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A farewell to Associate Professor Jiří Čmolík

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Associate Professor Jiří Čmolík was born on 21 November 1940 in Kladno. He studied the Dairy and Fat Technology study programme at the Faculty of Food and Biochemical Technology, University of Chemistry and Technology (FFBT UCT) in Prague.

Immediately after his graduation in 1962, he joined Severočeské tukové závody (North Bohemian Fat Processing Plant) in Ústí nad Labem (later known as Setuza a.s.). As a processing engineer, he dealt with the technical and technological requirements of the largest fat and oil refinery in Czechoslovakia at that time. Since 1971, he was the head of the Technical Development Department and was directly responsible for technological development and key investments. In the 1980s he became the technical director and later the director of the whole company. In 1988, after a serious illness, he returned to the Technical Development and Research Department, where he stayed until his retirement.

Jiří Čmolík was a man for whom a targeted life-long education and self-education was not only a matter of course but a necessity of life. In 1967–1972 alongside his employment, he completed scientific training as an 'external aspirant' (an equivalent of today's doctoral programme). In 1972 he defended his PhD thesis on the 'Basic properties of dispersion fatty acid mixtures and their significance in the industrial process of production of technical stearic and oleic acids on centrifuges' at the UCT.

Throughout his professional life, he cooperated with the Department of Food Chemistry and Analysis and the Department of Dairy and Fat Technology. He always closely linked technical developments in an industrial enterprise with the education of the young generation. Many of us, graduates of the dairy and fat technology specialisation, had the opportunity to complete a com-



Assoc. Prof. Jiří Čmolík

pulsory internship under his expert guidance. Later as assistants, we fondly remembered these internships which were always focused on solving specific technological or analytical problems.

During his tenure at Setuza a.s., he initiated two modernisations and comprehensive replacements of the screw presses and extractors in accordance with the latest technical development. Similar developments took place in the refinery, with batch technologies being

replaced by state-of-the-art continuous technologies such as Westfalia's continuous deacidification and Bernardini's continuous deodorisation in the early 1970s. These technologies were then replaced in the 1990s by the current physical refining technology. Fatty acid production technologies were developed in a similar way. The separation of stearic acid crystal dispersions from oleic acid droplets was the focus of his doctoral thesis. It was to his credit that modern continuous fat hydrolysis technology, the basis for the production of fatty acids and other derivatives in Czechoslovakia at the time, was put into operation in the 1980s.

On the background of technical developments, a fundamental change in the composition of oilseed crops took place around 1980, with low erucic acid oilseed rape becoming the main oilseed crop and the gradual introduction of new rapeseed varieties with decreasing glucosinolate content. The implications of this change have affected the whole edible fats and oils sector, including, for example, confectionery and animal feed production. With the change to a new raw material, a number of issues had to be addressed which, from the consumer's point of view, were reflected in the oxidative stability of the oil, the solidified fats produced from it and the structure and texture of margarines and cooking fats. Many of these issues were addressed by Assoc. Prof. Čmolík with experts from the academic sphere. Both of the above-mentioned departments of the UCT in Prague participated in the solution of oxidative stabilisation of fats and oils as well as their chemical modification, in particular by the catalytic hydrogenation process. He started to solve the problem of structure and texture of fat products with

the Institute of Hydrodynamics of the Czechoslovak Academy of Sciences. The result of patient, careful and systematic professional work of Assoc. Prof. Čmolík and his collaborators can be briefly documented in the development of oil quality if we reflect it in one parameter – the shelf life of final products, which increased from 3–4 months in the 1970s to 5 months after 1990 and to 12 months or more after 2000.

The cooperation with the academic sphere resulted in a number of excellent scientific papers, and in 1992 Jiří Čmolík submitted his habilitation thesis on 'Extraction and Utilisation of Rapeseed Oil' at the University of Chemistry and Technology in Prague. For more than 20 years he lectured on the oleochemical part of Fat Technology at the university. I would also like to highlight his irreplaceable role as a reviewer for both the dissertation and habilitation theses at UCT, and for scientific journals – especially for the European Journal of Lipid Science and Technology, European Food Research and Technology, and the Czech Journal of Food Sciences.

Jiří Čmolík was a member of the Czech Chemical Society since 1974 and a long-time member of the Committee of the Expert Group on Fats, Detergents and Cosmetic Chemistry, and a member of the American Oil Chemists Society since 1991. In 2000, the CCHS Expert Group recognised his contribution by awarding him the Vítězslav Veselý Memorial Medal.

We were lucky to meet Jiří Čmolík on various professional occasions. He was a respected teacher, an esteemed reviewer and last but not least a great colleague on whom we could always rely. We will always remember him with respect.

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