

## Greeting of Sándor Balázs, Member of the Hungarian Academy of Science on the occasion of his 80<sup>th</sup> birthday

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The Committee of Horticulture, Sub-Committee of Olericulture, Hungarian Academy of Science, and the co-workers of the Department of Vegetable- and Mushroom Growing, Corvinus University of Budapest, are joining to the wide circle of Hungarian and foreign scientists, colleagues and friends with our sincere greetings on the 80<sup>th</sup> birthday of Sándor Balázs, Member of the Academy, professor emeritus.

This celebration is addressed not only to the scientist of the Academy but also to our former head of department, teacher and dear colleague, who helped many of us in proficiency, vocational skill and promoting the scientific life in horticultural research. He has been continuously ready to assist any of us, so he earned unanimously our grateful respect.

His well known modesty blocked our attempts to organise an adequate celebration on the Academy as habitually done with Members of Academy in course of a session, therefore we arranged this festivity by means of the Sub-Committee and the Department of Vegetable- and Mushroom Growing moreover, the fellow Departments of the University.

Dr. Sándor Balázs was born in 1925 at Szegvár, finished his schools in his native town and at Szentes in the Horváth Mihály Gimnasium but took his final examination of secondary school in 1948, because of being prisoner of war in the Soviet Union. He withstood the affliction by putting his trust in the future, being a hard worker, socially susceptible, with a good sense of humour.

He received the higher grades of education in 1952 on the University of Agricultural Sciences, Faculty of Horticulture and Viticulture with excellent marks.

His first employment was and remained the Department of Vegetable- and Mushroom Growing of the Horticultural Faculty, where he took his part in teaching, organisation, research and development just from the very beginning.

The scientific graduation (Masters Degree) has been given for a research and study on the vegetable growing regions in 1959. Five regions have been explored and the results published in a monograph. With 1957 he became head of the experimental plant of the Department at Buda. The artificial illumination of greenhouse pepper cultures was his

research program, which received international attention and served to the promotion of candidate of science (corresponding to Ph.D.) in 1964. The use of CO<sub>2</sub>-feeding in forcing of vegetables has been one of the projects of the Department for several years.

His attention turned gradually to mushroom cultivation with the 1960-es. First the greenhouse culture of champion (agaric), subsequently, wild growing mushrooms and their domestication was his objective. The last 40 years has been spent with the elaboration of biological demands and the growing technology of a series of edible mushrooms (Stropharia, Pleurotus, Coprinus, Lentinula, etc.).

The scientific activity was oriented to develop a growing technology of Pleurotus to be applied in Hungary and abroad. The respective results are recognised and utilised all over the world. The growing substrate was earlier treated by moist heat being an expensive procedure. The new method is energy and time saving and an effective technology.

The essence of the original procedure is the utilisation of chopped agricultural waste (corn cobs, straw, etc), which are moistened and warmed up to 60 °C and kept for 5 hours, warmed once more for 2–3 days to 48–50 °C. The subject of the new licence is a dry heat treatment at 100 °C temperature then cooling down followed by the administration of a plant protective agent. Subsequently, the substrate is ready to be inoculated with the mushroom mycelium.

It should be emphasised that the most costly moment of the Pleurotus-culture is the preparation of the substrate, which is diminished by the licence to a fraction of the former technology, as the dry wastes are easier warmed up and the period to keep it warm is short. Thus much energy is economised. Not only time of several days is saved but the exploit of the machine and the organisation is improved.

Pleurotus production in Hungary utilises the new technology, and it has been adopted abroad too at a large extent.

Professor Balázs developed also the cultivation of Pleurotus mushroom in plastic containers on a wide scale and on the domestic as well as on industrial level. Those results are spread about and recognised, treated by sessions of international conferences as well as published in numerous

papers of scientific journals. As for the champion culture, scientific results improved the production by universally utilised substrates by mass disinfecting, which is an adopted practice in both, Hungary and abroad.

As a world wide novelty, champion substrates have been developed without manure, using straw only.

His imperishable merit is the extended mushroom growing in Hungary during the last decades due to the new improved technology and the new varieties (strains) developed by his activity.

Sándor Balázs became Doctor of Science in 1975 of the Academy, subsequently, correspondent member in 1982, then elected to regular membership of the Hungarian Academy of Science on the occasion of the 150<sup>th</sup> general assembly in May of 1990.

Besides the research work, he worked as an organiser of scientific research in the Research Institute of Vegetable Crops, as director and general director since 1971 until 1993. Meanwhile, he did not refrain of teaching on the University and formerly on the College of Horticulture. As University professor, he was active since 1983. As the Department of Vegetable- and Mushrooms, Growing has been promoted to be an Institute, he took over the duties as general director of it, and performed that function until the terms set by the Law of Education, i.e. 1993. In the Research Institute of Vegetable Crops he surmounted the crisis of its leadership, subsequently, the Institute received awards in 1976, 1979 and 1980, and achieved the title of "Excellent Institute". Acknowledging diploma has gained in 1977 and 1978.

He is a founding member and chairman of the Hungarian Horticultural Council as well as of the Hungarian Horticultural Council.

During his directorship, a scientific school has been established around his circle, where three scientists achieved the Doctors degree, further 15 colleagues became candidates of science. In the Institute of the University, numerous students attend the graduate school under his supervision.

His scientific publications are summarised in 150 scientific papers, 23 text books, four licences and there are the domestication and technology of four new mushroom species.

Sándor Balázs Member of Academy is the owner of numerous medals and distinctions:

„Excellent worker” (1958), „Prominent worker of agriculture” (1964), For the County „Bács-Kiskun” (1980), „Entz Ferenc Memorial medal” (1983), silver medal of

„Honour of Labour” (1988), „State Award” (1996), „Middle Cross of the Hungarian Republic” (1999), „Honoris Causa” title (2000), „Golden Medal of the Szent István University” (2001), and the Council of Horticultural Faculty suggested the distinction of „Pro Facultatae Horticulturae” (2002). The Hungarian Academy of Science, Department of Agricultural Science awarded him, and in 2004, for the first price of the „Academical Licence Award”.

One of the greatest recognitions for his life performance is the title „Professor Emeritus” in 2005, which stimulates his overwhelming activity, confuting his age.

Dr. Sándor Balázs Member of Academy is also active in several committees:

- 1968: member of Scientific Qualifying Committee, Sub-Committee of Plant production,
- 1980: member of the Scientific Qualifying Committee,
- 1972: member of Horticultural Committee of the H.A.S., 1975: secretary of the Committee: 1985: vice chairman; then chairman, at present honorary chairman,
- 1975: member of the Department of Agricultural Science of H.A.S.
- 1975: member of the National Council of Plant Varieties, Committee of Horticulture

He is member of numerous organisations and editorials, leading member or head in those organisations. His international relations are ramifying, mainly German, Dutch, French and Italian universities, moreover, enterprises are his partners.

Sándor Balázs Member of Academy enjoys high esteem amid the academic circles but also a wide society of horticulturists and farmers of related professionals and vocations attend his performances organised by the Department of Vegetable- and Mushrooms Growing conferences, exhibitions and extension-courses.

We are hoping that his profound knowledge, sober suggestions and restless activities will stay with us for a longer time, and we shall enjoy his good humour also as of a worthy example to be followed.

We wish him a long, happy life, good health and much success! God bless and keep him for a long time!

Budapest, January 2005