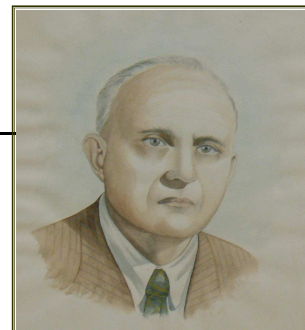
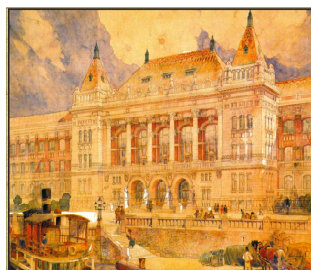


# JÁNOS DI GLERIA

(1899 – 1976)



Chemical engineer, Professor of agricultural chemistry, Doctor of Agricultural Sciences; organized the first isotope laboratory for agricultural research and adapted new methods in soil chemistry in Hungary.



The new main building of the Technical University facing the Danube embankment

In the last two decades of the nineteenth century food market and generally the agricultural trade rapidly developed in Hungary. As a consequence the demand arose to guarantee the quality of the products and to obtain higher crop yield. This led to the establishment of agricultural chemical experimental stations all over in the country. In the capital and in countryside altogether 23 agricultural experimental stations worked with a staff of 176 persons by 1908. These developed further and new ones were established in the first two decades of the twentieth century with a centralized leadership of the Central Committee of Agricultural Experimentation and a central station, the National Chemical Institute in Budapest.

After the First World War and the brake-down of the Austro-Hungarian Empire Hungary faced new challenges. The reduction in territory and the demand of numerous refugees split the economic balance. The stabilization of the economy brought with it the restructuring of agriculture and industry. Moreover, the government supplied significant financial support to develop natural sciences and applied sciences too. All of these factors influenced the training of chemical engineers with an agricultural attitude.

As a consequence, there moved five chemical departments from the old building of the Technical University in the new building of chemical technology in the backside of the new campus, and additionally four new chemical departments were instituted there. One of them was the Department of Agro-Chemical Technology.

János Di Gleria's interest in chemistry developed at an early age; he studied chemistry at the Technical University in Budapest, and graduated as chemical engineer in 1924. With him more than 500 students studied in the Faculty of Chemical Engineering of the University that time.

Under the guidance of Elek 'Sigmund Professor of the Agro-Chemical Technology of the University he learnt the basic facts about agricultural chemistry and soil chemical analysis. He was highly influenced by his talented and enthusiastic professor. For him 'Sigmund was a mentor who was not only an outstanding scientist but also an inspiring person with great humanity; Elek 'Sigmund was one of the leading soil chemists of the 20th century, but also interested in other problems of chemistry with a great commitment to the Hungarian agricultural development. Di Gleria was very fortunate to be 'Sigmund's student at that time of prosperity, and greatly enjoyed and benefited from 'Sigmund's friendly and unauthoritarian style of research supervision. He remained in the university for two more years and worked there as an assistant lecturer.

In 1926 professor 'Sigmund accepted the directorship of the National Chemical Institute in Budapest, and di Gleria got a position there in 1927 after he gained his doctor's degree at the Technical University. He became later the head of the departments of Soil Science, Agricultural Chemistry and Plant Protection.

That time 'Sigmund introduced him both in the national and international public life of science to promote his scientific carrier. Di Gleria attended to the Hungarian Association of Civil Engineers and Architects, and became the member of the International Society of Soil Science, where 'Sigmund led the Committee of Soil Chemistry and the Alkali Section. By these organizations possibilities were supplied for high level activity to many young soil scientist.

In the second quarter of the twentieth century a new scientific discipline the colloid chemistry appeared almost without any scientific background in Hungary. Beside his interest in basic and applied agrochemical research, di Gleria became more and more interested in the problems of colloids, especially in the context of the soil processes.

In 1927 the government established The National Council for Scholarship to provide financial support for the education and scientific development. Several thousands of young scientists gained the possibility to study the new theories and methods in their field of interest in western countries.

Di Gleria's work on soil chemistry induced him to study more closely the chemistry of colloids; as a researcher and 'Sigmund's close college he got a scholarship, and went to learn to one of the world famous soil colloid chemists: Professor G. Wigner to Zurich Technical University in 1930-31. It was here that he deepened his knowledge on the chemistry of soil colloid systems and drew his attention to the modern research methodology in soil physical-chemistry that was of great importance on his field of interest and further scientific carrier.

After coming back to Hungary he continued his work in the National Chemical Institute in Buda with extended research and developing activity. In the institute, as an experimental and product-controlling center for the country, thousands of samples of soils, crops and additional materials were analyzed yearly and besides the official duties new methods and several instruments and devices have been invented, as well as several scientific and educational studies were published.

He was very active and became an established member of the scientific community of the agricultural research, occupied a worthy position in the circle of scientists who worked on preparations for decision makers (Fig. 2.)

Unfortunately, six years of the most active period of his life was largely overlapped with the 2<sup>nd</sup> world war, when conditions for research steadily and deeply deteriorated. However, in 1942 di Gleria was assigned to organize the Agricultural Experimental Station at Budakeszi where two years later he accepted the directorship. In 1944 he was assigned to General director of Agricultural Experimentation.

In 1946 he was appointed professor of the University of Agricultural Sciences and Head of the Department of Agricultural Chemistry in Debrecen, where he was teaching physical-chemistry and colloid chemistry. He held this position until the dissolution of the department in 1949. This period the Hungarian educational system was realigned according to the Soviet example. University research was de-emphasized and research institutes were established under the auspices of the Academy of Sciences. He was invited to join and accepted a research post in the newly established Agrochemical Research Institute in 1950 in Budapest. In 1952 he was awarded the title of "Doctor of Agricultural Sciences" (Scientific Qualification Committee). In 1954 he accepted the position of the head of the Institute. During his directorship the Hungarian Academy of Sciences became superintendent authority above the Institute in 1954. Di Gleria was scientifically very active and published a large number of experimental work in various fields of agricultural chemistry and soil physics. Furthermore he had a particular interest in and adapted a number of new research methods of studying especially soil reaction, ion absorption-desorption dynamics, and the application of radioactive isotopes in agricultural research. As the director of the RISAC he made every effort to focus the research on up-to-date fields of interest; he made important contributions to the condition of research as well inviting excellent collaborators to the staff, improving research facilities and creating vivid scientific public life. He also invented and organized

János di Gleria was technologically minded and he was always to the forefront in considering ways of applying the results of scientific research to agriculture. His contributions to soil physics and colloid chemistry, the theory of nutrient availability in plant nutrition, fertilization and research methodology – involved the use of radioactive isotopes - are recorded in a series of monographs, and in his many papers. Together with the colleagues A. Klimes-Szmik and M. Dvoracek he wrote a book *Soil Physics and Colloid Chemistry* that was first published in 1957 and was also published in German (1962). His handbook *Agricultural Chemistry* was published in 1960; the books *Guidebook on Soil Cognition and Fertilization for Farmers* (first edition in 1958) and *Soil Analytical methods* (1962) were very popular in Hungary. The last book he edited was *Isotope Application in the Agricultural and Soil Research* in which he summarized also the results of the Hungarian research. Di Gleria worked in the editorial board of Hungarian academic journals such as *Agrokémia és Talajtan* and *Acta Agronomica Hungarica*.

János di Gleria was a member of the permanent Central Committee for Soil Amelioration Section of Agricultural Sciences from 1931; foundation member of the Committee on Soil Science and Agricultural Chemistry of the Hungarian Academy of Sciences, and the first president of the Society for Soil Science in the Association of Hungarian Agricultural Science. He was the member of the International Society of Soil Science and the German Society of Soil Science. He was awarded the Outstanding Worker of Agriculture Prize and the Tessedik Commemorative Medal. He was the recipient of the Golden Medal of The Honor of Labour and the Commemorative Medal of the Foundation of Hungarian Society for Soil Science.

- Born in 1899 in Szombathely
- 1924 Graduated as chemical engineer at Technical University, Budapest
- 1924-26 Assistant at the University
- 1926 Doctor's degree at the Technical University; admitted at the Hungarian Engineers' and Architects' Association
- 1927 Got a job in the National Chemical Institute in Budapest
- 1930-31 Studied physical chemistry and colloid chemistry in Zurich Technical University on a scholarship
- Member of the International Society of Soil Science
- 1942 Organized the Agricultural Experimental Station at Budakeszi
- 1944 General director of Experimentation
- 1946 Professor of the University of Agricultural Sciences in Debrecen
- 1950 Researcher in the Institute of Agricultural Chemistry, Budapest
- 1955 Received the title "Doctor of Agricultural Sciences"
- 1955-59 Director of the Research Institute for Soil Science and Agricultural Chemistry (RISSAC)
- 1959- Scientific advisor in the RISSAC
- 1967-1970 Organized the isotope laboratory for the Soil Science Institute in Havana, Cuba

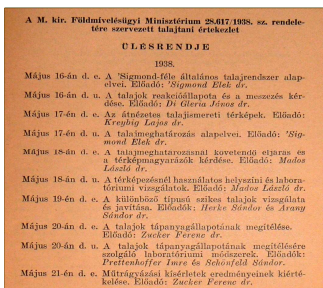


Figure 3: Conference program of the Hungarian Association of Civil Engineers and Architects (1938).

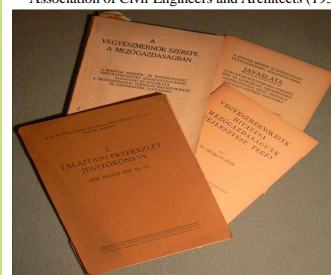


Figure 2: Publications of the Hungarian Association of Civil Engineers and Architects 1938

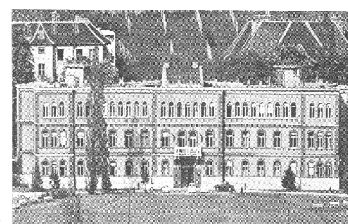


Figure 5: The building of the RISSAC of HAS in 1974

