



Pekka Koivistoinen

* 25.6.1932 † 18.8.2017

PEKKA KOIVISTOINEN, emeritus professor of food chemistry at the University of Helsinki and an honorary member of the Finnish Academy of Science and Letters, died in Suonenjoki on 18th August 2017 at the age of 85 years. He was born into a farming family in Suonenjoki on 25th June 1932. This background had a considerable influence on his choice of career, as the district had a long tradition in the growing of strawberries and currants and the leaders of the community were anxious to encourage the development of related industries in the area.

The Koivistoinen family's farm had in fact been one of the local pioneers of commercial strawberry-growing, and this situation led Koivistoinen to apply for a place in the Faculty of Agriculture and Forestry to study the processing of fruit and vegetable products. As teaching in this subject was relatively limited at that time, he eventually decided, on the advice of the dean of the faculty, Prof. Erkki Kivinen, to study nutrition chemistry, microbiology and plant pathology. Koivistoinen has described his student years as a time of active acquisition of knowledge. At least he made rapid progress in his studies, as he gained his first degree in agriculture and

forestry in 1956, following it with a licentiate in 1960 and a doctorate in 1961. His doctoral thesis on the removal of malathion residuals from plant material was focused on the need for addressing consumer protection issues in connection with agriculture. He was elected to membership of the Finnish Academy of Science and Letters in 1989.

Koivistoinen's principal mission in life was to develop teaching and research in the food sciences at the University of Helsinki, since this field of study and its status as a university subject were still taking shape in the 1960s. He frequently referred to the scheme devised by the Swedish-American professor Georg Borgström in which food science occupied a central position between primary production and consumption and was supported by both basic and applied sciences. The food sector was both subject to the problems that affected primary production, such as fluctuations in prices and weather conditions, and required to be responsive to the demands of consumers. At the same time, as each branch of the food industry had its own material and its own needs to which expertise could be applied, they had a common foundation in the natural scienc-

es, what one might call “the food science approach”.

He received support in carrying out that mission from his influential international contacts. Even at the early stages in his career he worked as a researcher in two USDA-financed pesticide residual projects that took place in his department, after which he continued his studies at Massachusetts Institute of Technology in 1964–1965. Later he occupied numerous honorary positions in the FAO, IUPAC and IUFOST, for instance. He nevertheless eventually came down in favour of activities at the university level in Finland, pointing out in one interview that this was the route by which he could best influence the future of research and education in food science.

Pekka Koivistoinen was convinced of the importance of food science, and it was at his instigation that plans were made for its development at the University of Helsinki. Support for this was received from Finnish industrial sources and from the Kellogg Foundation, the latter being forthcoming following an evaluation and proposal made by Prof. Robert S. Harris of MIT, who was a highly respected expert in food science in the United States at the time. The result was the establishment in 1965 of a degree programme in “food chemistry and technology” based on the existing nutrition chemistry option and intended to be available alongside the existing degree subjects of dairy and meat technology. Further study fields were started in the subsequent years, including food chemistry, food technology, food economics, cereal technology, packaging technology and sensory food science. Behind these developments was a broad-based survey of the needs for graduates in

food science and the teaching required for its various specialized branches.

Koivistoinen himself was associate professor of food chemistry from 1965 onwards, supernumerary professor of food chemistry and technology from 1970, full professor of this subject from 1977 and full professor of food chemistry from 1985 until 1995. This developmental work called for a clear perception of what was needed and an ability to present this distinctly and forcibly to the university’s leaders, representatives of industry and those responsible at the ministerial level. Koivistoinen was adept at looking into the future, perceiving its challenges and getting things moving.

Koivistoinen’s developmental work within the University of Helsinki was not restricted to food science, however, as he also served as vice-dean of the Faculty of Agriculture and Forestry in 1985–1987 and dean in 1987–1991. It was during his term of office as dean that the whole structure of the faculty was revised and the previous set of 35 small departments was reorganized into 12 new, functionally coordinated departments such that subjects with a certain common theoretical base were grouped together. He was also one of the main instigators of the project to create a science park on the Viikki Campus.

During the 1980s there was some talk of moving the Faculty of Agriculture and Forestry away from Helsinki, while on the other hand, Helsinki City Council was anxious to intensify land use in the city’s Viikki area, which was occupied at that time only by the Faculty of Agriculture and Forestry with its fields and experimental sites. When the City Council drew attention to this situation, Koivistoinen together with the dean of the faculty at that

time, Prof. Risto Ihamuotila, proposed a land use deal, which would be of benefit in the long run to both the University of Helsinki and the City of Helsinki. Thus three other faculties were able to move to Viikki in the course of time: those of the biosciences, veterinary medicine and pharmacy. In addition, the Viikki Campus now houses the Institute of Biosciences, the Centre for Research in the Neurosciences and three government research institutes. All in all, the campus provides employment for nearly 1900 people and teaching for 6000 students.

Koivistoinen was an active researcher and trainer of research students, the chief topics of this research being the nutrient content of foods, factors affecting these nutrient concentrations and evaluation of the nutritive value of food. The assessments of the mineral content of the Finnish diet in 1973–1980 pointed to deficits in selenium and fluorine, leading to joint research in which the selenium deficit was linked to the occurrence of coronary disease and cancer. One outcome of this was a recommendation that selenium should be added to fertilizers in order to raise the selenium intake of the Finns to a satisfactory and safe level. When the fibre content of foods was recognised as an increasingly important protective element in the diet, analyses were made of the fibre and carbohydrate composition of foods. The accent in the early 1980s was on tocopherols and tocotrienols (vitamin E), while attention switched in 1984–1987 to fats, fatty acids, retinoids and carotenoids (vitamin A) in food in connection with an extensive cancer prevention study financed

by the US National Cancer Institute, the results of which were used extensively to study such things as the significance of antioxidants in food for the aetiology of certain diseases. Towards the end of the same decade the focus was upon amino acids and proteins in foods, to be followed in the 1990s by the vitamin B group. The surveys in all these cases were wide-ranging, extending to something like 350 foods and the findings were gathered together into a food composition database maintained by Finland's National Institute for Health and Welfare for use when exploring the associations between diseases and nutrition, for instance.

Koivistoinen's farm in Suonenjoki was very dear to him, and he devoted his retirement years to its management and to the care of his grandchildren, approaching these callings with the same enthusiasm as he had previously shown for his work at the University of Helsinki, an institution for which he also had the highest respect. He seldom visited Viikki any longer, but he was still interested in developments in the food sciences and was pleased at the way the department's research had progressed, the quality of its new premises and all the successes it had had.

Pekka Koivistoinen was a visionary. He could look into the future and convince decision-makers and other actors of the importance of the measures that he was recommending. He once admitted in an interview that he had learned through his work to see things in perspective. Ideas can be conjured up in a couple of days but bringing them to fulfilment calls for skill and patience.

Obituary by Vieno Piironen, Lea Hyvönen and Hannu Salovaara