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● message from the president

As we reach the end of 2005 we can reflect positively on the activities of our Society. The highlight of the year was undoubtedly the 8th International Workshop on Seeds, held in Brisbane in early May. Approximately 250 registrants attended this excellent meeting, including some 50 students. Of the presentations made, 86 were oral and 135 were by poster. A comprehensive report on the meeting was subsequently provided to the Executive Committee by Steve Adkins, with many helpful recommendations for enhancing the operation of these triennial events.

The first of these recommendations discussed by the Executive Committee was the naming of the meetings. In recognition of the fact that they have outgrown their original workshop format, henceforth they will be called Conferences, with the upcoming one in Poland being the 9th ISSS Conference on Seed Biology.

Organization of that Conference is now underway, with a local organizing committee chaired by Ryszard Górecki, with Tomasz Kulik, Lesław Lahuta, Agnieszka Piotrowicz-Cieslak, Elwira Śliwińska, and Stanisław Weidner, and a Program Committee composed of Bill Finch-Savage and Ken Thompson (co-chairs), Renata Bogatek, Julia Buitink, Gerhard Leubner, Hiro Nonogaki and Robin Probert. A date has also been fixed for the meeting: July 6-11, 2008. So plan to be there!

The Executive Committee has expressed the desire to sponsor, or co-sponsor more seed meetings and symposia in the years between our triennial Conferences. Details on the types of meetings, and how to apply for support from the Society, are posted on the ISSS website (www.SeedSciSoc.org), under *Governance and Guidelines*. Already one such meeting has taken place, arranged at short notice by our Representative for Central and South America, Renato de Castro. A full report of that meeting and of ongoing discussions with other societies in the region is found later in the Newsletter.

With respect to the website, many thanks to our Secretary Karen Koster, who has done an excellent job of updating it and in the process making it more easily navigable.

Other matters discussed by the Executive include a new definition of Corporate/Institutional membership, to make it a more attractive option. Because this new definition requires a change in the Statutes and Rules of the Society, it is included in the Newsletter as a Notice of Motion that will require approval by the membership at the next Society AGM. Because there is no meeting in 2006 at which there will be a substantial number of ISSS members, the AGM will be held electronically for the first time. Several meetings are being planned for 2007, including a second Workshop on the Molecular Aspects of Germination and Dormancy to be held in Salamanca, Spain, with Dolores Rodriguez as the chief organizer, and the second Seed Ecology meeting in Perth, Australia with Kingsley Dixon as Chair.

The Charity Commission for England and Wales approved the changes to our Constitution and Statutes and Rules that were voted in at the last AGM in Brisbane. See: *Governance and Guidelines* on our website for this update. This Commission approves our tax-free status as a registered society within the UK, thus saving us all membership costs.

A reminder that it is time for many of you to renew your membership in the ISSS, and that your support is important for the continuing success of our Society. Note that you can receive four years of membership for the price of three. And please interest your friends and colleagues in becoming members. If you need brochures on the Society to distribute by mail (to interested colleagues or for e.g. along with reprints), or at meetings you are attending, etc., then please contact me at dbewley@uoquelp.ca and I will be pleased to send them to you. If you would like to print your own copy, a pdf of the brochure can be found on the ISSS website on the "About the Society" page.

Finally, a warm welcome to our new Newsletter Editor, Chris Wood. Chris has recently taken up a new position at the University of Plymouth; details of his contact address follow.

All the very best for 2006, and may you enjoy learning much more about seeds!

J. Derek Bewley

welcome to our new editor

We are pleased to welcome Chris Wood as the new editor of the ISSS Newsletter, following the retirement of Mike Black, our founding editor. Please send Chris any news/information that you feel is of interest to members of the Society for inclusion in the Newsletter. He can be contacted at: Dr. Chris Wood (chris.wood@plymouth.ac.uk), Director of Graduate Skills Development, Graduate School, Room 7, Mary Newman Building, University of Plymouth, Drakes Circus, Plymouth, Devon, PL4 8AA, UK.

meetings and workshops

The following are either organized by and for the ISSS, or the Society is in whole or part sponsoring them, or has been requested to do so. Check the ISSS website for more details and links as they become available, and for more meetings as they become known.

2006. September 6-8. 3rd International Seed Health Conference. Microorganisms on Seeds - Harmfulness and Control. Bydgoszcz, Poland. For further information, contact fitopato@atr.bydgoszcz.pl Also see our website, *Meetings*, for details

2007. January 14-21. 5th International Workshop on Desiccation Sensitivity and Tolerance in Seeds and Vegetative Plant Tissues. Drakensberg, South Africa. Patricia Berjak, one of the meeting hosts, sends the following notice: "After careful consideration of the budget and some negotiations we have managed to reduce the costs by about 12% for delegates with single accommodation and by 21% for students sharing. This information will be posted on our website: <http://www.sles.ukzn.ac.za/deswork/> "

2007. May 7-9. ISTA Seed Symposium 2007. Diversity in Seed Technology. Iguassu Falls, Brazil. The symposium will consist of six oral sessions, each chaired by a speaker well known for their research in a topic covered by the session. Two poster sessions will include the same topics. The first call for papers has now been announced and can be found on the ISTA web site at: www.seedtest.org/en/seed-symposium2007.html

2007. September 9-13. 2nd ISSS Meeting on Seed Ecology: Seed Ecology II, an international meeting on seeds and the environment will be held in Perth, Western Australia. The meeting will include three days of oral and poster presentations at The University Club of Western Australia, a conference banquet and pre-conference & mid-conference field trips to experience Western Australia's superb flora. Visit www.seedecology2007.com.au for information about the conference. The organising committee can be contacted via [Seedecology2007 @bqpa.wa.gov.au](mailto:Seedecology2007@bqpa.wa.gov.au), for further information.

2007. (date to be determined). 2nd ISSS Workshop on Molecular Aspects of Germination and Dormancy. Salamanca, Spain. Organizer: Dolores Rodriguez.

2008. July 6-11. 9th ISSS Conference on Seed Biology. Olsztyn, Poland. Visit <http://www.seedbio2008.pl/> for further information.

sponsorship of meetings and symposia by the ISSS

The Executive Committee has expressed the desire to reach out to more seed biologists, not only to raise interest in our Society and to increase our membership, but to provide a forum for interactions with researchers in the many diverse areas of the subject, to our mutual benefit. To this end a number of Guidelines have been drawn up that detail the type of meetings and symposia for which monies can be requested. Clearly, the number of events that we can sponsor depends upon the Societies' finances and, the larger our membership, the more funds that will be available to sponsor these events.

A series of guidelines are drawn out below with respect to several categories of meetings:

- 1. Workshops and Meetings on Specialized Topics in Seed Biology**
- 2. Symposium on a Topic in Seed Biology, as Part of a Larger Meeting**
- 3. Regional Meeting on Seed Biology**

For full information see our website under *Governance and Guidelines*.

● news from our representatives around the world

Central and South America

Renato de Castro reports that, as part of the Brazilian and Latin American Plant Physiology Congress, he arranged for an ISSS Symposium to be held on 'Tolerance, Resistance and Adaptations of Seeds for Germination under Stresses'. This was held in Recife, Brazil on the morning of September 13th, 2005, and was coordinated by Dr. Elaine Simabukuro (UFPE). Over 80 scientists attended, and the speakers were:

Dr. Fabian Borghetti (UnB, Brasília): Extreme temperatures and seed germination.

Dr. Massanori Takaki (UNESP Rio Claro, Campinas): Light as a stress factor in seed germination.

Dr. Renato de Castro (UCSal, Salvador): Perceptions and advances on stress susceptibility and tolerance during seed development, imbibition and germination.

Drs. de Castro, Simabukuro and Borghetti also organized a lunchtime meeting, attended by about 30 scientists, including members of a group of germination specialists, the NEG, to discuss greater collaboration between seed researchers, and the role that the ISSS might play in fostering more joint ventures with seed specialists. Subsequently, Dr. de Castro has been elected as Secretary of the NEG, which will facilitate collaboration. It was decided that a Seed Science electronic discussion network will be established, which Dr. de Castro has organized, involving 40 participants so far.

Brief discussions were held with the Brazilian Society of Plant Physiologists (SBFV) to explore the possibility of collaboration with the ISSS; these discussions will continue between Dr. de Castro and the President of that Society. The Brazilian Seed Technology Association (ABRATES) will be holding a Pan-American Seed Symposium in Fortaleza, Ceará in August 2006, at which 1200 participants are expected. This should provide a further opportunity for collaboration in the staging of talks of mutual interest.



Dr. de Castro and fellow participants at the meeting in Recife, Brazil. From left to right: Rita de Cássia L.F., Renato de Castro, Elaine Simabukuro, and Claudio J. Barbedo.

Note from the ISSS President: Many thanks to Dr. de Castro for arranging this Symposium at very short notice, and for making contacts with seed scientists in several countries and societies. It required a lot of commitment on his part, and my congratulations on what he has achieved. I will work with him to further the profile of the ISSS in this region.

Central and Eastern Europe and Russia

Elwira Śliwińska is our representative for this region that includes Poland, Russia, Estonia, Latvia, Lithuania, Belarus, Ukraine, Moldavia, Romania, Bulgaria, Czech Republic, Slovakia, Slovenia, Hungary, Croatia, Bosnia and Herzegovina, Serbia, and Yugoslavia. In 2005, 16 people from 5 countries were members: Belarus – 1, Czech Republic - 3, Poland – 9, Russia – 2, Hungary – 1). In her first step as Regional Representative, she reports sending the latest ISSS brochure (electronic or/and printed version) to all ISSS members in the region, and they were asked to distribute them among their colleagues who might be interested in joining the ISSS. Letters and ISSS brochures were also sent to colleagues in institutions in other countries in the region, such as Uman State Agrarian Academy (Ukraine), Institute of Molecular Biology and Genetics of National Academy of Science of Ukraine (Ukraine), Slovak University of Agriculture in Nitra (Slovakia), Institutes of Genetics and Cytology, and of Experimental Botany of Belarusian National Academy of Science (Belarus), Belarusian Genebank (Belarus).

In 2005 there were no seed conferences in the region; however, ISSS members actively participated in the 8th International Workshop on Seeds in Brisbane, Australia.

In 2006 the 3rd **International Seed Health Conference** will take place in Bydgoszcz, Poland, on September 6-8 (see the ISSS website, **Meetings**, for details).

Reports on activities in the region:

1.) International Research Network: Physiological and practical aspects of yield and seed quality improvement by ecological methods

This International Research Network was established in 2004 by the Polish State Committee for Scientific Research. It is coordinated by Prof. Mieczysław Grzesik from the Research Institute of Pomology and Floriculture, Skierniewice, and brings together nine research teams representing eight institutions: The Research Institute of Pomology and Floriculture (Skierniewice, Poland), Warsaw Agriculture University (Poland), University of Warmia and Mazury (Olsztyn, Poland), University of Lodz (Poland), University of Technology and Agriculture (Bydgoszcz, Poland), Paris University (France), TNO Leiden (The Netherlands) and Cork University (Ireland). The participants meet twice a year – in 2005 the meetings were held in Warsaw on February 4 and November 18.

The aim of the Network is to have scientific discussions, to establish common projects, and to exchange researchers. The main interests of the group are the improvement of seed quality using ecological methods, establishing molecular markers for seed quality and germination, development of ecological methods of plant cultivation, and the biomonitoring of toxicity of water and soil used in ecological plant production.

The increased interest in ecological plant production around the world and the research activities of the Network members and personal contacts resulted in the following collaborations becoming established. Bogumiła Badek, MSc (Research Institute of Pomology and Floriculture, Skierniewice) undertook 3 months of scientific training at TNO, Leiden, conducting research to improve the quality of seeds by priming, within the framework of a joint PhD program. Krystyna Oracz, MSc (Warsaw Agriculture University) continued her 6 month scientific training at Paris University VI, researching the breaking of dormancy in seeds, within the framework of the Polish-French PhD joint program. Certified field trials are organized at the Research Institute of Pomology and Floriculture,

Skierniewice, where experiments are performed on horticultural seeds and plant production using ecological methods. A large ecological farm will be build in Skierniewice by Warsaw Agriculture University in cooperation with the Research Institute of Pomology and Floriculture and the Institute of Vegetable Crops (Skierniewice). This investment will give opportunities to organize international research, workshops and teaching in the field of ecological plant production.

2.) Seed research activity in the Czech Republic

i) Information from Bozena Sera (Institute of Landscape Ecology, Ceske Budejovice):

The Czech members of the ISSS, Z. Prochazkova, from the Forestry and Game Management Research Institute, and J. Capurek from the forest nursery in Budisov, are both are interested in forest seed management. They have been working for 10 years on the reproductive capacity of wild plants, especially the numbers of seeds/diaspores produced. Now they are participating in an international program, the EWRS (European Weed Research). One objective is to develop a database, "SEDA" (seed data), containing all information about the ecology and morphology of reproductive organs of flowering plants in Central Europe. A conference entitled 'Introduction and Genetic Plant Sources' was held in Prague in September 2005. There were several workers from the Botanical gardens who spoke about the need for an Index Plantarum or Seed Index. Institutions connected with seeds include: Institute of Botany in Pruhonice (germination, L. Moravcova), Research Institute of Crop Production in Prague (breeding, plant genetic resources for food and agriculture, I. Faberova, I. Hon), OSEVA Grassland Research Station in Rožnov-Zubří (grassland seed), Agricultural Research Institute Kromeriz (cereal breeding).

ii) Activity at the Institute of Zdenka Prochazkova, FGMRI Research Station, Uherske Hradiste, 686 04 Kunovice.

a) Review of European larch seed orchards, assessment of their productivity and future perspectives. Objectives: To survey all larch seed orchards to determine the: (i) silvicultural and health condition of particular orchards, (ii) cone (seed) production in all orchards, (iii) quality and health of seeds collected from the orchards from 1993 to 2003, (iv) biological, silvicultural, technical and economic effectiveness of seed orchards, (v) effects of tree breeding, and to prepare proposals for use of reproductive material from the orchards.

b) Inventory, cone crop, quality and health of seed of single clones in selected seed orchards of European larch and Scots pine.

Objectives: In selected orchards, to carry out detailed surveys to determine and evaluate management methods and health of the trees. Evaluate the frequency of cone crops of seed orchards as a whole and in terms of single clones, especially with a view to clone fertility, seed quality and health. Use isozyme analyses to verify and compare the identity of clones with appropriate plus trees. Comparison of crop size, quality and health of seed from seed orchards and from forest stands.

c) Storage methods, pre-sowing treatment and evaluation of the quality of tree and shrub seeds.

Objectives: Test and develop suitable methods for evaluation of seed quality, storage and pre-sowing treatment for shrub species e.g. honeysuckle, buckthorn, bird cherry, black dogwood, and sycamore and other.

d) Possibilities of optimising of germination and emergence of dormant seeds of European beech.

Objectives: Improve pre-sowing treatment procedures in dormant seeds of *Fagus sylvatica*, and propose methods to provide better and more economical use of forest tree seeds. Develop procedures for more precise and faster determination of the time requirement for chilling of beechnuts and propose methods for stimulating germination and emergence in less vigorous beechnuts. In 2005, the first experiments began using phytohormones on beechnuts.

Africa

Norman Pammenter reports that the South African Association of Botanists runs an annual congress, and there are usually some papers dealing with various aspects of seed biology. The 2006 Congress (the 32nd) will be held from January 15-18 at the Nelson Mandela Metropolitan University in Port Elizabeth. The local organising committee has supported a request that all the seed papers be combined in a session of the Congress, under the auspices and banner of the ISSS. The Berjak/Pammenter lab will contribute a significant component, but there are other seed papers, too, the authors of which are in agreement with this arrangement. Several students will be presenting, thus giving them experience and exposure.

● notice of motions

As noted in the President's Message, the Executive Committee has discussed how to improve and to make more attractive what is currently called the Corporate Membership category. The following is proposed and will be voted on for acceptance at the 2006 AGM. Any comments related to this category should be addressed to the President at dbewley@uoguelph.ca for relaying to the Executive.

What is proposed is that the present Corporate Membership be defined and appear on our website as follows:

Corporate and Institutional Membership

This category is available to private and public organizations who wish to register several of their employees as members of the Society. For £200 per annum (ten times the fee for individual membership), up to 12 employees may be designated as members; the option of four years' membership for three years' subscription is available.

The Corporation or Institution will identify the registered members to the Secretary of the Society, providing names and e-mail addresses. If required, the designated members may be changed at the end of each membership year by notification to the Secretary. Each current identified individual will have the full privileges of membership (e.g. voting rights) and will be sent by e-mail the Newsletter, notice of meetings, etc., and will be eligible for appropriate discounts on publications and registration to Society meetings.

The Corporate or Institutional member has the option to display its logo on the Society website, with a link to its own website.

(Rationale: The previous regulations were not sufficiently encouraging to potential members in this category, were more expensive, and offered no tangible benefits)

This necessitates changes to the Constitution, as follows. If the first two motions below are accepted, then the Executive Committee will put the above procedures into operation.

Motion I: that the new class of Corporate membership be accepted, and the Constitution be altered as follows to accommodate this:

E. Membership

- 1) Membership of the Charity shall be open to:

- a) individuals (over the age of 18 years) who are interested in furthering the work of the Charity and who have paid any annual subscription laid down from time to time by the Executive Committee, and
 - b) any body corporate or unincorporated association which is interested in furthering the Charity's work and has paid the annual subscription for Corporations or Institutions (any such body being called in this constitution a "member organisation").
- 2) Every **individual** member shall have one vote.
 - 3) Each member organisation shall appoint up to twelve **persons to represent it and to who may vote on its behalf** at meetings of the Charity.
 - 4) Each member organisation shall notify the names of the **persons** appointed by it to the secretary. If **a person** resigns from or otherwise leaves the member organisation, **that person** shall forthwith cease to be **a member of the ISSS unless he or she rejoins the society as an individual member**.
 - 5) The Executive Committee may unanimously and for good reason terminate the membership of any individual or member organisation: Provided that the individual **concerned** or **the appointed individual of the** member organisation concerned (as the case may be) shall have the right to be heard by the Executive Committee, accompanied by a friend, before a final decision is made.

Consequently, Statute and Rule # 3 entitled Subscriptions will be changed to:

Motion II: that the following Statute and Rule be amended accordingly:

- 3.1.1 For corporate **and institutional** membership a sum equivalent to **10** times the highest annual subscription rate for an individual member.

Note that changes to the Constitution require approval by two-thirds of the voting members, and for changes to the Statutes and Rules, a majority vote is required.

Motion III: That the definition of Corporate representative be modified to the following:

Corporate Representative

This position will be filled by **a member from a** Corporation. The President, in consultation with the Executive Committee will appoint the Representative for a 3-year term, with the possibility of re-appointment for normally one further term.

(Rationale: Currently the Statutes and Rules state that the Representative must be from a member corporate body. But there are a substantial number of members from corporations that are not of sufficient size to qualify for Corporate or Institutional Membership, and are thus excluded from being a Representative. The change in wording above opens up the ability for Representatives to be appointed from all sizes of Corporation).

duties of officers and representatives

For both officers, representatives and members of the Society to understand the various duties that are involved in holding these positions, the Executive Committee has drawn up a document entitled *Guidelines to the Duties and the Election of Officers and Representatives of the ISSS*. This is now

available on our website, also under *Governance and Guidelines*. We welcome expression of interest in assuming any of these positions, for the more active participants there are, the more vibrant is our Society.

reminder to renew your membership

ISSS Secretary Karen Koster reports that renewal notices have recently been sent to those of you whose memberships expire at the end of 2005. Please send your renewal forms promptly to ISSS Treasurer Ken Thompson, who will process your payments. Ken would be most grateful if you would type your information into the form before sending it on to him, as it ensures that we have your contact information correct. Our “four years membership for the price of three” offer is still in effect, so be sure to take advantage of this offer. Not only does it save you money, it also saves you the trouble of submitting membership forms every year!

ISSS membership pays for itself with savings on attendance at ISSS sponsored meetings and discounts on publications from CABI, including *Seed Science Research*, the official journal of the ISSS. Please renew today and encourage your seed biology colleagues to join our society.

publications

The following is a report from Steve Adkins on the progress of the publication resulting from the meeting in Brisbane:

“This now has the tentative title of “Advances in Seed Science: 8th ISSS Workshop on Seeds, Brisbane, 2005”. The editors are Adkins, S.W., Navie, S.C. and Ashmore, S. Approximately half of the editorial process has been completed, and all of the chapters should be sent to CABI no later than the second week in January 2006. Of the promised 49 papers 43 have been received. The quality has been very good, with positive reviews being obtained for most papers, although one or two have required a lot of work.”

Additionally, [The Encyclopedia of Seeds: Science, Technology and Uses](#), edited by Mike Black, J Derek Bewley and Peter Halmer, is due to be published by May 2006. [960 pages. Hardback 0851997236, £140.00 /US \$275.00.] Publisher’s discount available for members of the ISSS. (For details, see ISSS June 2005 Newsletter and CABI website www.cabi-publishing.org).

This is the first scholarly reference work to cover all the major scientific themes and facets of the subject of seeds. It outlines the latest fundamental biological knowledge about seeds, together with the principles of agricultural seed processing, storage and sowing, the food and industrial uses of seeds, and the roles of seeds in history, economies and cultures. With contributions from 110 expert authors worldwide, the editors have created 560 authoritative articles, illustrated with plentiful tables, figures, black-and-white and colour photographs, suggested further reading matter and 670 supplementary definitions. The contents are alphabetically arranged and cross-referenced to connect related entries.