REPORT

3RD INTERNATIONAL SEED HEALTH CONFERENCE "MICROORGANISMS ON SEEDS – HARMFULNESS AND CONTROL" 6–8.09.2006, BYDGOSZCZ, POLAND

The third international conference on seed health was organized in Bydgoszcz in September 2006 by The Polish Phytopathological Society in cooperation with University of Technology and Agriculture (now: University of Technology and Life Sciences) hosting the conference, Polish Seed Trade Association and the State Plant Health and Seed Inspection Service. The organizing committee included: Cz. Sadowski (chairman), A. Baturo, L. Chmielnicki, K.W. Duczmal, B. Gurzyńska, A. Łukanowski, M. Mańka, D. Pańka, J. Piszczek, J. Prusiński, J. Szymczak-Nowak, E. Śliwińska, and K. Tylkowska. The conference was financially supported by the Ministry of Science and Information, International Society for Seed Sciences, Bayer Crop Science, and Seed Company "Rolnas". Previous conferences took place in Radzików (2000) and Poznań (2003). The conference title was "Microorganisms on Seeds – Harmfulness and Control". It was attended by ca 70 participants from 16 countries (Phot. 1), representing agricultural universities, research institutes, plant protection and seed inspection services, chemical and seed companies, seed technology groups, seed banks and state forest units. The first two days were filled with 21 oral presentations and 27 posters and on the third day the participants visited laboratories of the State Plant Health and Seed Inspection Service in Bydgoszcz, and afterwards Toruń Centre for Astronomy, Department of Radio Astronomy at Piwnice (the Nicolaus Copernicus University). This was followed by a visit in Toruń.

The first keynote speaker was J. Derek Bewley from the University of Guelph (Canada), presenting the goals of International Society for Seed Sciences (ISSS), its achievements and plans for future. Next keynote lectures were delivered by Jan Torp and Carmen Nieves Mortensen from Danish Seed Health Centre for Developing Countries, Valerie Cockerell from Scottish Agricultural Science Agency, Zdenka Prochazkova representing Forestry and Game Management Research Institute (Czech Republic), Inge M.B. Knudsen from Royal Veterinary and Agricultural University (Denmark) and Reyes Blanco from University of Almeria (Spain).

Jan Torp concentrated on the significance of experience in seed material health for all stages of seed production, qualification and trade, particularly international. He stressed the challenges to research, education and extension within the field. Carmen Nieves Mortensen characterized conventional and molecular methods for the diagnosis and identification of bacteria in seeds, with special emphasis on their advantages and disadvantages. Valerie Cockerell (Phot. 2) presented activities of the International Seed Testing Association (ISTA), with special emphasis on the

Phot. 1. Participants of the 3rd International Seed Health Conference "Microorganisms on Seeds – Harmfulness and Control" in the University campus in Bydgoszcz-Fordon (photo by G. Lemańczyk)

Seed Health Committee. She informed the auditorium that the complete list and description of methods for seed-borne pathogens detection published in the international rules of ISTA are available free of charge at the website www.seedtest.org. Zdenka Prochazkova concentrated on the most important fungi pathogenic to seeds of coniferous and broadleaf tree species and reviewed the methods of their detection. Inge M.B. Knudsen gave some examples of *Clonostachys rosea* IK 726 application for seed dressing against seed-borne and soil-borne fungi. The biological control agent can also be used for bioconditioning or for treatments joined with thermotherapy. Reporting on the health status of seeds in germplasm banks, Reyes Blanco emphasized the fact that low temperature helped to sustain the viability of seed-borne fungi. She pointed to the importance of prophylactics, having in view that the possibility of detecting the fungi during storage is very limited.

The following presentations were mostly devoted to the health of seeds of different plant species and in various geographical regions. Here the first communication on the transmission of *Acidovorax valerianellae* bacterium on corn salad seeds and the report of *Acidovorax avenae* ssp. *avenae* on rice in Italy are worth mentioning. The principles of defining the maximum tolerance levels of fungal infestation of cereal seeds in conventional and ecological production were eagerly discussed.

The papers on improving seed quality focused on efficacy of seed treatment with chitosan, organic acids, plant extracts and microorganisms (e.g. *Pseudomonas chlororaphis*, *Trichoderma viride*) as compared with synthetic fungicides, and on my-

Phot. 2. Dr Valerie Cockerell with the bran new "International Rules for Seed Testing. Annexe to Chapter 7. Seed Health Testing Methods" published in 2006 by International Seed Testing Association (photo by M. Mańka)

cological aspects of seed priming. The diagnostics of seed-borne pathogens comprised methods of detection of *Fusarium* and *Tilletia* spp., *Pseudomonas syringae* pv. *glycinea*, *Xanthomonas oryzae* pv. *oryzae* and *Pseudomonas* and *Pantoea* spp.

There were several presentations on toxigenicity of seed-borne fungi (wheat, rye, triticale and oilseed rape), conditions favouring the mycotoxin production, and methods of their detection. Attention was paid to mycological aspects of post harvest handling and storage of seeds of white and red clover, cereals, common serradela, and Scots pine and European beech. For the first time there were presentations on seed potato health.

Abstracts of the papers and posters will be available at the website of the Department of Plant Pathology University of Technology and Life Sciences www.utp.edu.pl.

The next seed health conference will take place in 2009 in Wrocław.

Krystyna Tylkowska and Małgorzata Mańka