**Gábor Sz á s z**

**(1927–2019)**

Born in Békés (September 28, 1927), Gábor Szász also completed his primary and secondary schools there. He continued his university studies at the University of Debrecen, and in 1950 he obtained a high school teacher's diploma (biology-geography). After graduating, he worked as an intern at the Institute of Meteorology of the university, then as a teaching assistant, between 1952 and 1956 he was a meteorologist aspirant (meteorology, physics, mathematics, agronomy). Subsequently, between 1956-1960, he was a researcher at the Hungarian Academy of Sciences. From 1960 he was a researcher at the legal predecessor institution of the University of Agricultural Sciences in Debrecen, then an associate professor (1963) and a university professor (1972) as the head of the agrometeorological subject group. He carried out his teaching work without interruption until his retirement (1997). He is the supervisor of several university and doctoral theses, postgraduate studies, PhD, research work. After his retirement, he is still active as the founder of the Doctoral School, member and postgraduate lecturer of several programs. As a university lecturer, he prepared several textbooks and notes.

During his scientific career, he mainly analyzed the interaction between the solid surface and the lower atmosphere, the so-called Prandtl layer. This problem required energetic and aerodynamic studies, and in 1962 the Agrometeorological Observatory, which is a modern and unique measurement system both in terms of hardware and software on the international scale, was established from the former climate monitoring station. For decades, the focus of the research has been on the water supply of various cultivated plants, the water circulation of plants, and the water management of the soil-plant-air system, and he is still active in these research topics. Due to the exact validity of his research results, they are internationally known, and a significant part of the developed new research methods is widespread. At all times, he sought to develop a physical approach in biological fields and to strengthen the importance of physical scientific analysis. He built a metabolic model for his energy-aerodynamic studies, the application of which allows the simulation of plant development and production size under different ecological conditions. With his work in this direction, he has participated in several Hungarian (HAS, ministry) research programs with success. He has widely developed the utilization of satellite and airborne remote sensing methods in Hungary. In his work, he examined in detail the development of the spectral reflection of different soils and plant stands at different levels of development, which are of diagnostic value in the assessment of plant and soil condition.

He conducted a significant part of his research in the framework of international cooperation. He worked on a five-year research collaboration with the Dutch Water Management Research Institute in Wageningen in the field of determining the evaporation of different soils. The focus of this issue is the relationship between the physical state of the atmosphere and the physical properties of the soil and its impact on water circulation. He also carried out his research in the field of remote sensing in the form of international cooperation on the one hand in the framework of the Space Research Program organized by Intercosmos of the Hungarian Academy of Sciences, during which he took part in several foreign expeditions jointly organized by former socialist and Western European states. Later, he continued his joint investigations at one of the US-NASA headquarters, and then the Trans-Tisza measurements and recordings were evaluated with the American partner. These studies were conducted primarily for agro-ecological purposes. He was the organizer and participant in the creation of a Central European Ecological Satellite Program, the aim of which was to monitor natural change, but unfortunately this was no longer the case due to international events, but the planning ideas were taken over by the later German-French program. The micrometeorological research, which he started at a young age, focused on the accurate detection of micrometeorological processes in plant stands, with particular reference to the consequences of technological effects, the impact of soil diversity and the regulatory role of different water supply. Mention should be made of agro-climatological research, which is also linked to water supply, in particular the regional consequences of extreme water management situations caused by weather conditions. The latter investigations were carried out under the direction of the international hydrological program, in the framework of which he was the leading researcher of the Trans-Tisza sample area. In the last decade, he has been conducting theoretical and experimental studies to determine the effect of surface heterogeneity on micrometeorological processes, primarily analyzing the physical parameterization and quantification of energetic and aerodynamic advective processes.

He carried out his public activities partly within the university, between 1970 and 1980 he was the deputy dean of science, directing the technical and scientific developments, with the help of which the university caught up with the international forefront in certain specializations (plant production). Later, from 1983 to 1989, he was the rector of the university, during which time he continued to focus on the development of the university: he established the Chemical Research Center, which still operates as an accredited laboratory and managed and contributed to establishing the large central field experiment base which enabled the development of effective crop production research for decades, he organized the computerized registry system of the university library, and enriched the university building complex. In all fields and at all times, he supported the scientific foundation of agricultural research and successfully sought to develop interdisciplinary research work between the various disciplines. Last but not least, his activities of the University of Debrecen in the field of reorganization should be mentioned. In the mid-1980s he was the initiator and supporter of the reorganization of the University of Debrecen, then for several years he was a member and president of the Debrecen Universitas Association for several years, during which time he nurtured the basic idea of the current new university structure which later leaders and eventually implemented. He carried out his scientific public activities primarily in the different scientific committees of the Departments of the Hungarian Academy of Sciences (Meteorology, Water Management, Agrometeorology, of which he was chairman for ten years). He was the chairman of the Resource Research Committee of the Space Research Committee of the Hungarian Academy of Sciences for almost ten years, and for three years he was the chairman of the international organization. He has established lasting relationships with various German, English and French research sites, mainly in the field of micrometeorological research. He continued his leadership role as Deputy Rector from 1989 to 1993. Based on his work, he was the president of the Hungarian Meteorological Society in 1981-1990.

His work has been recognized by various supervisory bodies, institutions and international bodies. He has won several honorary titles and awards (DATE Honorary Doctor, Prof. Emeritus, Bronze and Gold of the Order of Merit of Work, Outstanding Worker of Education, Officer's Cross of the Order of Merit of the Republic of Hungary, L. Eötvös Award, Internatonal Space Research Medal, Scheinzl Guido Medal, Pázmány Péter Medal, Hatvani István Medal, Pro Universitate, etc.). Academic degrees: Candidate (1956), Doctor of the Hungarian Academy of Sciences (2000). Number of scientific publications: 140 (35 in foreign languages).

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