



## IAPPS NEWSLETTER

Number II February, 2004

### PLANT PROTECTION AS A SCIENCE AND A TECHNOLOGY FOR THE FUTURE

#### **An IAC Study on Science and Technology Strategies for Improving Agricultural Productivity and Food Security in Africa**

The Secretary General of the United Nations, Kofi Annan, requested the Inter Academy Council (IAC) on March 7, 2002, to prepare a strategic plan for harnessing the best science and technology with the aim of enhancing agricultural productivity in Africa, thus contributing to food security. He asked the IAC to engage leading scientific, economic and technological experts, and a Study Panel of 19 members (11 from developing countries, of whom 7 were from Africa) was constituted for this purpose.

The Panel met three times to plan the implementation of the study, delineate its scope, commission the drafting of resource documents, and review progress. The first meeting was in Entebbe, Uganda in September 2002, the second at the Bibliotheca Alexandrina, Egypt in March 2003 and the third in Stellenbosch, South Africa in June 2003.

The Panel has also been engaged in a series of consultative workshops in four regions of Africa during January and February 2003. These workshops were organized jointly with the relevant sub-regional organizations responsible for the coordination of agricultural research in three of the four regions

- Eastern and Central Africa (ASARECA/IAC): 31 January-2 February 2003 , Nairobi, Kenya, 43 participants.
- Northern Africa (AARINENA/IAC): 3-5 February 2003 Hassan II Institute of Agronomy and Veterinary Medicine, Rabat, Morocco, 30 participants.
- Southern Africa (National Department of Agriculture, Republic of South Africa/IAC): 7-9 February 2003 Magaliesburg, South Africa, 32 participants.
- Western and Central Africa (CORAF/IAC): 10-12 February 2003 Dakar, Senegal, 45 participants.

The aims of the workshops were to:

- Understand the regional constraints to enhanced agricultural productivity as a means of improving food security;
- Identify explicitly the role of science and technology in alleviating constraints and exploiting opportunities.

The Panel has also commissioned several resource papers as complements to the consultative workshops. The purpose of the resource papers was to review the literature on subjects that the Panel felt were integral to the study. The topics were as follows.

- African farming systems and productivity: Trends, constraints and opportunities
- Constraints, opportunities and the promise of S & T in Africa
- Constraints and opportunities for African S & T institutions in Africa
- Creating and retaining the next generation of African agricultural scientists

In the report (the final draft is expected to be published by February 1, 2004) .and particularly in chapter 4 "Technology options that make a difference", Integrated Pest Management (IPM) is recognized by the panel as one of the most important means to improve the agricultural productivity in Africa.

Our knowledge on crop losses in Africa is rather limited. Crop losses due to plant pests were estimated for some crops e.g. rice, wheat, potatoes and maize, but losses in some important African food crops, e.g., cassava, millet and sorghum, are not known. In 1994, 52 % of the potential values of the crops were lost due to pests (42 % preharvest losses and 10 % post harvest losses). Therefore, plant protection has to be seen as a very important component in improving agricultural productivity and food security in Africa

IPM has increasingly been promoted by major agriculture and development institutions as a mean of efficient pest control and also for reducing pesticides use, and was adopted by the UN conference on environment and development in 1992 (Agenda 21, Chapter 14, sustainable agriculture and rural development). The World Bank, FAO,

CGIAR, UNDP, UNEP, CAB international, the IPM facility, NGO's as well as many governments and other institutions in Africa have adopted IPM as the underlying policy in plant protection. Opportunities for IPM among small holder farmers in Africa are expanding because IPM is enabling resource poor farmers to maintain and develop high agricultural productivity. Success stories in Africa abound (e.g., Striga, Orobanche, cassava and mango mealybugs, cassava green mites, Hessian fly, Ascochyta blight, nematodes, cereal stemborers).

However, African countries should also explore opportunities to enhance the use of some new technologies such as biopesticides, novel associations in biological control, biotechnology and transgenic plants in the context of IPM. Also, there are other severe limiting factors such as plant nutrients and water, which need to be considered along with biotic constraints when trying to raise the productivity of African agriculture. To sustainably reduce the impact of these factors will be the challenge of agricultural scientists, and in particular crop protectionists, in the coming decade.

**Mohamed Besri**, Member of the IAC Study Panel,  
Institut Agronomique et Vétérinaire Hassan II, Rabat, Morocco,  
E.mail: [m.besri@iav.ac.ma](mailto:m.besri@iav.ac.ma)

**Rudy Rabbinge**, Co-chair of the IAC study panel,  
Dean , Wageningen Graduate Schools, the Netherlands  
E.mail: [rudy.rabbinge@wur.nl](mailto:rudy.rabbinge@wur.nl)

**Jim Ryan**, Study Director,  
Visiting Fellow at the Australian National University in Canberra A.C.T. Australia  
E.mail: [ryanjim@cyberone.com.au](mailto:ryanjim@cyberone.com.au)

## ANNOUNCEMENTS

The International Weed Science Society will convene its 4th International Weed Science Congress in the International Convention Centre in Durban, South Africa on June 20-24, 2004. The program promises to be highly diverse, with something for everyone. To name only a few, main topics include biological control, invasive weeds, allelopathy, use of molecular biology in weed science, etc. The scientific program is chaired by Baruch Rubin ([rubin@agri.huji.ac.il](mailto:rubin@agri.huji.ac.il)) and Charlie Reinhardt ([creinhardt@bioagric.up.ac.za](mailto:creinhardt@bioagric.up.ac.za)). Detailed information on the program can be found at <http://www.iwsc2004.org.za>. The Durban ICC has been rated the best convention venue in Africa, and the nearby beach front hotels are luxurious, but inexpensive. All welcome.

**Steve O. Duke**, President International Weed Science Society (IWSS)

### Graduate Students Award - A competition

The International Weed Science Society (IWSS) has decided to encourage the participation of young weed scientists (M.Sc. and Ph.D. students) in the coming IWSC-2004 in Durban (see above), by providing up to 6 scholarships that will cover registration fees, accommodation, and part of the travel expenses. The Graduate Students Award Committee (Prof J. Streibig, Chairman, Dr. Phil Banks and Prof. B. Rubin) will select the awardees according to the following criteria:

1. The candidate must be enrolled as M.Sc. or Ph.D. student, pursuing a degree related to WEED SCIENCE as of December 20, 2003.
2. Submission should be in the form of up to a 5 page manuscript including tables, figures and photos (PDF file - font 12, 1.5 space and 3 cm margin throughout), with abstract, introduction, materials and methods, results, and discussion. Deadline for submission is December 31, 2003.
3. Submissions will be appraised based on the following merits: quality of research, novelty, contribution to the discipline of Weed Science and to the society.
4. Submissions should include a letter of commitment from the major professor or institution to provide additional travel support if the student should receive the award from IWSS.
5. All material should be sent via e-mail, no later than December 20, 2003 to: Prof. J. C. Streibig - The Royal Veterinary & Agricultural University, Dept. Agricultural Sciences (Weed Science), Room T364, Thorvaldsensvej 40, DK-1871 Frederiksberg, Denmark ([Jens.C.Streibig@agsci.kvl.dk](mailto:Jens.C.Streibig@agsci.kvl.dk))

Dr. P. A. Banks, Marathon-Ag/Environ Consulting, 2649 Navajo Rd, Las Cruces, NM 88007, USA  
([MarathonAg@zianet.com](mailto:MarathonAg@zianet.com))

Prof. B. Rubin, Institute of Agricultural Plant Sciences and Genetics, Faculty of Agriculture, Rehovot 76100, Israel  
([rubin@agri.huji.ac.il](mailto:rubin@agri.huji.ac.il))

**5th Meeting of the Working Group on Fruit Flies of the Western Hemisphere** May 16-21, 2004, Ft. Lauderdale, FL, Bonaventure Resort & Spa Conference

Please check the website for details: <http://www.conference.ifas.ufl.edu/Flies>

The IAPPS Newsletter is published by the International Association for the Plant Protection Sciences and distributed in *Crop Protection* to members and other subscribers. *Crop Protection*, published by Elsevier, is the Official Journal of IAPPS.

IAPPS Mission: to provide a global forum for the purpose of identifying, evaluating, integrating, and promoting plant protection concepts, technologies, and policies that are economically, environmentally, and socially acceptable.

It seeks to provide a global umbrella for the plant protection sciences to facilitate and promote the application of the Integrated Pest Management (IPM) approach to a the world's crop and forest ecosystems.

Membership Information: IAPPS has four classes of membership (individual, affiliate, associate, and corporate) which are described [here](#).

The *IAPPS Newsletter* welcomes news, letters, and other items of interest from individuals and organizations. Address correspondence and information to:

**Dr. Manuele Tamo, Editor**  
**IAPPS Newsletter**  
**Biological Control Center for Africa, IITA-Benin**  
**08 B.P. 0932 Tri Postal, Cotonou, Republic of Benin**  
**E-mail: [m.tamo@cgiar.org](mailto:m.tamo@cgiar.org)**