on adding arrowleaf clover to AOSA testing procedures was read by Svik. Amendments had been made in the open rules session. Svik moved and Dick Payne seconded to adopt the proposal as amended. Motion passed/rule adopted.

Rules proposal #17 on adding siberian kale to AOSA testing procedures was read by Svik. Svik moved and Dick Payne seconded to adopt the proposal. Motion passed/rule adopted.

Rules proposal #18 on adding text regarding tree and shrub seed into AOSA seedling evaluations was read by Svik. Svik moved and Frank Lewis seconded to adopt the proposal. Motion passed/rule adopted.

Rules proposal #9 on adding seedling evaluation drawings as official references in AOSA Seedling Evaluation Handbooks was read by Svik. Changes to some drawings had been made in the open session. Svik moved and Bob Young seconded to adopt the proposal as amended. Motion passed/rule adopted.

The Seed Standardization report was summarized by Rodger Danielson. The potential uses of training manuals being developed and their availability was discussed. A survey of laboratories was also being conducted. Danielson moved and Wayne Still seconded to accept the report. Motion passed.

The audit report was read by Ellen Chirco. The books had been audited on June 9, 1991 and found to be in order. Chirco moved and C.C. Baskin seconded to accept the report. Motion passed.

The budget report was read by Wayne Guerke. Questions arose on the availability of the budget to the membership. Presidet Guerke stated the budget was available for review if any member wanted a copy by mail or in the Board sessions. Guerke moved and David Svik seconded to accept the budget for FY92 with minor revisions. Motion passed.

The CAST report was read by Dan Niffenegger. He summarized the importance of CAST in the last year. Sandy Ednie moved and Bob Karrafelt seconded to accept the report. Motion passed.

The Certification of Analysts Report was given by T. Wayne Still. He gave the committee activities in regions and pass/fails. New regional chairmen were announced. It was also announced that as of July 1, 1991, botanical names were required for use in the purity examinations. Still moved and Steve McGuire seconded to accept the report. Motion passed.

The General Session then recessed for a short break from 2:48 PM to 3:10 PM.

The Constitution report was read by Ellen Chirco. The committee had received one inquiry regarding the Constitution in the past year. Several revisions were being planned for presentation in 1992. A copy of the present Constitution would appear in the September Newsletter. Chirco moved and Dick Payne seconded to accept the report. Motion passed.

The meeting Place Report was read by Wayne Guerke. Meeting dates of June 11th through the 19th in 1992 at Oklahoma City were announced. Hosts and co-hosts for each of the upcoming meetings were announced as follows:

Oklahoma City, OK . . . . .	1992	Roger Osburn & Dr. Ed. LeGrand
Fort Collins, Co . (6/10-18 / 1993)		Front Range Seed Analysts
Portland, OR . . . . .	1994	Oregon State Seed Laboratory

Sarna moved and Debbie Meyer seconded to accept the report. Motion passed.

The Merit Award was read by Wayne Guerke. A.B. Ednie from Agriculture Canada had been the recipient at the AOSA banquet. Steve McGuire moved and Dick Payne seconded to accept the report. Motion passed.

The Necrology report was read by Dick Lawson. Five past presidents of AOSA had passed away. They were W.R. Vaughan, L.C. Shamberger, T.F. Cuddy, B.F. Ford and N.G. Lewis. Dick Lawson moved and Sandy Ednie seconded to accept the Necrology report. Motion passed.

The Nomenclature report was read by Wayne Guerke. The committee was working on nomenclature for the Uniform Classification Handbook revisions. David Svik moved and T. Wayne Still seconded to accept the report. Motion passed.

The Program report was given by Steve McGuire. He expressed his appreciation to the Kentucky staff and various committee chairs for their work. Steve McGuire moved and Deborah Meyer seconded to accept the report. Motion passed.

The Resolutions report was given by Arnold Larsen. A thank you resolution to Kentucky and the Raddison Hotel staff was read. Arnold Larsen moved and Kathy Willey seconded to accept the report and adopt the resolution. Motion passed and action adopted.

The Seedling Evaluation Report was given by Doug Ashton. To date, the cost of drawings had come to approximately \$2800.00. He thanked the committee members who had contributed their time and efforts to complete all the work. Ashton moved and Sandy Ednie seconded to accept the report. Motion passed.

The Symposium report was read by Wayne Guerke for Betsy Randall Schadell. Fees for the workshop had supported travel of some of the instructors as well as material costs. Tim Gutormson's name was added to the list of contributors for the workshop. Sandy Ednie moved and Steve McGuire seconded to accept the report. Motion passed.

The AOSA/ISTA Harmonization report was summarized by Sandy Ednie. The committee was continuing to make progress as outlined in the Board minutes and would meet again in Bologna, Italy. Minutes of their progress would appear in the September Newsletter. Sandy Ednie moved and T. Wayne Still seconded to accept the report. Motion passed.

The AOSCA Advisory report was read by Wayne Guerke. The group had met with AOSA in March at Scottsdale, AZ. Arnold Larsen moved and Steve McGuire seconded to accept the report. Motion passed.

The special committee report to review AOSA Non-Profit Status was given by James Warren. The non-profit status had been updated in N. Carolina and proposals to change the constitution would be forwarded to that committee for action next year. James Warren moved and Arnold Larsen seconded to accept the report. Motion passed.

No Seed Analyst Report Form Committee report was given at the meeting. No old business was brought before the body in general session.

As new business the body voted on Allied membership fees. C.C. Baskin moved and David Svik seconded that AOSA adopt a fee of \$100.00 annually for Allied Laboratories member status and that such status entitle the facility to receive 1 Newsletter and Journal subscription an one complimentary copy of any new AOSA handbooks published. Motion passed, action adopted.

The nominations report was read by Wayne Guerke. Malcomb Sarna and Rodger Danielson had been elected to three year terms on the Executive Board. Larry Prentice had been elected Secretary-Treasurer of AOSA. Jim Lair moved and Sandy Ednie seconded to accept the election results. Motion passed. The incoming Board officers were installed.

Wayne Guerke announced Board members for FY92 and the standing committee chairman. He also announced that standing, sub-committee chairs and committee memberships would be published in the September Newsletter.

Wayne Still announced the arrangements that had been made for the post meeting tour to Churchill Downs race track Friday.

Since no other business was up for consideration before the general session, Rodger Danielson moved and Deborah Meyer seconded that the general session of AOSA in Lexington, KY adjourn. Motion passed. Meeting adjourned June 13, 1991 at 4:02 PM, Raddison Hotel, Lexington, KY.

**1991 AOSA/SCST MEETING ATTENDEES**  
Lexington, Kentucky

**CANADA**

Doug Ashton	Agriculture Canada, Ottawa, Ont.
Cathy Breadner	Canadian Seed Labs., Ltd., Lindsay, Ont.
Louise Cook	Grain Research Lab., Winnipeg, Man.
Bill Dale	Retired - AOSA, Saskatoon, Sas.
M.S. Dhaliwal	Agriculture Canada, Ottawa, Ont.
A.B. Sandy Ednie	Agriculture Canada, Ottawa, Ont.
Marilyn French	Saskatchewan Wheat Pool, Nipawin, Sas.
Marie Greeniaus	Accu-test Seed Lab, Rivers, Man.
Bernice A. Heck	Alberta Wheat Pool, Camrose, Alb.
Frank Lewis	Agriculture Canada, Toronto, Ont.
Jan Matheson	McKenzie Seeds, Brandon, Man.

**NEW ZEALAND**

Decima McCloy	Challenge Seeds Ltd, Christchurch
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**ARIZONA**

Dale Brown	Agricultural Seed Laboratories, Inc., Phoenix
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**ARKANSAS**

Jane Barris	Retired - SCST, Stuttgart
Nancy McGhee	Jacob Hartz Seed Co. Inc., Stuttgart
Aaron Palmer	Arkansas State Seed Lab., Little Rock

**CALIFORNIA**

David P. Carrillo	Royal Sluis, Inc., Salinas
Diana L. Colburn	AMM Seed Testing, Santa Barbara
Guin Jenanyan	Royal Sluis, Inc., Salinas
Carolyn Johnson	California Crop Improvement Assoc., Davis
Kent Johnson	Celpril Industries, Inc., Manteca
Hada R. Lambert	Cal/West Seeds, Woodland
Deborah Meyer	California State Seed Lab., Sacramento
Aleta Meyr	Ransom Seed Lab, Carpinteria
Karen Neumann	Germain's, Inc., Fresno
Richard D. Richins	Agri-Analysis Associates, Davis
Lynn Ryder	Sakata Seed America, Inc., Salinas
Norman Schaad	Harris Moran Seed Co., San Juan Bautista
Robert E. Skaggs	Assoc. of American Seed Control Officials
	California Dept. of Agriculture, Sacramento
Susan R. Taylor	AMM Seed Testing, Santa Barbara
Mary Ann Trowbridge	Rogers NK Seed Company, Gilroy
Ha Ung	Petoseed Co., Inc., Ventura
Nancy Vivrette	Ransom Seed Laboratory, Carpinteria
Michele Waggener	Mik-Lyn Seed Testing, Fresno
Gilbert Waibel	Ferry-Morse Seed Company, Modesto
John Warner	Harris Moran Seed Company, Modesto

**COLORADO**

Barbara Atkins	Seed Testing of America, Longmont
Michael W. Dideriksen	Hilleshog Mono-Hy Inc., Longmont
Patricia Klein	National Seed Storage Lab., Ft. Collins
Arnold L. Larsen	Colorado Seed Laboratory, Ft. Collins
Annette Logan	Seed Testing of America, Longmont
Darrell Maddox	Seed Testing of America, Longmont
Loren Wiesner	National Seed Storage Lab., Ft Collins

**DISTRICT OF COLUMBIA**

Leslie Schuchart	American Seed Trade Assoc., Washington
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**FLORIDA**

Shirlie H. West	USDA - Agron. Dept. U of Florida, Gainesville
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**GEORGIA**

Mansour Asghari, RST	Hulsey Seed Laboratory, Inc., Decatur
Ellen Finley	Georgia Department of Agriculture, Atlanta
Wayne Guerke	Georgia Department of Agriculture, Tifton
Jake Hulsey	Hulsey Seed Laboratory, Inc., Decatur
Jerry Hulsey	Hulsey Seed Laboratory, Inc., Decatur
Robert Karrfalt	National Tree Seed Laboratory, Dry Branch
Victor Vankus	National Tree Seed Laboratory, Dry Branch
Fabian Watts	Agratech Seeds, Inc., Dublin

**IDAHO**

Patricia Brownfield	Rogers NK Seed Company, Twin Falls
Diane Crookham	Crookham Company, Caldwell
Nancy Dionne	Pioneer Hi-bred International, Inc. Nampa
Danette Kroft	Rogers NK Seed Company, Nampa
Richard C. Lawson	Idaho State Seed Laboratory, Boise
Richard L. Sayers	Asgrow Seed Company, Twin Falls
Jeanie Shepherd	Bakker Brothers, Twin Falls
Louise Taylor	Asgrow Seed Company, Twin Falls
Robert Trent	Crookham Company, Caldwell
Brenda R. Watts	W-D Seed Growers, Inc., Homedale

**ILLINOIS**

Harold Armstrong	Shissler Seed Company, Inc., Elmwood
Ruth Cress	Dekalb Plant Genetics, Dekalb
John Goff	Cargill Hybrid Seeds, Aurora
Thomas E. Hillison	Dekalb Plant Genetics, Dekalb
James L. Hunter	Pioneer Hi-bred International, Princeton
DaNell Johnson	Cargill Hybrid Seeds, Aurora
Robert Johnson	Professional Seed Research, Sugar Grove
James N. Lair	Illinois State Seed laboratory, Springfield
Joe Lamb	Pro-Seed Testing Laboratory, Urbana
Jolan Mari	Pan American Seed, West Chicago
Steven C. Massa	Pan American Seed, West Chicago
David McClure	Cargill Hybrid Seeds, Aurora

Mark Miller  
 Stewart Oliver  
 Joan Opolka  
 Syed Rizvi  
 Dan Rubenacker  
 Charles H. Simmons  
 Gail M. Stoner  
 Al and Sandra Stults  
 Jo Swan  
 Joanie Swank  
 Wesley C. Wilcox

Ciba-Geigy Seed Division, Bloomington  
 Growmark, Inc., Decatur  
 Illinois Crop Improvement Assoc., Champaign  
 Vaughan's Seed Company, Downers Grove  
 Illinois Crop Improvement Assoc. Champaign  
 Bio-Plant Research Ltd., Camp Point  
 Agripro Seed Company, Princeton  
 Stults Scientific Engineering Corp., Springfield  
 Dekalb Plant Genetics, Dekalb  
 Dekalb Plant Genetics, Dekalb  
 Ciba-Geigy Seed Division, Bloomington

### INDIANA

Perry A. Bohn  
 Barbara Clark  
 Alan Galbreth  
 Judy Metsger  
 Larry Nees  
 James Neilson  
 John Richards  
 Kevin Seward  
 Helene Shoaf  
 Chester Sutula

Asgrow Seed Company, Oxford  
 Indiana State Seed Laboratory, Lafayette  
 Indiana Crop Improv. Assoc., Lafayette  
 Indiana State Seed Laboratory, W. Lafayette  
 Indiana State Seed Laboratory, W. Lafayette  
 Garst Seed Company, Kentland  
 Indiana State Seed Laboratory, W. Lafayette  
 Indiana Crop Improvement Assoc., Lafayette  
 Indiana State Seed Laboratory, W. Lafayette  
 Agdia, Inc., Elkhart

### IOWA

Dennis Berkey  
 Cathy Cook  
 Jim S. Frick  
 Stanley R. Grote  
 Tim Gutormson  
 Kim Joo  
 Allen Knapp  
 Gary D. Lawrence  
 Denis C. McGee  
 Diane Mesa  
 Loydeen F. Meyer  
 Donald F. Miles, Jr.  
 Michael O'Neil  
 Linda Reding  
 Leslie Ann Sinning  
 Gonzale Zorrilla

Asgrow Seed Company, Ames  
 Asgrow Seed Company, Ames  
 Growmark, Inc., Williams  
 Garst Seed Company, Coon Rapids  
 Iowa State University Seed Lab., Ames  
 Pioneer Hi-Bred International, Inc., Johnston  
 Iowa State U Seed Science Center, Ames  
 Pioneer Hi-Bred International, Inc., Johnston  
 Iowa State University, Ames  
 Northrup King Company, Lone Tree  
 Lincoln Seed, Inc., Souix City  
 Pioneer Hibred International, Inc., Johnston  
 Pioneer Hi-Bred International, Inc., Johnston  
 Pioneer Hi-Bred International, Inc., Johnston  
 Holden's Foundation Seeds, Inc., Williamsburg  
 Iowa State University, Ames

### KANSAS

Kathleen Willey

Kansas State Seed Lab, Topeka

### KENTUCKY

Jannine Baker  
 Lucy Gaines Baugh  
 Morris Bitzer  
 Bruce Cole

Plant Pathology Dept., U of Kentucky, Lexington  
 Retired - AOSA, Lexington  
 Agronomy Dept. U of Kentucky, Lexington  
 Div. of Reg. Serv., U of Kentucky, Lexington

Paul Cornelius	Agronomy Dept. U of Kentucky, Lexington
Mary Virginia Croley	Kentucky Seed Improvement Assoc., Lexington
Eric Fabrizius	Agronomy Dept. U of Kentucky, Lexington
Richard S. Ferris	Plant Pathology Dept., U of Kentucky, Lexington
Robert L Geneve	Agronomy Dept. U of Kentucky, Lexington
Lori Graves	Agronomy Dept, U of Kentucky, Lexington
A.J. Hiatt	Associate Dean, College of Agriculture U of Kentucky, Lexington
Tom Hutchens	Kentucky Seed Improvement Association F.W. Rickard Seeds, Inc., Winchester
Rita Jones	Div. of Reg. Serv., U of Kentucky, Lexington
C. Oran Little	Dean and Director, College of Agriculture U of Kentucky, Lexington
Mary Jane Morgan	Kentucky State Seed Laboratory, Lexington
Dan Niffenegger	Agronomy Department, U of Kentucky
Donna M. Notman	Kentuckiana Seed Laboratory, Louisville
Michael Oakley	Kentucky State Seed Laboratory, Lexington
Alan Phillips	Assoc. Official Seed Certifying Agencies Kentucky Seed Improvement Assoc. Lexington
Marian W. Phillips	Franklin Seed Laboratory, Franklin
Milyne Potter	Div. of Reg. Serv., U of Kentucky, Lexington
Adam Puteh	Agronomy Dept., U of Kentucky, Lexington
Michael Richey	Agricultural Alumni & Development, U of Kentucky, Lexington
Ruth Ring	Agronomy Dept, U of Kentucky, Lexington
Marcy Rucker	Agronomy Dept., U of Kentucky, Lexington
Scott Smith	Agronomy Dept., U of Kentucky, Lexington
Wayen Still	Kentucky State Seed Laboratory, Lexington
Mike Stovall	Kentucky Seedsmen's Association Southern States Cooperative, Franklin
Dennis Tekrony	Agronomy Dept., U of Kentucky, Lexington
David L. Terry	Director, Division of Regulatory Services U of Kentucky, Lexington
Shari Theobald	Kentucky Seed Improvement Assoc., Lexington
Tina Tillery	Kentucky State Seed Laboratory, Lexington
Letha Tomes	Found. Seed Stocks, U of Kentucky, Lexington
Susan Trawatha	Agronomy Dept. U of Kentucky, Lexington
Kent A. Von Lanken	Kentucky State Seed Laboratory, Lexington
Dixie Yockey	Kentucky State Seed Laboratory, Lexington

**LOUISIANA**

Steven Footitt	Plant Path. Dept., LA State U., Baton Rouge
Eric W. Gates	Louisiana State Seed Lab., Baton Rouge

**MAINE**

Norma Rossel	Johnny's Selected Seeds, Albion
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**MARYLAND**

Mark Bohning	ARS, USDA, Beltsville
Bob Gunn	ARS, USDA, Beltsville

Lois Labs	Maryland State Seed Laboratory, Annapolis
Susan R. Maxon	Federal Seed Laboratory, Beltsville
Jim Mowder	ARS, USDA, Beltsville
Richard C. Payne	Federal Seed Laboratory, Beltsville
Malolm L. Sarna	Maryland State Seed Lab., Annapolis
Jim Schoen	Federal Seed Laboratory, Beltsville
Rodney W. Young	Federal Seed Laboratory, Beltsville

**MASSACHUSETTS**

William N. Rice	Retired - AOSA, North Hampton
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**MICHIGAN**

Larry Copeland	Crop and Soil Sciences Dept. Michigan State U, East Lansing
Randy Judd	Michigan Crop Improvement Assoc., Lansing
Steve R. McGuire	Michigan State Seed Lab., East Lansing
Christopher J. Tiedje	Michigan Crop Improvement Assoc., Lansing
Ann M. Tucker	Michigan Crop Improvement Assoc., Lansing

**MINNESOTA**

Liz Hartinger	Anchor Paper Co., St. Paul
Glen Koskinen	Minnesota Crop Improvement Assoc., St Paul
Pete Lex	Minnesota Crop Improvement Assoc., St Paul
Richard and Gretchen Mahigan	Spear Envelope Company, Hopkins
Michael A. Muggli	Minnesota State Seed Laboratory, St. Paul
Rosie Nelson	Nelson Seed Testing, Prior Lake
Russell Ruud	Retired - AOSA Morehead
Cindy Wherry	Anchor Paper Co., St. Paul

**MISSISSIPPI**

Dupe C. Akintobi	Seed Technology Lab., Mississippi State
Charles Baskin	Seed Technology Lab., Mississippi State
Frank Bonner	Forest Service, USDA, Starkville
Songsakdi Chuntirapongsa	Seed Technology Lab., Mississippi State
Curt Delouche	Seed Technology Lab., Mississippi State
Susana Goggi	Agronomy Dept., MS State U., Mississippi State
Ricky Graves	Graves Seed Laboratory, Inc., Columbus
Jeffery H. Luhanga	Seed Technology Lab., Mississippi State
Jean Tolliver	Delta and Pine Land Company, Scott
Charles Vaughan	Seed Technology Lab., Mississippi State

**MISSOURI**

Jane Brewer	Pennington Seed, Inc., Greenfield
Charlotte Jennings	Retired - SCST, Lake Woukomis
Don McGee	Pennington Seed, Inc., Greenfield
Kenneth L. Nicholas	Nicholas Seed Testing, Springfield
Jane Scott	Pennington Seed Company, Springfield
James Smith	Pennington Seed, Inc., Greenfield
Karen Tevis	Missouri Seed Improvement Assoc., Columbia
Cathy Weidmaier	Research Seeds, Inc., St Joseph
Floyd Wiesner	Research Seeds, Inc., St. Joseph

**NEBRASKA**

Larry Prentice  
David F. Svik

Nebraska Crop Improvement Assoc. Lincoln  
Nebraska Seed Laboratory, Lincoln

**NEW YORK**

Sharon T. Allen  
Ellen M. Chirco  
Nan Shellenberger  
Lola Stanard  
Marilee Thompson

Seedway, Inc., Hall  
New York State Seed Laboratory, Geneva  
Harris Moran Seed Company, Rochester  
Agway Inc., Warners  
Hyttest Seed, Inc., Buffalo

**NORTH CAROLINA**

Cecilia Bianchi-Hall  
Jan Ferguson  
Betsy Randall-Schadel  
George Spain  
James M. Warren

Crop Sci. Dept., N.C. State U, Raleigh  
Crop Science Dept., N.C. State U, Raleigh  
N.C. State Seed Laboratory, Raleigh  
Retired - AOSA, Raleigh  
N.C. Department of Agriculture, Raleigh

**NORTH DAKOTA**

Mark Anfinrud  
Sharon Brandt  
Mark Hafdahl

Interstate Seed Company, West Fargo  
N.D. State Seed Laboratory, Fargo  
N.D. State Seed Laboratory, Fargo

**OHIO**

Tin Aung  
Jeffery A. Black  
Andy F. Evans  
Amy M. Fay  
Dale E. Kern  
Miller McDonald  
Betsy Medici  
Scott Palubiak  
Gordon Rudloff  
Vincent Snyder

Agronomy Dept., Ohio State U, Columbus  
ISOLAB, Inc., Akron  
Ohio Seed Improvement Assoc., Dublin  
Horticulture Dept., Ohio State U, Columbus  
Seed Technology, Inc., Marysville  
Agronomy Dept., Ohio State U, Columbus  
Ohio Seed Improvement Assoc., Dublin  
ISOLAB, Inc., Akron  
Ohio Dept. of Agriculture, Reynoldsburg  
O.M. Scott & Sons, Marysville

**OKLAHOMA**

Don Blair  
F.E. Legrand  
Roger Osburn  
Val Oyster  
Karen Rogers-Smellie

Johnston Seed Company, Enid  
Oklahoma Crop Improvement Assoc., Stillwater  
Oklahoma State Seed Lab., Oklahoma City  
Oklahoma Crop Improvement Assoc., Stillwater  
Armadillo Seed Lab, Inc., Kingsford

**OREGON**

Jane Bowdish  
Vicky Caldon  
Rodger Danielson  
Ed Hardin  
Al and Joy Hoffman  
Dolores Hutchins  
Anne Juurma

Agri Seed Testing, Salem  
Roberts Seed Company, Tangent  
Oregon State Seed Laboratory, Corvallis  
Retired - AOSA, Corvallis  
Hoffman Manufacturing Company, Albany  
True Test Seed Laboratory, Halsey  
Betaseed, Inc., Tangent

Sharon Lusk	Agri Seed Testing, Salem
Glenn Mahrt	Betaseed, Inc., Tangent
Ellen Mary	Tangent Seed Laboratory, Tangent
Jack Peters	Oregon State Seed Laboratory, Corvallis
Linda L. Proulx	Sunseeds, Brooks
Molly K. Scarborough	Townsend Seed Testing, Tangent
Coralie J. Wilson	NK Lawn & Garden Company, Tangent

**PENNSYLVANIA**

Sue Brewer	Ahlstrom Filtration, MT. Holly Springs
Margaret E. Duttenhofer	Abbott & Cobb, Inc., Feasterville
Susan Lanning	Ahlstrom Filtration, MT. Holly Springs

**SOUTH CAROLINA**

Joe Vines	S.C. State Seed Laboratory, Columbia
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**SOUTH DAKOTA**

Ronnie F. Parmely	The Sexaur Co., Brookings
Dennis Ruhlman	S.D. State Seed Laboratory, Brookings
Brent Turnipseed	S.D. State Seed Laboratory, Brookings

**TENNESSEE**

Robert H. (Lum) Edwards	Tennessee Farmers Cooperative, Lavergne
John S. Franklin	Southeastern Seed Testing, Inc., Gallatin
Kimberly D. Gwinn	University of Tennessee, Knoxville
Travis Handwerker	Mid-South Seed Testing Laboratory, Memphis
Rosa Irving	Mid South Seed Testing Laboratory, Memphis

**TEXAS**

Karen Arthur	Gustafson, Inc., Dallas
Terry Dunfield	Northrup King Company, New Deal
Russell Elliott	Dallas
Paul Johnson	Northrup King Company, New Deal
Timothy M. Loeffler	Asgrow Seed Company, Plainview
Dixie Ogle	Texas State Seed Laboratory, Stevenville
Kyle Rushing	Gustafson, Inc., Plano
Sue Shen	Gustafson, Inc., Dallas
Sue Varela	Gustafson Seed Technology Lab., McKinney

**VIRGINIA**

Betty Burwell	Virginia State Seed Laboratory, Richmond
Betty Butler	Southern States Cooperative, Richmond
Emma T. Kay	Southern States Cooperative, Richmond
Yvette Lanier	Southern States Cooperative, Richmond

**WASHINGTON**

Barbara L. Goddard	Alf. Christianson Seed Company, MT. Vernon
Bella A. Silva	Alf. Christianson Seed Company, MT. Vernon

**WEST VIRGINIA**

Clyde Edwards	Retired - AOSA, Unger
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**WISCONSIN**

Allan Houser	Wisconsin State Seed Laboratory, Madison
Bill Kunzelman	L.L. Olds Seed Company, Madison
Russell K. Marx	Retired - AOSA, Madison
Craig D. Nelson	Agrigenetics, Prescott
Quentin Schultz	Agrigenetics, Prescott
Gary Thomas	Wisconsin Crop Improvement Assoc., Madison

**WYOMING**

Rita A. Parker	Wyoming State Seed Laboratory, Laramie
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**AOSA Secretary / Treasurer Report**

June 01, 1991

As my office term expires at the end of this meeting, enclosed are FY91 summary reports to assist the incoming Secretary-Treasurer and new Board members. Projected AOSA 91-92 spending commitments on membership, publication for subscriptions, and printing costs appear. Those commitments primarily reflect the 1991 Newsletter and Journal subscription payments received. Areas that have led to a \$7007.50 outstanding accounts receivables balance are also explained.

Last year I included information related to journal inquiries on late issues. Although the Journal editor's effort improved maintaining JOST on schedule, the FY90 treasurer's report reflected reduced income received from Journal of Seed Technology subscription renewals. In FY91, out of \$7007.50 accounts receivable money owed AOSA, \$4950.00 consists of Volume 14 and 15 journal subscription renewal notices that are still unpaid. The remaining total, \$2057.50, in accounts receivable was generated from FY91 bills issued for AOSA's various publications. I've reviewed other fiscal year carryovers of accounts receivable money. If this year's figure reflected mostly the \$2057.50 in booklet sales, it would not be out of the ordinary.

Of the additional concern to me is the comparison of FY92 budget commitments already made versus current funds available. I projected AOSA had made \$30,000.00 in FY92 budget commitments. After subtraction from current treasury funds, a surplus of \$8827.81 remained. But \$7007.50 of that figure was in outstanding accounts receivable funds. Treasury surplus then became \$1820.31 as of the end of FY91's fiscal year. With Editor reports and office costs showing increases for overseas postage and general mailing costs, that surplus could quickly be depleted. I recommend paying particular attention to FY92 membership fee income generated and other fees paid to AOSA from subscriptions or booklet sales before any large scale printing commitments can be made.

Nebraska's account receivable total reflects the dollars tied up in unpaid Volume 15 subscriber accounts, Nebraska's figures were based on paid receipts reported to me as of 05/15/91. Some items are now being issued from my office but handled from Nebraska by Larry Prentice to:

1. reduce forwarding a large volume of mail to the Nebraska location.
2. adhere to last year's policy, stated in the FY91 secretary's report, on criteria for issuing bills on JOST subscriptions.
3. have funds directly routed, and more readily available, to AOSA.
4. allow the incoming officer time to establish his computer system.
5. acquaint the incoming officer with AOSA's files and correspondence.

By FY90 policy, a Volume 15 billing couldn't be released until at least one issue of Volume 14 had been distributed. As such, #15's invoicing date was in April 1991. Effective June 15th all office materials will be moved to Nebraska. Office manuals, price lists, computer files, and some funds are already in Larry's possession. I'll assist Larry with any questions he has at any time.

Without projected figures (\*) on volume 15 subscribers, this table primarily reflects the FY91 mailings completed and 1992 projections in five of six areas. Those projections for 1992 issues expected to be mailed are based on paid accounts at this time.

Type Affiliation / Membership	Newsltr Mailed	Journals Mailed
91(92) AOSA Full Member Labs	55 (52)	55 (52)
91(92) AOSA Associate Members	27 (28)	27 (28)
91(92) AOSA Honorary Members	50 (51)	
91(92) SCST Affiliations	207 (217)	
91(92) Paid Subscriber	96 (108)	143 (122)*
91(92) ISTA & Complimentary	125 (123)	125 (123)
1991 Totals & (1992) Estimates	560 (579)	350 (215)*

AOSA's regular funding sources were the following based on FY91 treasury figures:

1. Membership dues (Full & Associate)
2. AOSA Rules for Testing Seeds
3. SCST affiliation with AOSA
4. Meeting Returns after Expenses
5. Newsletter subscriptions
6. Journal subscriptions

With new membership categories of AOSA, additional interest, and subsequent membership dues paid into the Association should be generated. These monetary sources are needed for AOSA to continue work in Research Funding. It has been my pleasure to have served both the AOSA and SCST as AOSA's Secretary-Treasurer. You have all been my friends over the last six years. After coming to know and work with most of you, I believe we can only progress in the future.

James Lair, Secretary-Treasurer

**BALANCE SHEET**

Fiscal Year: Start date: 06-01-90 Finish date:06-01-91

-----Assets-----

Acc#	Description	Debit	Credit
Account Balances for AOSA, Inc.			
200	Land of Lincoln (Research CD) . . . . . FY		6000.00
201	Land of Lincoln (Checking 111-813) . . . . . FY		9447.59
202	Land of Lincoln (Savings 12001716) . . . . . FY		15502.25
203	Nebraska (Checking Acct NBC Lincoln) . . . . . FY		558.73
204	Nebraska (Accounts Receivable AOSA) . . . . . FY		3630.00
210	Illinois (Accounts Receivable AOSA) . . . . . FY		2914.50
		Cash Assets	0.00
		Assets	38053.07

-----Liabilities-----

Acc#	Description	Debit	Credit
AOSA Membership & Budget Obligations			
403	Journal 1990/1991 Printing Obligations	16500.00	
404	Seedling Evaluation Handbook Completion	500.00	
405	Uniform Classification Handbook Comp.	1200.00	
406	Research Funding Commitments (FY92)	7000.00	
408	Newsletter 1991 Printing (Vol. 65)	4800.00	
		30000.00	0.00
		30000.00	
Retained Earnings or Losses		30000.00	38053.07
			8053.07

**INCOME STATEMENT**

Fiscal Year: Start date: 06-01-90 Finish date:06-01-91

-----Income-----

Cde#	Description	Debit	Credit
001	act #210 transaction - money transfered	52481.51	
002	act #201 transaction - money deposited		54019.75
003	unpaid bills - Fiscal year 90 writeoffs	3607.50	
004	act #202 transaction - money transfered	4538.24	
005	act #204 transaction - money transfered	295.00	
006	act #205 transaction - money deposited		295.00
010	beginning balance - all accounts - fy91		45007.17
020	credits/cancellations - fiscal 91 order	909.42	
100	AOSA 1985 directory issue sales		23.00
101	blowing procedure handbook #24 sales		21.00

102	browse/forbes/shrub handbook sales	45.00
103	calibration sample - bluegrass sales	220.00
104	calibration sample - orchardgrass sales	60.00
105	uniform classification handbook #25 sales	11.00
106	journal subscription - Renewal - 14&15	9500.00
107	journal sales / individual issue #'s	50.00
108	micro-assay fungicide test bulletins	1.00
109	newsltr subscription - Renewal - VOL 65	2450.00
110	newsltr sales / individual issue #'s	109.00
112	rhizobia growth test bulletin sales	4.00
113	rules - covers / binders sales	563.50
114	rules - rule updates sales (89+90 year)	4056.00
115	rules - man body sales (88 issue date)	2804.00
118	tetrazolium testing handbook sales	654.00
119	vigor testing handbook sales	700.00
120	miscellaneous sales income/donations	662.24
121	DUES - associate membership (annual)	1550.00
122	DUES - full labs membership (annual)	8400.00
123	DUES - SCST affiliation/mbr (annual)	4260.00
124	journal page fees - volumes 13 & 14	3030.00
126	88 vigor test handbook (88 inserts)	190.00
127	RESEARCH - Private Donations & AOSA's	5839.18
202	fy91 account interest income	1511.39
204	profits - Maryland AOSA/SCST meeting	9359.33
400	past fiscal year(s) income received	1825.13

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	61831.67	157220.69
Total Income	95389.02	

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Expense

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Cde#	Description	Debit	Credit
300	banking expense - handling charges	35.46	
301	office expenses - computer time charge	949.50	
303	journal expenses - postage fees	1080.77	
304	journal expenses - printing costs	7876.60	
305	newsltr expenses - editorial charges	440.17	
306	newsltr expenses - postage fees	3035.77	
307	newsltr expenses - printing costs	6884.43	
308	office expenses - supplies (paper, etc.)	189.81	
309	office expenses - postage costs	1101.74	
310	booklet expense - printing costs	16665.12	
311	office expenses - AOSA Copying Costs	147.01	
312	association cost - FY90 Tax Preparation	150.00	
313	association cost - AOSA Dues/Donation	768.00	
314	association cost - AOSA Officer Travel	2575.73	
315	noncoded expense - under 50.00 Costs	456.18	
316	association cost - FY91 Meeting Set-up	1000.00	
317	research funding - FY91 Project Awards	9800.00	
318	fy91 meeting profit - SCST payment made	4179.66	

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Total Expenses	57335.95	0.00
Cash Flow	119167.62	157220.69
		38053.07

**EDITORIAL COMMITTEE**

Journal of Seed Technology - Loren E. Wiesner, Editor

The Association would like to thank the Associate Editors who have conducted timely reviews of all manuscripts received:

Dr. Al Knapp (1991)  
Dr. Norm Hopper (1991)  
Dr. Larry Copeland (1992)  
Dr. Dennis TeKrony (1992)  
Dr. Don Grabe (1993)  
Dr. Miller McDonald (1993)

The Association would also like to recognize the efforts of all reviewers who have reviewed manuscripts during the past year. The Journal could not be published if it were not for their efforts.

We have received 18 manuscripts during 1990-91, 10 of these papers are still in review. The time for completing a manuscript review is approximately six months. When analyzing the manuscripts published in Volume 14 we find that our acceptance rate is 60 percent.

Volume 14(1) was sent out and Volume 14(2) was mailed in June 1991. With the mailing of these volumes we are now current. Volume 15(1) is at the printer and should be out in July. The second issue of Volume 15 should be ready for printing in December 1991. This volume will contain the 1991 annual meeting proceedings and papers. I would like to encourage all researchers to consider JOST for publication of scientific data which is related to seed.

The Journal will use the metric system, but if authors wish to include english units, they can do so by placing them in parenthesis( ). SI units can also be used but are not required. When referencing the "Rules for Testing Seeds" the following example should be followed:

Association of Official Seed Analysts. 1988. Rules for Testing Seeds. Vol. 12(3) p

It is the recommendation of the Editorial Committee that symposia papers be published in the Journal in a separate section from the contributed manuscripts and in the same issue as the Association proceedings.

The 1990 Rules revisions were printed and distributed with Volume 14(1) of the Journal.

Handbook - Al Knapp, Editor

Two handbooks were printed and distributed during 1990-91;

Cultivar Purity Testing Handbook

Instructions for Using the Report of Seed Analysis Handbook

The Editor, in conjunction with the committee chairpersons, has been working on the Seedling Evaluation Handbook and is working on the printing of the recommended cold test procedures for the Vigor Testing Handbook. Dr. Knapp has asked to be replaced as Handbook Editor. I would like to thank Dr. Knapp for his service to the Association as Handbook Editor. He has truly done an outstanding job of getting handbooks published and has developed procedures for submitting handbooks for publishing.

Science Education - Arnold Larsen, Editor

Handbook 25 has received a second review and most of the revisions have been completed. The Editor is hopeful that the contents of the Handbook can be approved by the Association in 1991-92.

Newsletter - Larry Prentice, Editor

Four issues of the Newsletter were published in 1990-91. Those published were Vol 64(3) Sept., Vol 64(4) Directory, Vol 65(1) Feb., and Vol 65(2) May. All issues were published on or before the cover date. The Editor would like to thank all individuals who submitted materials for publication.

Loren Wiesner, Chairman

### LEGISLATIVE COMMITTEE

For a second year, the legislative committees from AOSA and SCST have cooperated in preparing a joint report. This procedure appears to be working effectively and avoids duplicate effort both on the part of the legislative committees and responding seed control officials.

Eighteen states and Canada reported changes in their law and/or regulations. Perhaps reflecting the economic situation, testing and other fee increases occurred in several states. A listing of these changes, together with several attachments, is enclosed. Twenty-two states and the Federal Seed Branch reported no changes. Ten states did not report.

My sincere appreciation goes to Ms. Nancy McGhee, RST, Chairwoman of the SCST Legislative Committee for her efforts in developing this report. We also thank those seed control officials who took the time to respond to our questionnaire.

Malcolm Sarna, Chairman

### AOSA-SCST JOINT LEGISLATIVE REPORT, 1991

No Law Changes	Changes or Proposed Changes	No Reply
Alabama	Arkansas	Deleware
Alaska	California	Georgia
Colorado	Connecticut	Louisiana
Florida	Hawaii	Nebraska
Illinois	Idaho	New York
Iowa	Kansas	North Carolina
Indiana	Maryland	North Dakota
Maine	Michigan	Oregon
Massachusetts	Minnesota	Washington
Mississippi	New Hampshire	
Missouri	New Jersey	
Montana	Ohio	
Nevada	South Carolina	
New Mexico	Texas	
Oklahoma	Utah	
Pennsylvania	Vermont	
Rhode Island	Virginia	
South Dakota	Wisconsin	
Tennessee		
West Virginia		
Wyoming		
Seed Branch, AMS, USDA		

### LIAISON COMMITTEE

AOSA was represented at the annual meetings of the American Seed Trade Association (ASTA) the Association of American Seed Control Officials (AASCO), the Association of Official Seed Certifying Agencies (AOSCA) and the National Association of State Departments of Agriculture (NASDA). The International Seed Testing Association (ISTA) did not meet this past year, but liaison was maintained through Dr. Richard Payne who is the US representative on their Executive Board and by Sandy Ednie, who is chairman of the ISTA-AOSA Harmonization of Rules committee.

Our President, Dr. Wayne Guerke, represented AOSA at the annual meetings of AOSCA in Richmond, Virginia where he extended greetings at the general session and he reported to the advisory board the activities of AOSA. Dr. Guerke also represented AOSA at the annual meetings of AASCO in Lincoln, Nebraska where he presented greetings at the opening session and he provided input as needed throughout the meetings. We were also represented at the annual meetings of NASDA by our president, Wayne Guerke. He visited with them about matters of mutual interest and concern, informed delegates of his presence and offered his services when needed. He also attended committee meetings and social and business functions.

The Association was represented at the AOSCA advisory board meeting in Tempe, Arizona by Dr. Allen Knapp. Dr. Knapp presented to the board the AOSA activity report and participated in various discussions pertinent to AOSA.

Rodger Danielson represented the Association at the annual meetings of ASTA in Orlando, Florida and presented to the ASTA Seed Analysts Liaison committee a report of AOSA activities. Topics discussed and/or dealt with were the Standardized Report of Seed Analysis, a definition for Official Certification Samples, AOSA Constitution Committee of Affiliates, the Cultivar Purity and Vigor Handbooks, and the possible changes in the ryegrass fluorescence formulas. This is only an overview of Roger's activities. His report is more detailed and comprehensive.

In summary, your Association established as needed and maintained a very close relationship with our official organizations during the past year, resulting in a mutual benefit to all.

T. Wayne Still, Chairman

### AOSCA ADVISORY COMMITTEE REPORT

The AOSCA Advisory Committee meeting was held in Scottsdale, AZ, in March. The committee was informed of the publication of the Cultivar Purity Handbook and the Instructions for Using the Standardized Analysis Report Form handbook. They were also updated on the progress of the Seedling Evaluation and Uniform Classification of Crop and Weed Seed handbooks. Further, progress on the current fluorescence issue and of the AOSA/ISTA Harmonization Committee were presented as was the date and time of the committee of affiliates meeting.

The advisory committee was apprised of the work of the AOSA Seed Testing Standardization Research Funding Committee and advised of who

to contact should they wish to contribute to this effort.

In closing my report to the committee, the dates and location of the upcoming annual meetings were given and an invitation for them to attend the meetings was extended.

I would like to thank Malcolm Sarna for providing me with an update of the work of his committee.

Allen Knapp, Representative

### **MEMBERSHIP COMMITTEE**

The membership Committee received the following applications for ASSOCIATE MEMBERSHIP in the Association:

1. Grace O'Keefe - Senior Lab Scientist, Plant Pathologist, Georgia Department of Agriculture
2. Neal R. Foster - Seed Laboratory Manager, Kansas Crop Improvement Association
3. Vincent A. Fritz - Associate Professor, University of Minnesota
4. Don Knutson - Seed Research Scientist, (Self employed) Wild Plant Seed Research

### **COMMITTEE RECOMMENDATION**

After a thorough review of background information supplied by the applicants, the committee recommends acceptance of Grace O'Keefe, Neal R. Foster, and Vincent A. Fritz for ASSOCIATE MEMBERSHIP, and rejection of Don Knutson. Rejection is based on the "professional Affiliation" of Mr. Knutson, who is self employed. Requirements for Associate Membership state that the applicant must be engaged in seen analysis, research, teaching, extension, crop improvement agencies and related activities in "universities, government agencies or government institutions".

The committee also received the following nominations for HONORARY MEMBERSHIP in the Association:

1. Dr. James F. Harrington - Professor Emeritus, University of California, Davis (retired)
2. Hollis E. Buckland - State Seed Analyst, Vermont Department of Agriculture (retired)

### **COMMITTEE RECOMMENDATION**

The committee recommends HONORARY membership be awarded to Dr. Harrington and Mr. Buckland for their dedication and service to seed testing and this organization.

Larry Nees, Chairman

### **PUBLIC SERVICE COMMITTEE**

FY91 Public Service Committee activity has dealt with slide set distribution. Seed identification slide sets have been very popular. The main use appears to be for RST training.

Two slide sets on seed identification are out at this time. Both are being used in training analysts. In total seven slide sets and scripts were distributed to seed facilities across the United States.

I have also received a number of requests for the "Seed Analysis

Bulletins" that the AOSA and SCST secretaries have available. Approximately 50 sets of both Association bulletins and other job description items for seed analysis from Illinois were distributed nationally and internationally. With a new Secretary-Treasurer's office this year, requests for this information will be forwarded on for a response from the new secretary.

With computers becoming more and more part of the work place, this is an area for expansion or consideration by the public service committee. It may be in the interest of both Associations that public service cooperate with the computer committee of Leslie Sinning in accumulating "public domain" software with a seed emphasis. The survey that they sent out this year is a good beginning to find out what is available now. An archives of seed receipt programs, testing applications, tutorials, identification keys and tolerance programming could be of value to all of us in the future. Education and training of seed analysts is not getting any easier.

This makes the ninth year I have served as the public service chairman. To me, that seems to be more than long enough. I hope that President Guerke and the Board can find a new chairman with some ideas to continue on with the Public Service Committee. My thanks to all the personnel that have served on this committee over the years.

James Lair, Chairman

### REFEREE COMMITTEE

Of the thirteen joint AOSA/SCST projects planned for 1990-91, ten were completed. Reports of the projects were presented Monday, June 10, 1991. Following the presentation of reports, projects for 1991-92 were chosen at the regional buzz sessions. Copies of the proposed projects and project coordinators were made available to the membership at the meeting and will be published in the AOSA Newsletter and SCST Seed Technologist News.

AOSA constitutional changes adopted during our 1990 meeting officially allow for the alignment of SCST and AOSA referee regions. This move should allow for better coordination of joint projects. Additionally, the term for AOSA regional chairs has been changed to two years with the possibility of reappointment for an additional two years.

Work continued on revision of the committee guidelines and regional mailing list. The revised guidelines define the purpose of the joint committee and the general duties of the regional and general chairs. They provide suggestions for project development, statistical analysis of data, report writing and oral presentation techniques, and furnish a timeline of "events" in order to provide adequate time for project preparation and execution, within a one year time frame. The regional mailing list has been updated, and will be annually revised. Drafts of the revised guidelines were distributed to committee members and the respective Executive Boards of AOSA and SCST for comment.

The committee has initiated the process of entering past referee projects into a dBase program. The current files identify the project title, project coordinator, year in which the project was conducted, region, location of the abstract publication, and crop tested. The intent of this project is to identify and define problem areas in referee testing and promote a productive problem solving referee program.

Due to a career change Paul Baker, chair of Region IV, asked to be relieved of his duties. The terms of Glenn Freeman, Region III, and Dick Lawson, Region I, expire at the close of the 1991 meeting. Lois Labs of the Maryland Department of Agriculture has agreed to chair region III, Dixie Ogle of the Texas Department of Agriculture Stephenville Laboratory has agreed to chair Region IV, and Dick Lawson has consented to remain chair of Region I for one more Year

Thanks to all the AOSA Referee/SCST Research Committee members and referee participants for your efforts.

Deborah Meyer, chairwoman

### **REGION I - NORTHWEST CORN COLD TEST TO COMPARE STANDARDIZED SUBSTRATE WITH LABORATORY SUBSTRATE**

Diane Crookham, Crookham Seed Co  
Danette Kroft, Rogers NK Seed Co.

The purpose of this referee was to determine if cold test results are reproducible when methodology, soil and media are standardized. Referee samples were sent to 20 laboratories with 11 laboratories participating.

Two lots of sweet corn were included in this referee. Lot A, a sugar enhanced variety, and Lot B, a shrunken 2 variety. Both samples were treated with Captan/Thiram/Apron prior to shipping. All supplies necessary to run the referee were included in the packet. This included a detailed cold test procedure, germination paper, plastic bags and soil. Due to the high costs involved with shipping large amounts of soil, the cold test procedure chosen was the rolled towel with soil method from the AOSA Seed Vigor Testing Handbook<sup>7</sup>. Modifications to the procedure specified soil slurry be applied with a paintbrush. Participating laboratories were instructed to run one set of cold tests following the enclosed procedure and a second set of cold tests following the procedure in current use within their laboratory.

Results were compiled using the ISTA tolerance tables at the 5% probability level. Contrary to expectations, using standardized methods and materials, Lot A averaged 84% with 27% of laboratories out of tolerance. Using in-house test methods, Lot A averaged 85% with 18% of laboratories out of tolerance. In direct contrast, Lot B averaged 81%, using standardized methods and materials, with 27% of laboratories out of tolerance, while in-house methods yielded a 77% average with 45% of laboratories out of tolerance.

While both interesting and informative, the results of this referee neither support or disprove our original theory that repeatability of cold test results among laboratories can be achieved by standardizing cold test substrate.

### **FLAX GERMINATION: BLOTTER VS ROLLED TOWEL METHOD**

Richard Lawson, Idaho State Seed Laboratory

Two samples of *Linum grandiflorum* Desfontaines, Flowering Flax, were each germinated on top of blotters and in rolled towels to determine the effects of rolled towels as an alternative substrate. Seeds were planted with the temperature, duration and additional instructions as given in Table 4 of the Rules for Testing Seeds for a flowering flax germination. One commercial and seven official laboratories responded with data. Results from five official laboratories were considered for analysis.

Average germination for Sample 1 was 78% on blotters and 76% in rolled towels. Sample 1 germinations ranged from a high of 89% to a low of 60%

on blotters and from a high of 84% to a low of 69% in rolled towels. The range of germination differences among laboratories was reduced from 29% to 15% with the rolled towel substrate. Average germination for Sample 2 germinations ranged from a high of 92% to a low of 80% on blotters and from a high of 87% to a low of 77% in rolled towels. The range of germination differences laboratories was reduced from 12% to 10% with the rolled towel substrate.

Blotter germinations averaged 82% with a high of 92% and a low of 60% for a range of 32%. Rolled towel germinations averaged 79% with a high of 87% and a low of 69% for a range of 18%. Rolled towel germinations for both samples averaged only 3% lower than blotter germinations and reduced the range of germinations differences between laboratories by 44%.

## REGION II - MIDWEST

### SUNFLOWER GERMINATION: PRECHILL VS STANDARD PROCEDURE

Perry Bohn, Asgrow Seed Co.

One of the objectives of this referee was to reduce variability in sunflower seed testing among laboratories. The other objective was to further analyze the value of the prechill procedure as an alternate method for germination of sunflower seeds.

Methods used consisted of the standard AOSA and standard AOSA plus a 7 day, 10°C prechill. Thirty-nine laboratories participated, of which 19 laboratories routinely conduct the standard procedure and only 3 laboratories routinely conduct the prechill procedure. Using the standard procedure, average germination of Lot A was 91% and Lot B was 77%. Using the standard procedure plus prechill, average germination of Lot A was 94% and Lot B was 81%. Most laboratories reported abnormalities due to decay and that prechilling and adequate spacing of seeds tended to reduce the amount of decay. All four test conditions had laboratories outside ISTA tolerance at the high and low end, with acceptable ranges varying from 8 - 14 percentage points.

## BIRDSFOOT TREFOIL GERMINATION

Mark Hafdahl, North Dakota State Seed Department

The objectives of this referee project were to compare laboratories in the germination of Birdsfoot Trefoil, and to compare the 2 AOSA (T & B) to one another. Three samples of seeds were sent to 66 laboratories. Laboratories were instructed to follow AOSA Rules for both AOSA methods (T & B). Thirty-three analysts representing 32 labs returned results. The two AOSA methods compared favorably to one another with between blotters averaging about 2% higher. Comparison of laboratories showed about 20% of the results were out of tolerance at 5%. I feel that, for the most part, the procedures used were correct, but that evaluation criteria was the reason for the high percentage of laboratories out of tolerance. I think drawings such as those proposed by the Seedling Evaluation committee would be helpful in correcting this variation.

### REGION III - NORTHWEST NO REPORT

### REGION IV - SOUTHWEST BEET GERMINATION: STANDARD AOSA VS WASHING IN RUNNING WATER

Nancy Vivrette, Ransom Seed Lab

The Southwest Region Referee for 1990-91 was a comparison of presoaking as described in the AOSA Rules with prewashing followed by drying as described in the Canadian Rules. Two lots of beets were tested in soil without pretreatment; presoaked for two hours; and prewashed for three hours then dried before planting. Nineteen laboratories participated in the referee.

The percent germination was highest when the seeds were prewashed then dried in 15 of 19 tests for Lot A and 10 of 19 tests for Lot B. The percent germination was lowest when the seeds were planted directly in soil in 13 of 16 tests for Lot A and 10 of 16 tests for Lot B.

Pretreatment of beets by soaking or washing significantly increases the percent germination. Washing and then drying the seed gives a higher percent germination than soaking alone.

Note: Conclusions from Statistics Committee

Dan Niffenegger

Laboratory to laboratory variation is of minor concern in high quality seed, but it continues to be a problem in low quality seed.

Reported germination percentages were lower, and variability was greater in soil tests than either of the blotter test methods.

Variability in the wash-dry procedure in low quality seed (Lot A) was excessive.

The pre-soak treatment appears to be superior to the other two methods as a standard germination test method, because when it was used, variability was relatively low with both high and low quality seed. There is, however, a need to further reduce laboratory to laboratory variation with the pre-soak method.

Laboratories 18 and 34 had laboratory averages above the overall mean in all 4 of the tests that they performed. Laboratories 23 and 21 had laboratory averages below the overall mean in all 6 tests. Since these laboratories represent the two extremes, a search for the reason for their differences may provide information that can cut down on the laboratory to laboratory variation in table beet standard germination tests.

### EVALUATION OF PHYSIOLOGICAL NECROSIS IN LETTUCE

John Warner Harris Moran Seed Company

The goal of this referee was to determine how uniformly different laboratories test standard germination of lettuce with varying levels of physiological necrosis. Three lots of the same variety were used; Lettuce "A" was from the 1989 crop year, Lettuce "B" was from the 1988 crop year, and Lettuce "C" was from the 1985 crop year. Results from the 27 laboratories that responded to this referee are summarized as follows:

SEED LOT	AVERAGE % GERMINATION	VARIANCE	RANGE
Lettuce "A"	97	7.54	99-87%
Lettuce "B"	95	93.27	99-48%
Lettuce "C"	61	1,079.04	98-1 %

Differences in the above statistics can be explained by the amount of physiological necrosis present in the lettuce samples. Lettuce "A" averaged less than 1% abnormal because of physiological necrosis. Agreement among laboratories on percent germination was very good for lettuce "A" (as shown by the low variance). Lettuce "B" averaged 3% abnormal because of necrosis. Agreement among laboratories on percent germination was good for Lettuce "B". Lettuce "C" averaged 34% abnormal because of physiological necrosis. In lettuce "C", there was virtually no agreement among laboratories on percent germination (as shown by the very high variance).

It is apparent from this referee, that if a lettuce sample has significant amounts of physiological necrosis, there is little agreement among laboratories as to the proper germination percentage.

### **REGION V - SOUTHERN COMPARISON OF COLD TEST ON CORN USING NEWLY ADOPTED PROCEDURE FOR THE ROLLED TOWEL METHOD**

Fabian Watts, Agri-Tech

This year the SCST Southern Region Referee project was comparison of the corn cold test revised rolled towel method vs. the "old" seed vigor testing handbook rolled towel method. The revised method recommends more precise procedures than does the "old" method. Both procedures recommend evaluating the seedlings according to the standard warm germination test for maize outlined in the AOSA Rules for Testing Seeds.

A sample of corn, with instructions to follow each procedure precisely as outlined in the various publications, was mailed to participating laboratories. Everyone is aware that the corn cold test should provide imbibitional chilling shock to the seed, regardless of the procedure used and most all laboratories indicated that they did provide the imbibitional chilling shock. Therefore, the two major differences, as I see it, are placing seed in two 25-seed rows, 6 and 12 cm from the upper towel edge recommended in the revised methods and the growth period of 7 days, recommended in the revised methods as compared to a 4 day growth period recommended in the "old" methods, for the warm temperature period.

The results indicate no significant difference at the 5% level of probability using the ISTA Tolerance table. However, there were two laboratories out of tolerance when the revised methods were used and one laboratory out of tolerance when using the "old" method. Due to the results obtained, I would suggest, as long as each laboratory providing the imbibitional chilling shock and maintaining a germination medium of 70% saturation, that either procedure may be used.

## PURITY ON IMPERFECT BLACK HILA SOYBEAN WITH BUFF CONTAMINANT

Jewell Stallings, North Carolina State Seed Laboratory

Approximately 495 grams of Deltapine 105 soybeans were mixed and weighed from a 50 pound bag of seed grown in North Carolina. Each sample was physically contaminated with 40 seed of TN 5-85 variety of soybeans. The weight (of the 40 seed) ranged from 4.66 to 5.09 grams and the weight was recorded for each individual laboratory. This contamination would result in an approximate 1.00% of other crop seed (other variety) in the 500 gram sample.

A variety description of Deltapine 105 soybeans was submitted with each sample. Each laboratory was asked to determine if the sample was contaminated, and if so, to state the procedure used to verify their findings. The purpose of the referee was to determine if member laboratories would accept the hila variability of "off-type" seed as pure seed (based on the enclosed description) or report them as another variety.

Seed analysts may question "off-type" seed in a sample based on physical characteristics (seed size, luster, seed coat color, seed shape and hila color). Differences may be real (as in this sample) or may be as a result of environmental factors or genetic breeding. Often resources available to the average analysts (peroxidase and hypocotyl color test) do not provide conclusive evidence of contamination and electrophoresis is necessary. The referee sample (Deltapine 105) showed a negative peroxidase and green hypocotyls.

This referee was submitted to 26 different AOSA and SCST laboratories, with 16 responding.

## REGION VI - CANADA CANADIAN NOXIOUS WEED SEEDS

M.S. Dhaliwal, Agriculture Canada, Central Seed Laboratory

The purpose of this round-robin referee was to familiarize North American seed analysts with the Canadian noxious weed seeds. Twenty-five seeds were included, of which 24 were of Canadian noxious seed species. This referee was sent to 64 laboratories, from which 40 responses were received. Most laboratories did well, with nearly 70% of them correctly identifying at least 80% of the seeds.

The most serious difficulties were the following: separating species of the genus *Euphorbia*; recognition of *Linaria dalmatica*; separating species of the genera *Oxytropis* and *Astragalus*; separating species of the genus *Silene*; and, separating species of the genus *Zygadenus*. Analysts need to refresh their familiarity with these groups.

## GERMINATION OF *ALTERNARIA* INFECTED CANOLA (*BRASSICA*)

Doug Ashton, Agriculture Canada, Central Seed Lab

The objective of this referee was to determine if modified germination test methods would reduce among-laboratory variability for *Alternaria* infected Canola samples. Three samples with varying levels of infection by *Alternaria* were tested by 15 laboratories using a standard testing method, surface sterilization before testing and the "Netherlands method" in which the opportunity for spread of secondary infection is reduced. Ratios of the observed to expected standard deviations of results confirmed that the standard testing method allowed excessive variation among-laboratories. The surface

sterilization method reduced the variability in the heavily infected samples, but increased the variability in the control sample. The "Netherlands method" failed to reduce variability in the heavily infected sample. Although the two modified methods were not consistent in reducing variation, they may be suitable with some refinement of the methods and increase in experience by the testing laboratories. It was observed that the majority of the participating laboratories did not have a problem with testing this type of sample.

### RESEARCH COMMITTEE

I have asked that a new chair be appointed for this committee. Hence, this will probably be my last report. It has been a pleasure to serve on this committee. With the hard work of the committee members: Dr. Loren Wiesner, Dr. Dennis TeKrony, and Dr. Miller McDonald, and the support of the entire Association, there have been several notable accomplishments. We are just beginning to see the benefits that the Seed Testing Standardization Research Funding Committee will provide for the Association. As Dr. Tekrony states in his report, four research papers will be presented at the annual meetings reporting new information generated with the help of this subcommittee's activities. The committee also hopes that the research subcommittee reorganization will have very positive effects with regard to the visibility and efficiency of the research activities of the Association. One committee agenda item from last year was, for several reasons, not addressed. Last year, the research committee and outgoing referee committee chair, Steve McGuire, discussed increasing the interaction between the research committee and the referee committee. It was decided that the research committee should appoint one research committee member to serve as a resource person for each referee region. This would obviously provide a resource to the regional referee chairs who must design and conduct the referees as well as ensure that the research committee is intimately familiar with the activities of the referee committee. Such familiarity would not only aid in assessing the research needs and priorities of the Association but also perhaps provide a mechanism to evaluate the application of research results.

Again, I would like to thank the research committee members and the subcommittee chairs for their hard work.

A summary of the activities of the AOSA Research Subcommittees follows (Chairperson in parentheses):

1. **Cultivar Purity** (Loren Wiesner, National Seed Storage Laboratory):

The committee has conducted a safety survey to assess precautions taken in laboratories in dealing with the toxic chemicals which are used in certain of the electrophoresis protocols. A second activity of the committee has been to conduct a referee on scoring of starch gels. For this referee, participants were provided with isozyme data and asked to establish the level of off-types, inbreds, etc. The cultivar purity handbook has been printed and the committee is preparing to conduct a second collaborative corn purity starch-gel, isozyme referee.

2. **Flower Seed** (Ellen Chirco, New York Agric. Exper. Station, and Aleta Meyer, Ransom Seed Laboratory):

The committee conducted a *Verbena* germination referee.

3. **Moisture Testing** (Don Grabe, Oregon State University):

This committee continues to develop moisture testing methods. The moisture determination committee continues to work with the ISTA moisture testing committee since the requirements of both organizations are the same. Plans for the coming year are to continue calibrating oven testing methods for various seed types against the Karl Fischer standard reference method.

4. **Rangegrass Analysis** (Tim Gutormson, Iowa State University):

During the past year, this committee has submitted rules change proposals for the germination of sand dropseed and yellow bluestem and conducted studies on standard blowing point methods for sideoats grama and bluegrass and initiated a study on buffalograss germination. Objectives for the coming year are to publish the results of the blowing point study, continue the buffalograss germination studies and work to develop standard blowing points for switchgrass, reed canarygrass, and Indian ricegrass.

5. **Seed Vigor** (Janet Ferguson, North Carolina State University):

During the past year, this committee conducted a preliminary referee concerning the potential for using the tetrazolium test for measuring vigor in corn, soybeans and garden beans. The rewrite of the cold test procedure will be reprinted by July, 1991. The committee's objectives for the coming year are to begin to assess the adaptability of existing cold test procedures for other crops.

6. **Tree and Shrub Seed** (Robert Karrfalt, National Tree Seed Laboratory, Dry Branch, Georgia):

This committee coordinated the compilation of tetrazolium procedures for tree and shrub seeds, finished editing the introductory sections of the seedling evaluation handbook which cover gymnosperms, and coordinated the development of seedling descriptions for trees and shrubs for the seedling evaluation handbook. For the coming year, the committee plans to conduct "stratification-redry" pregermination treatment studies.

7. **Garden Bean Seed Germination** (Patricia Brownfield, Rogers Bros. Twin Falls, ID.):

The committee finished a four month storage project the primary objective of which was to monitor rounded leaf deterioration as a result of seed aging. The committee is also conducting a germination referee which compares AOSA and ISTA methods as well as current AOSA rules versus the drawings proposed by the seedling evaluation committee. The committee plans to continue study of rounded leaf deterioration and gather further information on the impact of the proposed seedling evaluation handbook on bean germinations.

8. **Tolerances** (Dan Niffenegger, University of Kentucky):

The tolerances committee has worked with the referee committee on analysis of data and standardizing some aspects of data analysis. The committee has also provided consultation to the cultivar purity committee. The objectives for the coming year are to continue this work and to obtain better estimates of variance for specific tests and specific species.

9. **Germination and Viability** (Charles Vaughan, Mississippi State University):

This committee will meet for the first time during the annual meetings in Lexington, Kentucky.
10. **Seed Conditioning** (Manjit Misra, Seed Science Center, Iowa State University):

The committee has initiated a survey on storage and handling of seed samples received in seed laboratories. The intent is to provide a list of equipment and supplies to help seed laboratories as well as determine needs. Dr. Misra has asked to be relieved of his responsibilities as chairperson. No replacement has been found at this time.
11. **Lolium labeling** (Malcom Sarna, Maryland Dept. of Agric.):

The committee has developed several rules change proposals. These proposals include Table 1 and Table 3 entries in the "Rules for Testing Seeds" for Lolium X hybridum, intermediate ryegrass, changes in the ryegrass fluorescence test formulae, an example of 400-1000 seed test tolerances for the ryegrass fluorescence test. Objectives for the future are to develop rules changes to address the festuloliums, to improve the method for the conduct of the fluorescence test. The committee also will study the value of the fluorescence test as a cultivar identity test for intermediate ryegrass.
12. **Seed Pathology** (Betsy Randall-Schadel, North Carolina Dept. of Agric.):

The Committee completed the seed pathology resources survey and copies will be available at the annual meetings. The committee is also conducting a seed pathology workshop at the annual meetings with at least three committee members participating as workshop leaders or assistants. The committee plans to continue updating the seed pathology resources survey annually as new services become available and plans to investigate the potential need of seed pathology testing procedures for regulatory purposes.
13. **Tetrazolium Evaluation** (Tim Gutormson, Iowa State University):

Progress has been slow over the past year. The committee will receive information on tetrazolium testing methods for tree and shrub seed. Tim Gutormson has asked to be relieved of his responsibilities as chair of this committee and, as of this writing, no replacement has been found. The chair recommends that the committee activity continue due to the need to update tetrazolium information and methods.
14. **Seed Testing Standardization Research Funding** (Dennis TeKrony, University of Kentucky):

Three research projects were funded by the committee in 1990/91. All funded research projects were for studies of seed germination in: big bluestem (T. Gutormson), soybean (R. Ferriss) and purple coneflower (R. Geneve). Two new proposals were received for funding in 1991-92. Four research papers were presented on previously funded projects at the AOSA annual meetings. The objectives of this committee are to continue to gain additional funding from industry sources, survey industry for suggestions on research needs and funding, and review progress reports of projects funded in previous years.

15. **Purity** (Arnold Larsen, Colorado State University)

This committee will meet for the first time during the Annual Meetings in Lexington, Kentucky.

### **RULES COMMITTEE**

Eighteen proposals for changes in the AOSA Rules for Testing Seeds were received, evaluated, and approved by the Committee for consideration by the AOSA membership. These proposals will be discussed at the open Rules meeting on Thursday, June 13th at 8 A.M. and voted on by the membership during the afternoon business meeting.

The Committee Chairman also accepted the resignation of Jeff Ruprecht of Asgrow Seed Company on April 29, 1991. Mark Miller of Funk Seeds Int. was nominated as the SCST representative by President Jenanyan.

In other business, members of the Committee assisted the Chairman of the Editorial Committee in preparing and proofing the 1990 Rules for publication. I would especially like to thank Jim Effenberger and Deborah Meyer for their help on this project. Due to a very short time period between the proposal deadline and the Newsletter deadline in January, the Committee decided to move up the proposal submission deadline to October 15th of each year.

All eighteen proposals were adopted by the AOSA membership during the June 13th annual business meeting. Some of the proposals also had some amendments which are listed here. Please refer to the February 1991 Newsletter for the complete proposals as written.

### **AOSA Rules Changes for 1991**

- Proposal No. 1: approved as written.
- Proposal No. 2: approved as written.
- Proposal No. 3: approved as written.
- Proposal No. 4: approved with amendment; change 2.6 (4) to 2.6 b. (4)
- Proposal No. 5: approved with amendment; change sec. 4.8 j. presoak to moisten.
- Proposal No. 6: approved; (complete rule change published in this issue)
- Proposal No. 7: approved; (complete rule change published in this issue)
- Proposal No. 8: approved; (complete rule change published in this issue)
- Proposal No. 9: approved with amendments.
- Proposal No. 10: approved as written.
- Proposal No. 11: approved as written.
- Proposal No. 12: approved as written.
- Proposal No. 13: approved as written.
- Proposal No. 14: approved with amendments.
- Proposal No. 15: approved as written.
- Proposal No. 16: approved with amendment; change final count from 14 to 10 days.
- Proposal No. 17: approved as written.
- Proposal No. 18: approved with amendments.

### SEED STANDARDIZATION COMMITTEE

The Standardization Committee continues to be active and to play an important role for both AOSA and SCST. The Beginning Seed Analyst Short Courses are well established and are doing their job to train new analysts as well as identify areas of the Rules that need attention. Most recently, the committee developed a standardized report form and published an instruction booklet for its use.

A leadership change in the Teaching and Training subcommittee will insure its continued activity. Miller McDonald has replaced Allen Knapp as chairman. I wish to express my personal thanks to Allen for his hard work as previous chairman. I'm confident that Miller will continue with vigor. Miller reports that 38 students attended Beginning Seed Analyst Short Courses this year at Oregon State and Iowa State Universities. Since the inception of these training programs in 1985, a total of 218 students have received standardized training in AOSA seed testing rules and procedures, and related subjects. Miller will review training manuals used in these schools and will work toward developing a manual that can be made available to anyone wishing introductory seed testing information. A one day Seed Pathology workshop, which attracted nearly 60 people, was held prior to the AOSA/SCST annual meeting. The workshop was hosted by AOSA and SCST and was sponsored by the Teaching and Training Subcommittee.

The Uniformity subcommittee, chaired by Jim Effenberger submitted a rule change mandating the use of calcium nitrate when hypocotyl collar rot is observed in garden bean germination testing. His committee is compiling a survey to be circulated to all seed laboratories which will help assess specific areas of non-uniformity in the application of the rules. At the conclusion of this meeting, Jim will step down as subcommittee chairman, but will remain active as a member. Rodney Young has agreed to carry on. My thanks to Jim for his past leadership.

The Seed Sample Mediation subcommittee, chaired by James Warren has one sample in the process of mediation. The sample involves weed seed identification. Jim is publicizing the Seed Sample Mediation Subcommittee through trade newsletters.

Rodger Danielson, Chairman

**REPORTS OF SPECIAL COMMITTEES****AFFILIATES COMMITTEE**

The AOSA Committee of Affiliates met on Sunday, June 9, 1991, at 10:00 a.m. in Lexington, KY. The following affiliate members were in attendance:

1. American Seed Trade Association  
Leslie Schuchart, representative  
Richard Sayers  
Wes Wilcox
2. Association of American Seed Control Officials  
Robert Skaggs, President
3. Association of Official Seed Certifying Agencies  
Allen Phillips, President
4. Commercial Seed Analysts of Canada  
Marie Greeniaus, President
5. International Seed Testing Association  
Richard Payne, representative
6. Society of Commercial Seed Technologists  
Guin Jenanyan, President
7. Association of Official Seed Analysts  
Wayne Guerke, President  
Steve McGuire, Vice-President  
Charles Baskin, Past President  
Wayne Still, Liaison Committee

Each Association's representative presented their activity report. Dr. Richard Sayers proposed the following objectives to improve communication among the various affiliates:

1. Affiliates Committee chair to notify participants of key issues.
2. Critical issues discussed in the Affiliates Committee passed on to the appropriate organization or committee for consideration.
3. Designate representatives to the Affiliates Committee.
4. Motions and resolutions recorded and passed on to Board with action taken passed back to committee members.
5. Involvement by invitation of appropriate AOSA chairmen to discuss key issues identified.

These proposals were discussed further at the AOSA Executive Board Meeting on Tuesday, June 11, 1991. It was felt that proposed objectives 1, 2, 3 and 5 were already being done. There was no objection to proposed objective no. 4. The Board directed the President to develop guidelines of the Committee's function and operation for the AOSA Administrative Practices Handbook.

Wayne Guerke, Chairman

**AUDIT COMMITTEE**

The Audit Committee consisting of Steve McGuire and myself audited the books on June 9, 1991, and found them to be in order.

Ellen Chirco, Chairwoman

**BUDGET COMMITTEE  
FY 1992**

<b>Revenue</b>	<b>3-Yr. Average</b>	<b>FY '91</b>	<b>FY '92 Budget</b>
Starting Balance	27,834	45,007	38,827
Past Due Acct.	1,930	11,825	1,500
Convention Profit	6,849	9,359	4,500
Interest Income	1,115	1,575	1,000
Misc. Income	193	—	—
Starting Available Funds	37,921	57,766	45,827
Member Lab. Dues	9,150	8,400	8,400
Associate Dues	1,505	1,550	1,500
SCST Affil. Dues	3,960	4,260	4,200
Membership Income	14,615	14,210	14,100
Newsletter Suscriptions	2,898	2,599	2,450
Journal Subscriptions	5,469	9,550	2,500
Page Charges for Journal	1,515	3,030	1,200
Annual Subscription Income	9,882	15,179	6,150
Rules/Binders/Inserts	5,577	8,467	4,000
Vigor Hndbk./Inserts	1,380	940	600
Cultivar Purity Hndbk.	—	662	1,500
TZ Handbook	502	762	350
Calibration Samples	323	280	200
Other Publs.	294	109	50
Handbook Sales Income	8,076	11,220	6,700
AOSA Research Fund Donation	3,000	3,000	3,000
Other Grp. Research Donations	—	2,839	3,000
Total Research Donations	3,000	5,839	6,000
<b>TOTAL REVENUE</b>	<b>73,494</b>	<b>104,214</b>	<b>78,777</b>
<b>Expenses</b>	<b>3-Yr. Average</b>	<b>FY '91</b>	<b>FY '92 Budget</b>
<b>Regular Expenses</b>			
Annual Meeting Advance	1,000	1,000	1,000
Acct. Past Due Owed	4,178	3,608	3,000
Bank Fees/Refunds	237	36	250
CAST Dues/Donations	1,395	768	500
Research Fund Transfer	2,500	3,000	3,000
Research paper comp.	—	—	100
Tax Prep. & Non-profit status	150	150	520
Misc. Costs—Under \$50	—	456	500
SCST Meeting Profit	—	4,180	2,250
Regular Assoc. Expenses	9,460	22,998	15,620

**Office Operations**

Insurance (3-yr. Bond)	—	0	126
Computer Equipment	811	950	1,000
Supplies	254	190	300
Office Postage	900	1,156	1,000
Misc.	295	147	300
Sec.-Treas. Files Transfer	—	—	300
Office Expense	<u>2,260</u>	<u>2,443</u>	<u>3,326</u>

**Travel**

AASCO			0
AOSCA			950
AOSCA Advisory			850
ASTA			0
ISTA			0
NASDA			1,500
Travel Expense	<u>2,038</u>	<u>2,576</u>	<u>3,300</u>

**Publications**

Journal Expense		8,958	8,000
Newsletter Expense		10,360	8,500
Handbook Expense		16,665	
Seedling Evaluation			500
Crop & Weed			
Classification			1,200
Rules Expense			3,000
Publications Expense		<u>35,983</u>	<u>21,200</u>

**Total Expense**

<b>64,000</b>	<b>43,446</b>
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<b>Total Revenue</b>	<b>38,827</b>
<b>Total Expense</b>	<b>43,446</b>
<b>Balance</b>	<b>35,331</b>

**Future Expense:**

Seedling Evaluation Handbook publication	(estimate) 15,000
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Wayne Guerke, Chairman

**CAST COMMITTEE**

The Council for Agricultural Science and Technology (CAST) is a consortium of 29 scientific societies, each of which is involved in research and educational programs that impact upon agriculture and food production. CAST also has 3,500 individual members, along with a number of corporate, nonprofit, and associate society members. Scientists, most of whom are members of the societies, volunteer their time and expertise to develop CAST reports and its science magazine. These scientists are the foundation upon which the program has been built. CAST reports summarize current scientific information on public issues in food and agriculture. They are intended

for use by Congress, the executive branch and others who make decisions affecting agriculture and food, the media, and the public. *Science of Food and Agriculture* provides articles and exercises for teachers in 16,000 high school science departments and 7,000 FFA chapters. An understanding of the types of issues addressed by CAST is perhaps easiest gained by a look at recent CAST publications and chairs:

Effective Use of Water in Irrigated Agriculture. Marvin E. Jensen, Colorado Institute for Irrigation Management, Fort Collins. R113, June 1988, 64 pp. \$5.00.

Long-Term Viability of U.S. Agriculture. Luther G. Tweeten, Dept. of Agric. Econ. and Rural Sociology, The Ohio State University, Columbus. R114, June 1988, 48 pp. \$4.00.

Ionizing Energy in Food Processing and Pest Control: II. Applications. Edward S. Josephson, University of Rhode Island, West Kingston Eugen Wierbicki, USDA, ARS, Philadelphia, PA. R115, June 1989, 98 pp. \$10.00.

Mycotoxins: Economic and Health Risks. John L. Richard, USDA, ARS, Peoria, Illinois, and Richard J. Cole, USDA, ARS, Dawson, Georgia. R116, December 1989, 91 pp. \$10.00.

Alternative Agriculture: Scientists' Review. Lowell S. Jordan, Department of Botany and Plant Science, University of California, Riverside. SP16, July 1990, 182 pp. \$15.00.

Ecological Impacts of Federal Conservation and Cropland Reduction Programs. John R. Abernathy, Texas A&M Research and Extension Center, Lubbock. R117, September 1990, 28 pp. \$6.00.

Reducing American Exposure to Nitrate, Nitrite and Nitroso Compounds: The Regional Network to Prevent Birth Defects Proposal (Comments from CAST). By Charles A. Black, Iowa State University, Ames. CC 1989 - 1, June 1989, 16 pp. \$3.00.

Antibiotics for Animals: The Antibiotic Resistance Issue (Comments from CAST). By Virgil W. Hays, University of Kentucky, Lexington, and Charles A. Black, Iowa State University, Ames. CC 1989 - 2, June 1989, 12 pp. \$3.00.

Pesticides and Safety of Fruits and Vegetables (Comments from CAST). Robert D. Sweet, Cornell University, Ithaca, NY. CC 1990-1, December 1990, 16 pp. \$4.00.

Herbicide-Resistant Crops (Comments from CAST). Stephen O. Duke, USDA, ARS, Stoneville, MS. CC 1991-1, May 1991, 224 pp. \$8.00.

Publications are under development on the following topics: Food Fats and Health; Quality of U.S. Agricultural Products; Risks Associated with Foodborne Pathogens; Risk/Benefit Assessment of Antibiotics Use in Animals; Waste Management and Utilization in Food Production and Processing; Water Quality: Agriculture's Role; Agriculture and Global Climate Change; Contribution of Animal Products to Healthful Diets; Integrated Animal Waste Management; Minor use Pesticide Registration: Problems and Solutions; Public Perceptions of Agricultural Drugs and Chemicals; Relationship of Value-Added Activities on Agricultural Products and the U.S. Trade Balance;

Risk/Benefit Assessment of Agricultural Chemicals; and The Impact of Alternative Agriculture Practices on the Environment.

Individual members receive *NewsCAST*, *Science of Food and Agriculture*, and summaries of each new task force report. They may order one free copy of each new CAST report within one year of release. Century Club, Cornerstone Club, and Lifetime members receive a free copy of each new publication. Individual memberships for 1992 are \$30.00. For information, write to CAST, 137 Lynn Avenue, Ames, IA 50010-7197 or phone 515-292-2125.

Dan Niffenegger, Lexington, KY, represents AOSA on the CAST Board of Directors.

Dan Niffenegger, Chairman

### CERTIFICATION OF ANALYSTS COMMITTEE

Seed analyst certification examinations were administered in four of the five regions to a total of 37 candidates during 1990-91.

The Northcentral region, Allen Knapp coordinator, examined 10 candidates—four for purity and germination, four for purity only, and two for germination only; the Northeast region, Joe Garvey coordinator, examined 7 candidates—two for purity and germination, three for purity only, and two for germination only; the Northwest region, Rodger Danielson coordinator, examined 9 candidates—four for purity and germination, three for purity only, and two for germination only; the Southern region, Mary Smith coordinator, examined 11 candidates—four for purity and germination, five for purity only, and two for germination only. Examinations were not administered in the Southwest region.

A total of 99 examinations (written and practical) were administered to the 37 candidates with a pass-fail ration of 89:10. The results, by region, are:

Region	Purity Examination		Germination Examination	
	Taken	Passed	Taken	Passed
Northcentral	16	14	12	11
Northeast	10	10	8	7
Northwest	13	11	11	11
Southern	17	15	12	10
	56	50	43	39

Forty-three certificates were presented to 32 successful candidates at the AOSA banquet in recognition of their accomplishments.

We now have in AOSA 211 analysts that are certified in purity, germination, or both, representing 38 states and 2 federal laboratories. A list of Certified Seed Analysts follows this report.

Region coordinators will announce to laboratories in their region dates the examinations are to be offered in 1991-92.

As a reminder, I want to announce to laboratories points relative to the Certification of Analysts program.

1. Applicant must be a practicing seed analyst employed by an AOSA member laboratory.
2. A minimum of 24 months' experience in an AOSA laboratory or RST supervised laboratory, or its equivalent, is required to take the examinations.
3. The program, on the part of AOSA, is voluntary.
4. Analysts may be certified in two areas, purity and germination, or in only one area, purity or germination.
5. Written and practical examinations are given in each area, purity and germination. Thus an analyst desiring certification in both purity and germination must take and pass four examinations.
6. A minimum score of 60% is required to pass the written examination, 80% is required to pass the practical exam, and an average of 75% for the written and practical is required to pass each area, purity and germination.
7. An analyst not passing an examination, written or practical, may take the exam again after one year.
8. In the event a candidate passes one of the exams (written or practical) and fails the other, it is not necessary to retake both exams, only the one failed. The score attained on a retake is the one used in determining candidates' eligibility for a certificate.
9. Effective July 1, 1991, scientific names are required in the seed identification part of the purity practical examination.

## Committee members:

A.B. Ednie	Aaron Palmer
Rodger Danielson	Mary Smith
Joe Garvey	Terry Turner
Tim Gutormson	Wayne Still, Chairman
Allen Knapp	

**AOSA Certified Seed Analysts**  
(as of June 12, 1991)

<b>Name</b>	<b>Laboratory</b>	<b>Certificate Awarded</b>
Cauthen, Joseph A.	Alabama	Purity-Germination
McCartha, Joyce M.	Alabama	Purity-Germination
Till, Linda M.	Alabama	Purity-Germination
Kopperud, Barbara	Alaska	Germination
Hill, Deborah	Arkansas	Purity-Germination
James, Minta J.	Arkansas	Purity-Germination
Lambright, Daphne D.	Arkansas	Purity-Germination
Lange, Monte Cochran*	Arkansas	Purity-Germination
Moore, Barbara	Arkansas	Purity-Germination
Palmer, Aaron	Arkansas	Purity-Germination
Smith, Mary	Arkansas	Purity-Germination
Stane, Suzy	Arkansas	Germination
Chesi, Jacquelyne	California	Purity-Germination
Effenberger, Jim	California	Purity-Germination
Meyer, Debbie	California	Purity-Germination

Peterson, Paul S.	California	Germination
Stephenson, Marian*	California	Purity-Germination
Cardona, Irene	Colorado	Purity-Germination
Durkin, Paula	Colorado	Purity-Germination
Johnson, Cheryl	Colorado	Purity-Germination
Larsen, Arnold	Colorado	Purity-Germination
Milhous, Marilyn S.	Colorado	Purity-Germination
Moreng, Miriam	Colorado	Purity-Germination
Ramirez, Connie	Colorado	Purity
Chason, Wallace C.	Florida	Purity-Germination
Johnson, Marjorie H.	Florida	Purity-Germination
Kelley, Gus, Jr.	Florida	Germination
André, Lonita	Georgia	Purity-Germination
Bennetti, Aida	Georgia	Purity-Germination
Finley, Ellen	Georgia	Purity-Germination
Guerke, Wayne R.	Georgia	Purity-Germination
Hembree, Diana	Georgia	Purity-Germination
Patterson, Brenda	Georgia	Purity-Germination
Brubaker, Marilyn	Idaho	Germination
Caldon, Vicky*	Idaho	Purity-Germination
Duehlmeier, Corrie	Idaho	Germination
Greger, Kenneth	Idaho	Purity
Lawson, Richard	Idaho	Purity-Germination
Weber, Sharon K.	Idaho	Purity
Trent, Robert	Idaho	Purity-Germination
Waldram, Amy	Idaho	Germination
Baldwin, Minak	Illinois	Germination
Books-Carstens, Brenda	Illinois	Purity-Germination
Brickey, Jean	Illinois	Purity
Buckles, Brenda	Illinois	Purity-Germination
Cowan, Scott	Illinois	Germination
Faires, Carol	Illinois	Purity-Germination
Guimard, Debby	Illinois	Purity-Germination
Haught, Fred	Illinois	Purity-Germination
Kumpel, Velva	Illinois	Germination
Lair, Jim	Illinois	Germination
Miller, Wilma	Illinois	Purity
Pape, Jean	Illinois	Germination
Philmon, Rodger	Illinois	Germination
Simpson, Mike	Illinois	Germination
Tonelle, Nellie	Illinois	Germination
Clark, Barbara	Indiana	Purity
Follick, Loretta	Indiana	Purity-Germination
Metsger, Judy	Indiana	Germination
Richards, John	Indiana	Purity-Germination
Shoaf, Helene	Indiana	Purity
Hegna, Sandra*	Iowa — Ames	Purity-Germination
Kayser, Eileen	Iowa — Ames	Germination
Roys, Elaine	Iowa — Ames	Purity-Germination
Rudyanski, Diana Kay	Iowa — Ames	Germination

Shevokas, Rose Marie	Iowa — Ames	Germination
Stahr, Mike	Iowa — Ames	Germination
Waqar, Tauqir	Iowa — Ames	Germination
Wysong, Myrta*	Iowa — Ames	Purity-Germination
Webster, Carroll M.	Kansas	Purity-Germination
Willey, Kathleen A.*	Kansas	Purity-Germination
Oakley, Michael	Kentucky	Purity
Still, Wayne	Kentucky	Purity-Germination
Tillery, Tina	Kentucky	Purity-Germination
Von Lanken, Kent	Kentucky	Purity-Germination
Yockey, Dixie	Kentucky	Purity
Cronin, Barbara	Louisiana	Germination
Fisher, Linda	Louisiana	Germination
Gates, Eric	Louisiana	Purity-Germination
Smith, Tammye O.	Louisiana	Purity
Bitzel, David F.	Maryland	Germination
Buschling, Darryl Ann	Maryland	Germination
Capshaw, Lois	Maryland	Purity
Crippen, Lyle	Maryland	Purity
Heckert, Robert	Maryland	Purity-Germination
Kahline, Philip	Maryland	Purity
Miller, Jennifer	Maryland	Purity
Schorr, Charlene	Maryland	Purity
Garlick, James H.	Michigan	Purity-Germination
Hanson, Carol Ann	Michigan	Purity-Germination
McGuire, Steve	Michigan	Purity-Germination
Dunn, C.W. (Will)	Minnesota	Purity-Germination
Muggli, Michael	Minnesota	Purity-Germination
Ruffledt, Harold	Minnesota	Purity-Germination
Ziegler, Sarlyn	Minnesota	Purity-Germination
Hoskins, David	Missouri	Purity-Germination
Johnston, David	Missouri	Purity-Germination
Umstattd, Tom R.	Missouri	Purity-Germination
Cooke, Lucy	Montana	Germination
Drumheller, Kristin	Montana	Purity
Kodejs, Elaine M.	Nebraska	Purity-Germination
Koester, Douglas B.	Nebraska	Purity-Germination
Pape, Marjorie	Nebraska	Purity-Germination
Svik, David F.	Nebraska	Purity-Germination
Maul, Donna	Nebraska Crop Imp.	Purity-Germination
Prentice, Larry*	Nebraska Crop Imp.	Purity-Germination
Brightbill, Margaret	New Jersey	Purity-Germination
Freeman, Glenn	New Jersey	Purity-Germination
Ogburn, Connie	New Jersey	Purity-Germination
Kocheuar, Richard	New Mexico	Purity-Germination
Turner, Terry L.	New Mexico	Purity-Germination
Chirco, Ellen M.	New York	Germination
Samimy, Cyrus	New York	Germination
Wicksall, Joyce	New York	Purity
Armstrong, Sharon	North Carolina	Purity-Germination

Bailey, George R.	North Carolina	Purity-Germination
Hearne, Malanie	North Carolina	Purity-Germination
Saunders, Patricia H.	North Carolina	Purity-Germination
Stallings, Jewell G.	North Carolina	Purity-Germination
Brandt, Sharon	North Dakota	Purity-Germination
Hafdahl, Mark*	North Dakota	Purity-Germination
Rogers, Brenda	North Dakota	Purity-Germination
Abbott, Charles C.*	Ohio	Purity-Germination
Osburn, Roger	Oklahoma	Purity-Germination
Watts, Jeanette	Oklahoma	Purity-Germination
Bass, Kimberly	Oregon	Purity-Germination
Bolton, Kristi	Oregon	Germination
Cheever, Sally	Oregon	Purity
Danielson, Rodger	Oregon	Purity-Germination
Domaschofsky, Debra	Oregon	Purity-Germination
Hanning, Sherry	Oregon	Purity
Knower, Jo	Oregon	Germination
Peterson, Phyllis	Oregon	Germination
Post, Ruth	Oregon	Purity-Germination
Voorhees, Mary Anne	Oregon	Purity-Germination
Cook, William R.	Pennsylvania	Purity-Germination
Deppen, Richard	Pennsylvania	Purity-Germination
Garvey, Joe	Pennsylvania	Purity-Germination
Taylor, Arlene	Pennsylvania	Purity-Germination
Foy, J. Robin	South Carolina	Purity-Germination
Sumter, Mary L.	South Carolina	Purity-Germination
Vines, Joseph S., Jr.	South Carolina	Purity-Germination
Wannamaker, David D.	South Carolina	Purity-Germination
Gutormson, Tim	South Dakota	Purity-Germination
Ruhlman, Dennis	South Dakota	Germination
Silva, Cynthia A.	South Dakota	Purity
Franklin, John*	Tennessee	Purity-Germination
Patterson, Jean*	Tennessee	Purity-Germination
Arriaga, Mary Francis	Texas	Purity-Germination
Book, Kelly	Texas	Purity-Germination
Brendle, Janice	Texas	Germination
Bryant, Virgie	Texas	Purity-Germination
Chumney, Lou	Texas	Purity-Germination
Cranford, Patricia	Texas	Purity-Germination
Dalby, Ella Ruth	Texas	Purity-Germination
Demons, Marilyn	Texas	Purity-Germination
Dunk, William G.	Texas	Purity-Germination
Edwards, Martha	Texas	Purity-Germination
Flatt, Sibbie	Texas	Purity-Germination
Franke, Jeannette	Texas	Purity-Germination
Gonzales, Miguel	Texas	Germination
Govan, Lois	Texas	Purity
Griffin, Betty	Texas	Germination
Helms, Kay	Texas	Purity-Germination
Jones, Jimmie Lois	Texas	Germination

Keilberg, DeAnn	Texas	Purity-Germination
Kieschnick, Florence	Texas	Germination
Kocurek, Randy	Texas	Purity-Germination
Medack, Ruth	Texas	Purity-Germination
Ogle, Dixie	Texas	Purity-Germination
Pack, Marion Jane	Texas	Purity-Germination
Schkade, Ellie M.	Texas	Germination
Speer, Myrvlyn	Texas	Purity-Germination
Waymack, Mary Ann	Texas	Purity-Germination
Scott, John*	USDA — FSL	Purity-Germination
Bricker, Michael	USDA — NSSL	Germination
Cecil, Marcela	USDA — NSSL	Purity-Germination
Coil, Janice	USDA — NSSL	Germination
Dideriksen, Mike	USDA — NSSL	Purity-Germination
Hall, Jane	USDA — NSSL	Purity-Germination
Keys, Eugene D.	USDA — NSSL	Germination
Klein, Pat	USDA — NSSL	Germination
Moss, Dennis	USDA — NSSL	Germination
Nelson, Lana	USDA — NSSL	Germination
Prange, William	USDA — NSSL	Germination
Stratton-Reed, Janie	USDA — NSSL	Germination
Baker, Paul	Utah	Purity-Germination
Freeman, Terry	Utah	Purity-Germination
Larsen, Ron	Utah	Germination
Wilson, G. Richard	Utah	Purity-Germination
Binns, Stephen J.	Virginia	Purity-Germination
Burwell, Mary E.	Virginia	Purity-Germination
Cobb, Stephen H.	Virginia	Purity-Germination
Glenn, F. Berkley, Jr.	Virginia	Purity-Germination
Hansen, Beverly F.	Virginia	Purity-Germination
Harvey, Perri	Virginia	Purity-Germination
Jackson, Beverly*	Virginia	Purity-Germination
Johnson, Robert E.	Virginia	Purity-Germination
Jones, Susan R.	Virginia	Purity-Germination
Langford, Margaret	Virginia	Purity-Germination
Mackey, Pameley	Virginia	Purity-Germination
Moore, Kitty	Virginia	Purity
Rashid, Majida	Virginia	Purity-Germination
Smith, Harry	Virginia	Purity-Germination
Smith, W. Carter	Virginia	Purity
Waugaman, Carolyn	Virginia	Purity-Germination
Selzler, Ruth	Washington	Purity-Germination
Houser, Allan C.	Wisconsin	Purity-Germination
Thomas, Gary	Wisconsin	Purity-Germination
Kreuzer, Deborah	Wyoming	Purity-Germination
Parker, Rita A.	Wyoming	Purity-Germination

\*Former RST

T. Wayne Still, Chairman

### CONSTITUTION COMMITTEE

The Constitution Committee had one inquiry during the past year in reference to BYLAW XII Rules for testing seeds. The present statement is "All proposed changes and additions to the Rules must be sponsored or cosponsored by either an AOSA committee or subcommittee, or SCST Registered member in good standing." Although it is not stated here it is the understanding of many that the statement also includes AOSA *official laboratories*. This needs clarification and the adjustment of wording needs to be done at this time before reprinting.

A retyping of the Constitution incorporating the adopted proposals from the 1990 annual meeting has been done and it is presently being checked for errors and/or omissions.

Ellen Chrigo, Chairwoman

### MEETING PLACE COMMITTEE

The committee has received and recommends acceptance of the following invitation to host the 1994 Annual Meeting:

1994—Portland, Oregon

HOST: Roger Danielson,  
Oregon State Seed  
Laboratory, on behalf of the  
Oregon Seed Analysts

DATE: June 9-17, 1994

The schedule for future meetings, pending approval of this invitation, is as follows:

1992—Oklahoma (Oklahoma City)

HOST: Roger Osburn, OK Dept.  
of Ag.

1993—Colorado (Fort Collins)

HOST: Front Range Seed  
Analysts

1994—Oregon (Portland)

HOST: Roger Danielson, OR  
State Seed Lab.

Larry Nees, Chairman

### MERIT AWARD COMMITTEE

The Association of Official Seed Analysts Merit Award Committee selected A.B. (Sandy) Ednie, Agriculture Canada, to receive the Merit Award for 1991.

Sandy was awarded the merit certificate at the AOSA banquet on Wednesday, June 12, 1991.

Wayne Guerke, Chairman

**NECROLOGY COMMITTEE****William R. (Buddy) Vaughan**

William R. (Buddy) Vaughan passed away on August 9, 1990. He was 55 years of age.

Buddy Vaughan was born in Crestview, Florida, where he graduated from high school in 1953. He attended the University of Florida earning a bachelor of science degree of agricultural science in 1957. He was employed in the Florida State Seed Laboratory in 1957 as a seed analyst, later as assistant chief and in 1982 appointed chief of the seed laboratory. Buddy served as chief of the laboratory and as secretary on the Seed Investigation and Conciliation Council from 1982 through 1990. He served with the Florida Department of Agriculture and Consumer Services for 33 years.

Buddy Vaughan was a dedicated professional to seed technology. He was very active in the Association of Official Seed Analysts including the offices of President in 1989 and Vice-President in 1988. Committees he served on included the Executive Board from 1984 through 1987, Seed Standardization, Membership and others. Buddy was the AOSA representative to other national seed organizations. Buddy held the offices of President of the Association of Seed Control Officials of the Southern States and committee chairmanships in the Association of American Seed Control Officials.

Buddy was a Deacon of the Westminister Presbyterian Church in Tallahassee. He is survived by his wife of 32 years, Lee Broderick Vaughan; two daughters, Debbie Walker and Vicki Langston, and son, Broderick Vaughan.

**Lester C. Shenberger**

Lester C. Shenberger passed away on April 13, 1991. He was 80 years of age.

Dr. Lester Shenberger was born in Kentland, Indiana. He entered Purdue University completing a bachelor of science degree in 1934 in Horticultural Science. A master of science degree was completed in 1939 in Botany. He taught within the Horticultural Department and inspected seed for certification. Later he became the supervisor of the Indiana State Seed Laboratory. He began teaching biochemistry in 1941 and conducted research until his retirement in 1976 after 37 years in the field of seed technology. Numerous reports and publications on seeds, germination problems and environmental effects on seedlings were published by Dr. Lester Shenberger.

Dr. Shenberger held numerous offices and served as chairman on many committees with the Association of Official Seed Analysts including President in 1960, Vice-President in 1959 and Secretary in 1957. Dr. Shenberger also served as President of the North Central Seed Control Officials Association in 1964.

Lester Shenberger is survived by his wife of 56 years, Christian; two sons, James and Robert Shenberger, and daughter, Ruth Ann Holder.

**Thomas F. Cuddy**

Thomas F. Cuddy passed away on May 1, 1991. He was 81 years of age. Dr. Thomas Cuddy was born in Winnipeg, Manitoba. He obtained a bachelor of science degree in Agriculture in 1941 from the University of Manitoba

and was a research assistant in Plant Breeding. Dr. Cuddy was an inspector of Plant Products Division from 1946 to 1949. A diploma was received from the Imperial College of Science and Technology, London, followed by a doctoral degree from the University of London, England, in 1953 in Plant Physiology. Dr. Cuddy retired as head of Agriculture Canada's Seed Biology Laboratory, Ottawa, after 21 years service within the Department of Agriculture Canada.

Dr. Cuddy was an active member of the Association of Official Seed Analysts and the International Seed Testing Association. He was chairman of 7 AOSA committees and served on 10 other committees over a period of 16 years. In 1973 he served as AOSA Vice-President, President in 1974 and was elected as an Honorary Member of the AOSA for his work in the Association. He was also an active member on the ISTA Germination and Statistics Committees representing Canada well within the ISTA family.

Tom Cuddy is survived by his son, John B. Wilson; sister, Tannis Lester; brother Jim Cuddy; a brother-in-law and numerous nieces and nephews. He was predeceased by his wife Janet.

#### **Bower F. Forward**

Bower F. Forward passed away in August, 1990. He was 88 years of age.

Dr. Forward was born in Ottawa, Ontario. He attended the University of Toronto receiving a bachelor of science degree in 1925 and a master of science degree from Cornell University in 1928 in Plant Breeding and Soils. A doctoral degree was received in 1950 from the University of Toronto.

From 1928 to 1938 Dr. Forward was a district analyst in the Calgary Laboratory and in 1938 he headed the Toronto Seed Laboratory until his retirement in December of 1966.

Since 1931 Dr. Forward participated actively in the Association of Official Seed Analysts serving on several committees and holding various offices. Dr. Forward was President in 1952, and Vice-President in 1951. From 1947 to 1951 he chaired the Membership Committee and during 1955 and 1956 served as editor of the Newsletter. Dr. Forward was the recipient of the Award of Merit in 1966. Dr. Forward was also very active in the Commercial Seed Analysts Association of Canada and in appreciation was elected as an Honorary President of the Association. Articles by Dr. Forward were published in the proceedings of the AOSA and the International Seed Testing Association. From 1956-1957 he served as President of the Central Ontario Branch of the Agricultural Institute of Canada.

Bower Forward is survived by his wife, Jean; sons, James and Robert Forward; daughters-in-law, Shirley and Lianne, and four grandchildren.

#### **Norman G. Lewis**

Norman G. Lewis passed away in 1990. He was 90 years of age.

Norman Lewis was born in Margate, England. Mr. Lewis received a bachelor of science degree in agriculture from the University of Alberta in 1925 and a master of science degree in Botany, Genetics and Plant Pathology in 1938.

From 1926 through 1938 Mr. Lewis was a seed inspector for the Plant Products Division, Department of Agriculture Canada. In 1938 Mr. Lewis joined the seed laboratory in Calgary, Alberta and served as district analysts through 1958. In 1959 through 1965 he served as the assistant chief of the Analytical Services Section of the Plant Products Division. Mr. Lewis

was an active member of the Agricultural Institute of Canada. Mr. Lewis served as the AOSA Vice-President in 1943 through 1944 and as President in 1945 through 1946.

On November 24, 1965, Norman Lewis retired after 40 years of service in the Plant Products Division of the Department of Agriculture Canada.

Dick Lawson, Chairman

### **NOMINATIONS COMMITTEE REPORT**

Members of AOSA were mailed nomination ballots and asked to nominate persons for secretary/treasurer (3 year term) and two Executive Board members (3 year term). Of the four people nominated for secretary/treasurer, Larry Prentice was selected. His selection was based on the number of nominations he received and his willingness to run for the position.

There were 23 persons nominated for Executive Board positions from the 24 nominated, Rodger Danielson, Kathleen Willey, Dixie Ogle, and Malcom Sarna were selected, based on the number of nominations they received and their willingness to run for the positions.

Results of the 38 ballots cast in the final election are as follows:

Executive Board Member (3 year term) — Rodger Danielson

Executive Board Member (3 year term) — Malcom Sarna

Secretary/Treasurer (3 year term) — Larry Prentice

Terry Turner, Chairman

### **PROGRAM COMMITTEE**

I express my gratitude to those who served on the program committee for the Joint 1991 AOSA/SCST meeting in Lexington, Kentucky: Paul Johnson as SCST co-chair, Dr. Charles Baskin for review of the draft program, and Dr. Dennis TeKrony for coordinating the research paper competition and other research paper presentations. A total of 28 papers were presented.

Thanks also to Betsy Randall-Schadel and Cathy Cook as symposium chair and co-chair respectively for an excellent and informative workshop and symposium on seed pathology.

Thanks to Wayne Still, Alan Phillips, Dan Niffenegger, and the many others in Kentucky who so expertly handled the local arrangements.

Steve McGuire, Chairman

### **RESOLUTION COMMITTEE**

WHEREAS: The local arrangements and registration committees lead by Wayne Still, Dan Niffenegger, Dennis TeKrony and their various staff members and students (as listed in the program) performed in an exemplary manner in hosting the AOSA/SCST Annual Meeting;

WHEREAS: The instructors for the Seed Pathology Workshop provided a stellar program;

WHEREAS: The Radisson Hotel staff provided comfortable lodging and meeting facilities;

WHEREAS: The tours prepared by the local arrangements people were entertaining and informative;

WHEREAS: Banquet master of ceremony, Ed Hardin, presenter of the invocation, Charles Baskin and speaker, Roger Osburn, made the AOSA banquet evening rewarding to all attending;

WHEREAS: Leslie Sinning and her helpers made a significant contribution to AOSA research funds by designing and selling commemorative t-shirts;

WHEREAS: Numerous commercial organizations listed below generously supported this AOSA/SCST meeting; Agrigenetics Company, Kentucky Department of Travel Development, Agronomy Department, Univ. of Kentucky, Kentucky Garden Supply, Aladdin's House of Design, Ameri-Can Pedigreed Seed Co., Kentucky Seed Improvement Assoc., Anchor Paper Company, Kentucky Seed Underwriters, Asgrow Seed Company, Kentucky Seedsmen's Association, Caudill Seed Company, Kentucky Soybean Association, Caverndale Farms, Kentucky State Parks, Commercial Seed Analysts Association of Canada, Kentucky Sweet Sorghum Association, Cook Bros. Popcorn Company, Lexington Convention and Visitors Bureau, Council for Burley Tobacco, Inc., Northrup King Company, DeKalb, PanAmerican Seed Company, Delta Airlines, Pioneer Hi Bred International, Inc.—North, Division of Regulatory Services, University of Kentucky, American Seed Division, Dobbs Seed and Grain Company, Pioneer Hi Bred International, Inc.—International Operations, F.W. Rickards Seeds, Inc., Gustafson, Inc., Radisson Plaza Hotel, H.A. Hampton and Sons, Rogers NK Seed Company, Holman Seed Company, Royal Sluis, Inc., Holman Seed Company, Jacques Seed Company, Scott Seed Company, Southern States Cooperative, Inc., Sphar and Company, Terral-Norris Seed Company, Kentucky Agricultural Statistics Service, Kentucky Corn Growers Association.

WHEREAS: Exhibitors added an important dimension to the success of these meetings;

WHEREAS: The presenters of research papers and other scientific communications contributed to the better understanding of the latest information useful to AOSA/SCST members;

BE IT RESOLVED: That the AOSA officers, Executive Board, and members wish to express their sincere appreciation for the contributions of the above persons and groups to the success of the 81st Annual Meeting of the Association of Official Seed Analysts.

Arnold Larsen, Chairman

### SEEDLING EVALUATION COMMITTEE

Work of the Committee in 1990-91 concentrated on completion of the drawings to illustrate the Seedling Evaluation Handbook (the text for the Handbook was adopted following presentation as Rules proposal no. 14 in 1989). More than 230 individual drawings are included in this year's Rules change proposal no. 9. These were prepared by a scientific illustrator, Susan Laurie-Bourque of Ottawa, under the direction of Doug Ashton. All drawings were reviewed by the Committee, and most were reviewed during an open Committee meeting in Annapolis in 1990. The illustrator's fees to date of \$2793.58 (U.S.) have been paid by the AOSA. An additional six proposals relating to the text of the Handbook were prepared. All proposals were published in AOSA Newsletter 65(1), February, 1991.

Following publication of the proposals, several comments were received. Some of the concerns related to the wording of the descriptions which were adopted in 1989 (e.g. cotyledon decay in garden beans and peas, mesocotyl lesions in corn), while others related to details of the drawings themselves. All concerns will be discussed during open meetings of the Seedling Evaluation and Rules Committees at the June meetings in Lexington.

The Committee was informed that there are insufficient funds available to print the Handbook in 1991. While this will mean a further delay in completing the Handbook, it will allow more time for final editorial fine tuning, and if necessary, incorporation of proposals submitted in 1992.

Committee members during the past year were: Doug Ashton, Agriculture Canada, Ottawa; Barbara Atkins, Seed Testing of America, Longmont, Colorado; Ellen Chirco, New York State Laboratory, Geneva; Dr. Wayne Guerke, Georgia State Laboratory, Tifton; Bob Karrfalt, National Tree Seed Laboratory, Macon, Georgia; Susan Maxon, Federal Seed Laboratory, Beltsville, Maryland; Paul Peterson, California State Laboratory, Sacramento; Jeff Ruprecht, Asgrow Seed Co., Twin Falls, Idaho; Coralie Wilson, Northrup King Co., Tangent, Oregon. Jeff Ruprecht resigned from the Committee in April, 1991, to pursue other interests. We thank Jeff for his many years of dedication to the development of the Handbook.

Doug Ashton, Chairman

### SYMPOSIUM COMMITTEE REPORT

The Symposium topic for the 1991 annual meetings was Seed Pathology. Six speakers presented talks on a variety of elements of seed pathology, including new testing techniques, seed treatment, and kits and services. The Symposium was jointly sponsored by AOSA and SCST. Papers from the symposium will be published in the *Journal of Seed Technology*, at association expense.

A workshop on seed pathology was held on Saturday, June 8. Most of the symposium speakers were also workshop leaders. The fee charged for the workshop helped support the travel funds needed by some of the speakers/leaders. The agenda for the workshop is attached. The committee for the workshop included:

Cathy Cook, SCST Symposium Chair  
 Wayne Still, Local Arrangements  
 Rick Ferriss, Local Arrangements  
 Betsy Randall-Schadel, AOSA Symposium Chair  
 The Seed Pathology Committee

The Symposium Committee would like to express its appreciation to the Symposium speakers and workshop leaders: \_

Karen Arthur, Gustafson, Inc.  
 Sue Chen, Gustafson, Inc.  
 Tim Gutormson, Iowa State University Seed Science Center  
 Kim Gwinn, University of Tennessee  
 Darrell Maddox, Seed Testing of America  
 Denis McGee, Iowa State University Seed Science Center  
 Betsy Randall-Schadel, North Carolina Dept. of Agriculture  
 Richard Ritchens, Agri-Analysis Associates, Inc.  
 Kyle Rushing, Gustafson, Inc.  
 Norm Schaad, Harris Moran Seed Company  
 Chet Sutula, Agdia, Inc.

The committee also recognizes the excellent support of Rick Ferriss, Jannine Baker and other members of the faculty and staff of the Department of Plant Pathology, University of Kentucky, Wayne Still, Regulatory Services, University of Kentucky, and Dennis TeKrony, Adam Puteh and Susan Trawatha, Agronomy Department, University of Kentucky. We also thank Gustafson, Inc., Agdia, Inc., Seed Testing of America, and Harris Moran Seed Company who partially or wholly supported the presence of members of their organization at the workshop and symposium.

The Symposium committee included: Cathy Cook, SCST, Betsy Randall-Schadel, AOSA, Wayne T. Still, Denis McGee, Steve McQuire, and Mary Smith.

The Seed Pathology Committee is Denis McGee, Steve McQuire, and Mary Smith.

Betsy Randall-Schadel, Chairwoman

### GRADUATE STUDENT AWARDS

Eleven students presented research papers at the first graduate student competition at the annual AOSA meeting in Lexington, Kentucky. All presentations were excellent, and the three judges selected the following students and papers for the top three awards:

First Place (\$100)—Susan Trawatha, University of Kentucky, "Changes in Lipoxxygenase Activity During Seed Development of Field Grown Soybeans."

Second Place (\$50)—Steven Footit, Louisiana State University, "Embryo Acidification During Dormancy—Breaking and Subsequent Germination in Red Rice (*Oryza sativa*)."

Third Place (\$25)—Gonzalo Zorrilla, Iowa State University, "Relationships Between Severity of *Phomopsis* Infection, Quality Evaluation and Field Performance of Soybean Seeds."

Other students who participated in this year's competition were: Elizabeth Alvarez, Iowa State University; U. Tin Aung, Ohio State University; C. Bianchi-Hall, North Carolina State University; Amy Fay, Ohio State University; Craig Nelson, University of Kentucky; S. Panigrahi, Iowa State University; Adam B. Puteh, University of Kentucky; Wartidiningsih, University of Kentucky. The judges for this year's competition were: Dr. Nancy Vivrette, Ransom Seed Laboratory, Carpinteria, CA; Dr. Larry Copeland, Michigan State University, East Lansing, Michigan; and Dr. Loren Wiesner, National Seed Storage Laboratory, Ft. Collins, CO. Abstracts for all papers presented were published in the May issue of the AOSA newsletter.

The graduate student competition for seed research awards will be continued at the 1992 AOSA meeting in Oklahoma. Deadline for submitting abstracts is March 15, 1992. For additional information contact the research program chairman, Dr. Dennis TeKrony, Department of Agronomy, University of Kentucky, Lexington, Kentucky 40546.

**PRESIDENTIAL ADDRESS**  
**WAYNE R. GUERKE**  
**"A DECADE OF PROGRESS"**

It has been a pleasure to be associated with AOSA during the past decade. I would like to review with you our past 10 years to see where we have been and to propose future goals.

The AOSA constitution states "The objective of this Association shall be to improve seed testing in all its branches and to make it more useful to agriculture and society." The Research and Rules committees have always worked diligently to improve and update seed testing methods, but during the eighties many other aspects of seed analysis were also considered. The seed analysts who make up our laboratory staffs are our most valuable resource. This fact has been recognized in the 80's by establishing the Certification of Analysts Committee, the Teaching and Training Subcommittee and by regularly sponsoring symposia on various seed quality topics. The certification of analysts not only brings everyone up to a level of knowledge and expertise, it also bestows a sense of accomplishment and pride. The Teaching and Training Subcommittee gives credit and recognition for attending training seminars and workshops. The symposium program gives us all a more comprehensive understanding and insight in the many diverse aspects of seed quality and the seed industry. As we become more informed we are better able to make laboratory decisions and interpret findings. This all comes together to improve laboratory performance and uniformity among laboratories. Further, the referee, sample mediation and uniformity committees exist as valuable checks on laboratory performance.

Active research programs are another vital part of developing and improving standardized testing methods. The many committees that deal with seed standardization research lend support for proposals to the *Rules for Testing Seeds*. Publication of handbooks on sometimes controversial topics such as seed vigor and cultivar purity testing are the result of assimilation of large amounts of data to present suggested testing methods. It is most valuable to examine developing areas that may eventually lead toward more uniform methods and provide additional seed quality factors. Continued

support of the Standardization Research Funding Committee is also vital to AOSA in that it allows us to actively address areas that need research. Also, presentation of technical papers at our meetings exposes our membership to areas of ongoing research and it introduces graduate students and others to involvement in our organization.

Communication and representation are also areas that have been expanded in the eighties. As president, it is clear to me that no aspect of the seed industry functions in a vacuum. One part affects the other. Our Committee of Affiliates provides an essential liaison with other seed related organizations. Broadening our membership base last year gives us the opportunity for increased member diversity and support. The Newsletter has served well in keeping everyone informed thanks to the efforts of editors and contributors. Even resolving differences between AOSA and ISTA should bring our organizations closer together.

These areas just highlighted were developed or expanded during the eighties. They are essential changes for preparing us as an effective organization entering the nineties. I would like to suggest to you that they make the difference between being a reactive organization responding to seed industry problems to being an active organization that is addressing seed quality needs.

As we enter the nineties, I would like to recommend the following areas for future consideration.

1. Resolve differences that create trade barriers. The AOSA-ISTA Harmonization Committee is studying differences between AOSA and ISTA. Resolution of these differences is essential as we become increasingly involved in international trade.
2. Study the office of Secretary-Treasurer. As our organization grows there is an increasing need for at least a part-time Executive Secretary. With increasing work loads we cannot expect this office to be maintained totally on a voluntary basis. Further, as we have broader global involvement there is a need for a stable organization address.
3. Study of computer programming. The study and monitoring of computer systems and programming would be a valuable resource as laboratories develop programs and networking is developed within the industry.
4. Revise and update the Tetrazolium (TZ) Testing Handbook. The TZ Testing Handbook was one of the most significant publications of our organization and it maintains the highest average sales volume. We should continue work to expand and update this publication to standardize recommended methods.
5. Continued support of research funding and presentation of technical papers. Support of research funding and involvement of graduate students pays dividends by providing active study of areas needing research and broadening our base of new, trained students and seed technologists.
6. Continued study to expand membership categories. We have a strong core of Official laboratories represented in our organization that should not be threatened by the participation and involvement of associate members and allied laboratories. Many valuable contributions come from those that may not have official status and it is important that we encourage their active participation. Further, with increased international trading

it is important to further consider expansion of our concept of being an American Association to include participation of Central and South American countries. We need their involvement for organizational diversity, representation and financial support.

7. Establish a Ways and Means Committee. This committee would be responsible for studying financial needs and recommending management options to the Executive Board. Good fiscal management is increasingly complex and essential as our organization grows.

As in the eighties, our organization will grow and expand its influence by keeping open minds to study new concepts and methods. As major worldwide changes take place toward democracy and capitalism, and as the needs of the world's population increases, our organization will move increasingly into the international arena. Our world continues to get smaller and I believe we are prepared to step out and meet the challenges.

## GREETINGS FROM ASSOCIATIONS

### ASSOCIATION OF AMERICAN SEED CONTROL OFFICIALS

**Robert Skaggs, President**

I bring you greetings on behalf of the Association of American Seed Control Officials, Inc. The Inc. was added last year, thanks to the efforts of Jim Warren of North Carolina. We are now a nonprofit North Carolina Corporation. It's a pleasure to be able to attend your meeting and I look forward to participating in your sessions.

Our Association had a very productive year. At our Lincoln, Nebraska meeting last fall, the labeling of Canola and Dwarf Tall Fescue was discussed and agreed upon. As you know Canola is a trademark and cannot be used as a name of kind. Using the variety Cascade as an example, and based upon a survey by our Information and Education committee, chaired by Ken Rauscher, Michigan, the agreed upon labeling would be Cascade Winter Rape; with the word Canola in parenthesis as supplemental information, i.e. Cascade Winter Rape (Canola).

As to the oxymoron, Dwarf Tall Fescue, and based upon the survey, it was agreed that the proper labeling terminology would be as an example, Bonsai Dwarf Fescue should be labeled as Bonsai Tall Fescue with Dwarf turf type in parenthesis as supplemental information, i.e., Bonsai Tall Fescue (Dwarf turf type).

Since our Nebraska meeting, the seed industry had been asking about the notice statement on the label pertaining to arbitration. Those states with arbitration requirements, under their Seed Law, all required different labeling for the Notice Statement on the label.

Joe Hardy, Chairman of our Legislative Committee, polled the 12 states with this type of labeling requirements. Joe, with considerable arm twisting and persuasion, was able to get them all to agree to a generic statement for noticing of arbitration labeling requirements. The generic statement is:

NOTICE  
ARBITRATION/CONCILIATION/MEDIATION REQUIRED BY  
SEVERAL STATES

Under the seed laws of several states arbitration, mediation or conciliation is required as a prerequisite to maintaining a legal action based upon the failure of seed to which this notice is attached to produce as represented. The consumer shall file a complaint (sworn for FL, IN, MS, SC, TX, WA; signed only CA, ID, ND, SD) along with the required filing fee (where applicable) with the Commissioner/Director/Secretary of Agriculture, Seed Commissioner (IN), or Chief Agricultural Officer within such time as to permit inspection of the crops, plants or trees by the designated agency and the seedsman from whom the seed was purchased. A copy of the complaint shall be sent to the seller by certified or registered mail or as otherwise provided by state statute.

This notice will be presented to our membership next month for inclusion in the Recommended Uniform State Seed Law (RUSSEL).

The activity of the past year points up the fact that great things can be accomplished with a little cooperation.

Again I want to express my appreciation for this opportunity and invite you all to attend our meeting in San Antonio, Texas, July 6 through the 11th, though I don't know anybody who would of their own free will choose to visit San Antonio in July.

## **AMERICAN SEED TRADE ASSOCIATION**

### **Leslie Schuchart, Director of Governmental Affairs**

The American Seed Trade Association can trace its beginnings back to 1883. More than a century has passed and ASTA continues a tradition of representing one of the noblest and important professions in all of agriculture—the seed industry.

Looking back over 1991 ASTA can point to a number of achievements and accomplishments. First, let's look at ASTA's involvement here at home.

ASTA has long advocated amending the PVP act. 1991 has been a year of action. ASTA's officers and members have had great success in securing resolutions of support from a number of influential and powerful agricultural organizations. Groups like the National Association of Wheat Growers, the National Corn Growers Association and a myriad of state seed associations, crop improvement associations and related groups have all come forward with strong and supportive language complementing ASTA's ongoing efforts to strengthen the integrity of the PVP act.

No one would argue that much remains to be done. Dialogue continues with other commodity groups. However, I continue to be very encouraged and pleased that the issue remains at the forefront and the debate, while still spirited and in many cases still emotional, is being met with perseverance and purpose.

ASTA's commitment to amending the PVP act is being closely tied with the recently approved UPOV Convention. Efforts are under way for the United States to become an official signatory to the international convention and appropriate action to bring the PVP act in compliance is a major concern of USDA and the ASTA.

Switching to another long term ASTA concern—deficiency payments to growers of hybrid seed corn. I am very pleased to say that as an Association, ASTA won a major battle with USDA when special operations unique to the seed corn grower were included in 1990 Farm Bill regulations. Briefly:

inputs such as rouging, detasseling, special pesticide applications, and drying are now considered necessary operating procedures. The result for the seed corn grower is 100% deficiency payments. Seed companies will not receive any portion of a deficiency payment, unless they specifically desire to do so. As you know, ASTA has "discussed" this issue for a number of years. ASTA's strong and united response (by way of 4500 letters of protest) most likely influenced the outcome.

ASTA has been looking ahead and believes that tomorrow's seed industry will be influenced by the broad area of biotechnology. As a response, a new standing committee has been established. The committee is up and running with some 70+ members. Asgrow's Dr. John Sorenson serves as chair and welcomes any ASTA member to participate.

In the international arena, ASTA continues to push for the delisting of pseudomonas. The work continues and ASTA remains committed.

ASTA also continues to advise the membership on trade opportunities and business ventures, special consideration has been paid to Eastern Europe where change is most apparent.

Perhaps most importantly, ASTA has stepped up its member services. Special consideration for addressing critical issues in a timely fashion is apparent in activities like joining other agricultural groups during the fast track negotiations, providing the seedsman's perspective on intellectual property laws currently being drafted in Mexico, and monitoring Congressional action that affects these important issues.

ASTA is especially pleased at the participation rate at a series of workshops held to discuss changing coverage in the Federal Crop Insurance Corporation. Well over 150 ASTA members attended regional workshops to hear firsthand USDA's FCIC officials on proposed changes in the FCIC program as related to corn and other program crops. ASTA saw the need and responded with a specially tailored program. More workshops on other topics will be planned as warranted.

In closing, ASTA remains committed to serving the seed industry. Although the issues change and, sometimes, even are resolved, our role as the official voice of the seed industry remains constant. ASTA speaks for all of us. From issues involving trade to protection of intellectual property rights to ensuring full deficiency payments to our growers, ASTA is proud to speak on your behalf. Our issues area as varied as our membership, yet our purpose remains clear: ASTA will continue to strive to be a powerful and influential voice not only in Washington, but also in the states.

ASTA values your trust and relies on your unique contribution. Let us know how we are doing. Get involved and let us know your thoughts and concerns. Your enthusiasm is important.

The first part of 1991 has been challenging and rewarding. Much remains to be done and with your help and enthusiasm I am confident that part two will be just as productive.

Remember, the 108th annual convention is coming (June 23-27 in San Diego). And, as always, the Lawn Seed Conference in Kansas City will be held November 2 and the 37th Farm Seed Conference, also in Kansas City, will take place on November 5. Finally, in December, the 10th-11th, the 21st Soybean Seed Conference in Chicago will take place and the 40th Corn & Sorghum Conference will close out 1991. If you need additional information or assistance, please contact the ASTA office. (Last year's trade show was the biggest yet—plan to be a part of the world's largest gathering of seedsmen.)

## **INTERNATIONAL SEED TESTING ASSOCIATION**

**Richard Payne, Presenter**

President Jenanyan, President Guerke, dignitaries, guests and fellow seed analysts, it gives me great pleasure to bring you greetings from ISTA, the International Seed Testing Association. The aims and objective of ISTA and those of the AOSA and SCST are very similar. All three organizations promote uniformity in seed testing and the advancement of seed technology in general.

As you may know, there is concern about differences between the official testing procedures of AOSA and ISTA. As a result of this concern, a joint AOSA-ISTA committee, chaired by Mr. A.B. Ednie, has been formed to identify these differences and suggest how they should be resolved. Fourteen major differences have been identified and are currently being studied. The committee is scheduled to complete its task by 1995. ISTA is especially concerned about differences involving seedling evaluations.

ISTA offers a discount of 10% on publications purchased in bulk. The ISTA Secretariat suggests that AOSA and SCST members could take advantage of this discount if orders were sent to a single location in the U.S. or Canada and then combined and forwarded to ISTA. This procedure would also minimize problems involving exchange rates when ordering ISTA publications.

ISTA is in the process of completing a survey of its member laboratories to determine which species are routinely tested by each laboratory. When completed, this survey would allow someone to contact a laboratory for assistance when testing a species with which they are unfamiliar.

The ISTA Congress in 1992 will be held in Argentina. The technical committees will begin meeting on October 28, and the opening session of the Congress will be held on November 2. The theme for this Congress is "Quality Seed for the Present and Future." Keynote addresses are planned to cover the topics of synthetic seed, seed banks, and seed technology training and their influence on and importance for the continuing development of seed technology around the world. The Congress will conclude on November 6, and several post Congress tours will follow. Additional details will be available at a later date.

Once again, I am pleased to bring you greetings from ISTA.

## **ASSOCIATION OF OFFICIAL SEED CERTIFYING AGENCIES**

**Alan Phillips, President**

On behalf of the Association of Official Seed Certifying Agencies, I bring you greetings. It is a pleasure for me to attend and assist in hosting your meeting here in Kentucky, my home state. After looking over your agenda for this meeting, I see that AOSCA shares many of the same concerns and issues that are of interest to SCST and AOSA.

With the large volume of certified seed moving internationally, we are interested in harmonizing differences that exist between AOSA and ISTA rules for testing seed. We are also involved and working the area of seed priming . . . enhancing and coating which we all will be working with more. With the widespread movement of seed in today's market, uniformity of seed testing is very important. The increased use of referee tests and training workshops like the one held yesterday are important and necessary to measure and achieve uniformity in testing.

The seed industry in this country is alive and well but does have some problems. One area of change needed is in the PVPA, especially concerning the so-called "farmer crop exemption" which has created a loophole in the law and allowed abuses to occur. This section of the act must be changed for PVP to be effective and used.

With the increased development of specific end use varieties, the issue of genetic purity and varietal identification take on new meaning. When certification agencies begin certifying varieties for specific intrinsic traits, these varieties will have to be tested for those traits and most of these tests will be done in the laboratory. This will create the need for new tests for seed laboratories.

The AOSCA Annual Meeting will be held August 4-8, 1991, in Salt Lake City. I want to extend an invitation for you to attend this meeting if possible.

I want to express my appreciation for the opportunity to attend your meetings on behalf of AOSCA. I wish you a most successful annual meeting and an enjoyable stay while you are here in Kentucky.

## **COMMERCIAL SEED ANALYSTS ASSOCIATION OF CANADA**

**Marie Greeniaus, President**

Presidents Guin & Wayne, officers, members and guests. I bring you greetings on behalf of the membership of the Commercial Seed Analysts Association of Canada.

Every year the involvement and cooperation that our Associations share seems to broaden, which is what is needed to be ready to meet the challenges of the years to come. Each Association is important and must be ready to contribute to the changes that will arise.

The seed business and testing will always be here, we are all an important part of the industry and technology, but this can only be advanced if we work together sharing ideas and our expertise. This requires the involvement of the seed trade, analysts, researchers and government.

The CSAAC have and will continue to have a good working relationship with Agriculture Canada. It has been a busy but productive year for our members.

Revision continues on the Methods and Procedures for Testing Seed in Canada. The new copy, which will reflect the changes to the PRESENT M & P, will be available in July. This version is to cover the revisions for the 1979 M & P which brings it up to date with the present regulations. This M & P is not related to the PROPOSED creation of the new Regulations and Compendium.

The second draft of the proposed Regulations and Compendium will be available in July. These will be discussed at the Canadian Seed Trade meeting in July and the Canadian Seed Growers meeting in July and the CSAAC in the fall. The CSTA/CSAAC Liaison Committee will meet in July to discuss the many important issues at hand.

The Plant Health Directorate is currently conducting a review of its seed testing program in Canada. Our Association is being represented at the Steering Committee level by Cathy Breadner, First Vice President and by myself. This review is comprised of five projects each headed by government personnel with our members being part of the working group.

Recommendation from these groups will be given consideration by the Steering Committee in October with an action plan to be prepared to implement the recommendations that are approved.

We are proposing changes to our Constitution and By-Laws which would allow the Associate Members to become a more active part of our Association.

This would compensate for the influx of Associate Members caused by Agriculture Canada's acceptance of partially accredited analysts which allows them to test for specific crop kinds only. For example, a person would be accredited for germination only on soybeans. The Association must look to the future as currently we have only 25 Senior Members versus 27 Associate Members, Seniors being fully accredited to test all crop kinds.

Many laboratories have and will continue to diversify into other areas of testing. This includes vigor testing, disease testing, training of Authorized Established personnel and crop inspection.

Due to the tough economic times and the recession in Canada, there are only five of our members in attendance at these meetings. The companies that these analysts represent realize the advantages of participation at these meetings. The contacts that a person makes and knowing who to call when a problem arises makes it all worthwhile.

Wayne Still and the "Seed Gang" have been hard at work preparing for this meeting and they have put together an excellent program and interesting festivities for us.

The CSAAC Annual Meeting will be held September 25-28th in Saskatoon, Saskatchewan. You are invited to attend and participate in our meeting.