

THE PUSTOVOIT AWARD - 1996 to Pr. Dr. Antonin KOVACIK (Czech Republic)

The V.S. Pustovoit Award is the highest honour conferred to individuals working in the Sunflower Industry. To fully appreciate the significance of the Award, it is necessary to have some knowledge of the man after whom the Award was named.

In 1912, V.S. Pustovoit began his research work on fields crops in the Kuban region. Pustovoit was an outstanding breeder, a Lenin and State Prize winner, and a member of the USSR Academy of Sciences and the Lenin Academy of Agricultural Sciences.

He worked out the technique of multiple individual selection from strains and intervarietal hybrids assessed for their offspring quality, with the subsequent induced and regulated transpollination of the best numbers. In 1924, Krasnodar became the experimental selection centre for Russian oilseeds and in 1932 the V.S. Pustovoit All Union Research Institute was established to formalise the valuable work Pustovoit had done in the preceding years.

V. S. Pustovoit headed the Breeding Department of the Institute until his death in 1972.

Nominees for the Award must have been active in the sunflower industry for more than ten years. Contributions must have been of a scientific or technical nature, and have gained world-wide recognition.

Recipients of the Pustovoit Awards in the past years :

- Dr. Galina Pustovoit (USSR) in 1980
- Dr. Eric D. Putt (Canada) in 1980
- Dr. Murray L. Kinman (USA) in 1980
- Dr. Alex Vranceanu (Roumania) in 1980
- Dr. Patrice Leclerq (France) in 1980
- Dr. Waldemar Sackston (Canada) in 1982
- Dr. Tihomir Vrebalov (Yugoslavia) in 1982
- Dr. Charles B. Heiser (USA) in 1985
- Dr. A.V. Anaschenko (USSR) in 1985
- Dr. Dragan Skoric (Yugoslavia) in 1988
- Dr. Aurelio Luciano (Argentina) in 1988
- Dr. A.B. Dyakov (Russia) in 1992
- Dr. G. Teodorova (Bulgaria) in 1992 and
- Dr. Georges Piquemal (France) in 1992.

In 1996, the Pustovoit Award Committee received several proposals to give this award at the time of the Conference in Beijing.

After consultation, the chosen candidate was Pr.Dr. Antonin Kovacik from the Research Institute of Crop Production, Prague-Ruzyně, Czech Republic.

The following curriculum sent by Dr. Dragan Skoric will be the best presentation for those who still do not know him well.

Prof. Ing. Antonin Kovacik was born on 15th December 1928 and is living in the Czech Republic. After finishing the Technical University of Agriculture and Forestry he was shortly employed as associate professor in the Department of Botany at Nitra and since 1954 he has been permanently working in the Research Institute of Crop Production, Prague-Ruzyně as scientific worker and for a long time as Director of this institute. He used his pedagogic abilities at the University of Agriculture, Department of Biological Principles of Plant Production, Prague-Suchbát. He was head of the above mentioned department and gave lectures on plant

genetics and biometrics. In 1975 he was appointed ordinary professor for genetics and plant breeding. In these functions he influenced the development of genetics, genetic resources and plant breeding for a long period. He was elected full member of the Czechoslovak Academy of Agricultural Sciences, corresponding member of the Czechoslovak Academy of Sciences and in 1993 foreign member of the Ukrainian Academy of Agricultural Sciences in Kiev.

Professor Kovacik was active expert in the development of agriculture and plant breeding in Afghanistan, Mongolia, Tunisia and within the framework of FAO in several Middle-African countries (Senegal, Gambia, Guinea). He was member of the Executive Committee of the European Agricultural Commission ECA for Agriculture and Nutrition - FAO in Roma. For more than 15 years he was coordinator of FAO European Research, Subsection of Applied Sunflower Genetics and member of Commission for the Germ-Plasm Collection of Oil Crops IBPGR. Under this leadership study of genetic resources was significantly developing in the Czech Republic including domestic and international coordination. Thus it was possible to preserve and extend the collection of 60,000 cultivars of cultivated plants and gather about 60 old cultivars - sunflower populations in the Gene Bank in Prague-Ruzyne.

Since many years he has been contributing by his scientific papers to the international journal «HELIA» - FAO being member of the Editorial Board. He also is member of the Editorial Board of the scientific journal «Archiv für Züchtungsforschung» (Germany). He is member of the international organization EUCARPIA for which he organized a session for sunflower in Czecho-slovakia.

Creative activity in the branch of oil crops, namely creative scientific, publicity and organizatory work with sunflower to which Prof. Kovacik devoted full 40 years has been awarded a high state honour for scientific publications in the field of allogamic plants - model plant sunflower - and application in crop breeding. He published over 230 original scientific papers dealing with sunflower, about 300 scientific popular articles, several books or text books as «Plant Genetics», «Topical Questions of Genetics», «Principles of Sunflower Growing», «Sunflower Digest», methods, university manuals on oil plants and similar. Many scientific papers have been published in «HELIA», presented on international conferences on sunflower, on the meetings of the Subsection Sunflower Genetics FAO, EUCARPIA and similar. Many presentations by Prof. Kovacik on the above mentioned conferences were orientated at new prospective fields of sunflower research. He is also author of two scientific films on genetics and on importance of sunflower for human population.

In his scientific publications Prof. Kovacik drew attention to all topical problems concerning sunflower starting 40 years ago till present days. His work represents an original collection of publications tackling problems of biological relations and rules in genetics, physiology, biochemistry and plant breeding.

Studies by Prof. Kovacik contain papers on karyotype, methods of pollen culture, induction of genetic variability by means of colchicine, acute gamma rays Co 60, quality of ligh spectrum on metabolic processes and sunflower ontogeny from the point of view of cellular and whole sunflower plant metabolism. Papers studying variability of environment and its effect on important traits and characters were important contributions to breeding. They enabled to analyze the whole variability and effect on hybrid traits important for selection in F1 generation and to develop optimal methods for line hybrid breeding. Original findings are also on genic and cytoplasmic male sterility. The author has evaluated 5 CMS sources according to the level of sterile pollen formation. Knowledge on CMS sources, GMS genetics and methods for pollen fertility determination in sunflower was summarized. Prof. Kovacik developed original biometric procedures based either on completely new proposals or on unconventional application for genetic and breeding purposes. Principles of regression and correlation analysis in the evaluation of complex traits are involved in them. Under Prof. Kovacik's coordination, studies on agronomic sunflower traits under various climatic and soil conditions were carried out with the aim to determine their variability and heritability. The final aim was the development of new sunflower hybrids with high oil content. In this connection, research was orientated as follows: overturned head position, self-fertility, leafless stem below the head, ramification, erectoid leaf position, shape of heads, petiole length and others.

This is only a brief and incomplete enumeration of intentions and findings of Prof. Kovacik regarding sunflower studies in both the international program and the program of the Research Institute of Crop Production, Section for Genetics and Plant Breeding in Prague-Ruzyne.

Prof. Kovacik has devoted all his life to his scientific work on sunflower. His results are well known not only in Czechoslovakia but also abroad. His original findings are cited in many foreign publications. In the Czech and Slovak Republics he deserved well of the extension of sunflower growing by his permanent publicity and organizatory work.