

Obituary

IN MEMORIAM ISTVÁN SZABOLCS (1924–1997)



The international community of soil scientists has suffered a great loss. Prof. István Szabolcs, the distinguished soil scientist, known and respected internationally, died suddenly - together with his wife Dr. Katalin Darab - on 10 August, 1997.

Prof. Szabolcs was well-known all over the world among pedologists, agrochemists, agroecologists and scientists in related fields for his broad and continuously updated knowledge, brilliant memory and logical thinking, creativity, and unbelievable enthusiasm for his subject and for research. During his career he brought an almost missionary zeal to his work in soil science and especially in the field of salt-affected soils.

István Szabolcs was born in Túrkeve, Hungary, in 1924. He graduated from Debrecen University of Sciences with a B.Sc. in Chemistry in 1948. He obtained his C.Sc. (Ph.D.) degree in Moscow, USSR and his D.Sc. degree in Budapest in 1968, based upon theses entitled "Salt-affected soils in the Hortobágy region (Hungary)" and "The influence of water regularities and irrigation on soil processes in the Transtisza region".

Following two years' service as deputy director of the Irrigation Research Institute in Szarvas (1953–1954) he was appointed first deputy director (1954–1959) and then director (1959–1981) of the Research Institute for Soil Science and Agricultural Chemistry of the Hungarian Academy of Sciences, Budapest. After his retirement he continued to act as scientific adviser to the Institute until his death. He was appointed professor of soil science at Eötvös University, Budapest, in 1968.

His main field of interest was the development, regime, classification, mapping, utilization and amelioration of salt-affected soils. He defined,

described, characterized and quantified the primary and secondary salt accumulation processes, the mechanisms of phase interactions under saline and/or alkali conditions, the formation of "solonetz" and "solods" and the changes induced by human intervention in salinization/alkalization/sodification processes. He introduced such important terms as: secondary salinization; critical depth of groundwater table; potentially salt-affected soils. His research team elaborated a comprehensive soil survey – analysis – mapping – monitoring system for the prediction and prevention of salinization/alkalization processes which was efficiently used not only on the Hungarian Plain and in the Carpathian Basin, but in many other countries with similar natural conditions as well. He developed a new classification system for salt-affected soils and prepared maps of these soils for Hungary (1:500,000) and for Europe (1:5,000,000). He coordinated the project "World Map of Salt-Affected Soils".

In the early sixties he was the main promoter of large-scale genetic soil mapping in Hungary and edited the Hungarian handbook for this programme. He took an active part in the Desertification Assessment UNEP Programme, collaborated with IAEA (International Atomic Energy Agency) for five years in isotope tracer applications in soil science and agrochemistry, and in recent years in the various "post-Rio" international projects on soil resilience and sustainable land use.

Prof. Szabolcs published 17 books and more than 630 papers in scientific journals in Hungary and abroad. His monographs on salt-affected soils "European Solonetz Soils and their Reclamation", Akadémiai Kiadó, Budapest, 1971; "Salt Affected Soils in Europe", Martinus Hijhoff, The Hague – RISSAC, Budapest, 1974; "Modelling of soil Salinization and Alkalization", Agro-kémia és Talajtan, Tom. 28. Suppl., 1979; "Review of Research on Salt Affected Soils", UNESCO, Paris, 1979; "Salt Affected Soils" CRC Press, Inc., Boca Raton, USA, 1989) are well known all over the world.

In 1964 he organized the International Symposium on Sodic Soils (ISSS) in Hungary. This meeting, with the participation of top experts on salinity/alkalinity from all continents, managed to break through the "iron curtain" and, for the first time in many years, gave the opportunity for direct dialogues and discussions between the various scientific schools on salt-affected soils. The success of the Symposium was one of the reasons for re-establishing the Alkali Subcommittee of the ISSS (which existed from the early 30's, under the chairmanship of Prof. Alexius J. 'Sigmond and Prof. S. Arany, Hungary, up to the 2nd World War) during the 8th Congress of ISSS (Bucharest, 1964). He was appointed Chairman of the reactivated Subcommittee on Salt-Affected Soils of the ISSS and filled this position until 1982. During (and after) this time he initiated and organized numerous symposiums and scientific meetings (Budapest, Yerevan, Cairo, Novi Sad, Osijek, etc.) and the Subcommittee was one of the most active groups of ISSS.

In 1974 (10th ISSS Congress, Moscow) he was elected Deputy Secretary General of the ISSS. He was re-elected to this position at the 11th (Edmonton, Canada, 1978), 12th (New Delhi, India, 1982) and 13th (Hamburg, Germany, 1986) ISSS Congresses. At the 14th Congress (Kyoto, Japan, 1990) he was elected Honorary Member of the ISSS. Dr. Szabolcs participated in all ten ISSS Congresses from 1956 and became a decisive personality in ISSS. He played important roles in other international organizations (UNESCO, UNEP, CICRA, CIEC, etc.) as well. He was the Director of the International Post-graduate Course on Salinity and Alkalinity (Budapest, 1973), promoter of the Indo-Hungarian Seminars on the Management of Salt Affected Soils (Karnal, India, 1977; Budapest, Hungary, 1981), FAO consultant at the Chambal Project (Rajasthan, India, 1969), IIASA consultant in Laxenburg (1982), UNEP consultant at the 1985 Planning Commission Meeting, and invited lecturer in many countries (Ghana and Nigeria, 1969; Tunisia, Kenya, Tanzania, Ethiopia and Sudan 1974; Iraq, 1979; Tunisia, 1980, 1982).

Prof. Szabolcs was President of the Hungarian Soil Science Society between 1970 and 1990, and after two decades of efficient service he was elected Honorary President. He was honorary member of the Indian, Soviet, Russian, Bulgarian and Rumanian soil science societies.

From 1960 he was editor-in-chief of the journal "Agrokémia és Talajtan" (RISSAC, Budapest) and was a member of the editorial boards of *Acta Agronomica* and of numerous other Hungarian and international scientific journals (*Agrochimica*, *Geoderma*, *International Journal of Tropical Agriculture*, *Soil Survey and Land Evaluation*).

For his achievements Prof. Szabolcs received two Governmental Awards, the "Tessedik Gold Medal" (Hungarian Agricultural Society) and the "Treitz Medal" (Hungarian Soil Science Society). In 1996 he was awarded the "Dokuchaev Gold Medal", the highest award of the Russian Soil Science Society.

The life of a highly intelligent and eminent scientist came to an end on 10 August, 1997. The scientific achievements of Professor István Szabolcs will remain and will be continued by his colleagues and students. He will be sadly missed by the world's soil scientist community.

G. VÁRALLYAY