

IN MEMORIAM

ACADEMICIAN EMANUIL NIKOLAEV KARANOV (1936–2005) – LIFE DEVOTED TO PLANT SCIENCE



February 7th 2016 marks 80 years since the birth of Academician Emanuil Nikolaev Karanov. Acad. Karanov graduated in agronomy at the High Institute of Agriculture in Sofia in 1958 and later continued his education in chemistry at the High Institute of Chemical Technology in Sofia. Based on his knowledge in the field of biology and chemistry he chose a scientific pathway in an interesting and fairly developed area with significance for practice such as the synthesis and application of natural and synthetic regulators of plant growth and development. His scientific achievements were associated with enormously profound research on chemistry, mechanism of action and practical application of these substances. His career began as a research associate

at the Institute of Chemical Industry in Sofia and continued at the Bulgarian Academy of Sciences, where he received a position in the Department of Plant Growth and Development Regulation as a leader of Laboratory of Chemical phytoeffectors at the Acad. M. Popov Institute of Plant Physiology. Meanwhile, his scientific ideas rapidly found national and international recognition. This was associated with his regular visits, specializations and collaborations with a number of well known scientists such as Prof. Rakitin and the talented chemists Dr. K. Bokarev and Dr. V. Kraft from the Russian Academy of Sciences. This was the place where his scientific ideas found real appreciation. He also collaborated widely with colleagues from Czechoslovakia, Germany, Italy, Belgium, the UK and other countries. This intensive work was done in the times when the first plant hormones, cytokinins (Folke Skoog) and abscisic acid (Frederick Addicott and Philip Wareing) were discovered. Acad. Karanov worked at the Acad. M. Popov Institute of Plant Physiology at the Bulgarian Academy of Science and headed this Institute in the period 1989-2005. In 1995 he was elected a Corresponding Member of the Bulgarian Academy of Sciences and in June 2003 was elected a full Academician. Tightly connected with his name is a profound research on phyto-effectors and their application in the regulation of plant growth and development. He contributed

tremendously to elucidation of the chemical structure-physiological activity relationship of a number of synthetic plant growth regulators and herbicides as well as their mechanism of action and application in agriculture. As an outcome of these investigations new approaches for synthesis and testing of biologically active substances with defined properties were developed. Technologies for the application of these substances in agricultural practice with major economic benefits were elaborated. An important line in his studies was the research on the regulation of plant senescence, mechanisms of stress and approaches for its overcoming. The results of his research were published in more than 220 scientific papers, 2 books and more than 30 patents. The works of Acad. Karanov are distinguishable in the world literature with over 1000 citations. Acad. Karanov possessed profound knowledge not only in biological studies and agronomy but he was also able to bring his findings from laboratory into practice. Some of the growth regulators created under his guidance licensed at home and abroad have been still used carrying economic impact. His name is forever listed in the golden book of Bulgarian inventors.

Acad. Karanov was not only a distinguished scientist, held in great respect in the scientific community, but also an excellent organizer and promoter of science. He was the founder of Bulgarian research endeavor in the field of development, research and application of new plant growth regulators. A great number of highly qualified scientists were trained under his direction. Scientific symposia on plant growth regulators organized by him will be long remembered and recognized in Bulgarian but also in foreign science. It was on these meetings that national and world-wide famous scientists in the field could meet such as Acad. Michail Chailahian, Prof. Anton Lang, Prof. Mike Hall, Prof. Martin Gibbs, Prof. Olga Kulaeva, Prof. Miroslav Kaminek, Prof. Valentin Khefelli. For his contribution to plant physiology he was honored not only with international recognition as a member of many scientific organizations but also awarded numerous international and governmental awards. His contribution to international science was recognized by his election as President of the Federation of European Societies of Plant Physiology in 1996.

We will always remember him with gratitude!

His students and colleagues