

**Faculty of Agronomy  
of the Czech University of Agriculture Prague**

Independent Faculty of Agronomy was established in 1952 in connection with the establishment of independent University of Agriculture.

From its very existence it has a position of important scientific and academic institution closely associated with the development of agricultural science and education.

**Engineering study** represents a main form of the study at the Faculty. The main branch is agricultural engineering. A student can choose during his study, at latest in the third year, the study programme from an offer of study specializations or to continue in the study according to one's own individualized specialization. Credit system of the study makes prerequisites for it along with options in the study programme and orientation of the diploma thesis.



Prof. Ing. Václav Vaňek, CSc., Dean of the Faculty of Agronomy

**Study orientations:**

- agricultural engineering (without specialization of study orientation). A student makes his own option according to his interests;
- agricultural engineering - plant production. Education of graduates oriented to phytotechnical sciences which may further orient to e.g. plant nutrition, breeding and seed production, to growing of special crops or to the quality of plant production, ecological agriculture, etc.
- agricultural engineering - animal production. Graduates oriented to zootechnical sciences can specialize in e.g. rearing of monogastric or polygastric animals, breeding of animals and food science and technology but also in the quality and processing of animal products or breeding of laboratory animals, etc.
- agricultural engineering - plant medicine. Complex education in the field of protection of plants and stands, including legislation, prepares experts for plant medical service.



- agricultural engineering – horticulture. It includes not only education of traditional gardening and pomological subjects, including their quality but also very interesting aesthetic study in disciplines oriented to flowers and gardening design of landscape and environment.
- agricultural engineering – quality and processing of production. Education in the field of evaluation of the quality of plant and animal products and in the field of marketing of foodstuffs creates prerequisites for employment of graduates in marketing and commercial organizations. Graduates can be employed also in small processing enterprises.
- agricultural engineering – management in agriculture with extended education of economic and managerial disciplines.

The study is based upon credit system which applies a point assessment of subjects and an obligation to reach the point limits to complete the year and the whole study. It makes possible to finish study earlier than within five years. Qualifications for it have students with pre-school one-year practice in agriculture.

An offer of more than 160 subjects included in the study programme of the Faculty of Agronomy is very wide. To complete the study – 40 to 50 disciplines are enough according to the chosen study field and further individualized specialization.

**Bachelor's study** – is oriented to horticulture, forage crops production and food science and technology.

**Doctor's study** – the Faculty of Agronomy is accredited for doctor's study in the following subjects: general plant production, special plant production, plant protection, general zootechnics, special zootechnics.

**Scientific and research activities of departments** – is to a great extent bound to pedagogic process and contributes to its improvement.

At the present, a great part of capacity is devoted to the problems of permanently sustainable development of agriculture.

Its main fields are as follows:

#### **1 Care of soil:**

circulations and balance of nutrients in agroecosystem, determination of ecologically justified levels of nutrients, diagnostic and regulatory systems, processes of soil fertility and task of biological component, preservation of soil during changes in management, building of database of soil properties and their transfer into the form of map.

#### **2 Quality of environment, quality of production:**

geochemistry of hazardous elements in soil-forming substrates – monitoring, use in database for GIS, distribution of hazardous elements in plants, animals and products, measure to increase quality of production, burden of population by pollutants, monitoring of effect of radioactive phonon on genetic burden, development of analytical methods and their verification.

#### **3 Effectiveness and restructuring of enterprises:**

minimization of inputs in bound to economically acceptable level of production (low input, technology), proposal of theoretically justified technological processes in plant and animal productions (formation and regulation of production), more effective use of genotype, methodology for management of landscape of various intensity, use of alternative plants and technology of their processing.

#### **4 Theoretical research:**

use of methods of molecular genetics and analysis of nucleic acids (molecular determination of varieties), induction and use of dihaploidy, searching and use of eroded genes, keeping and improvement of gene pool, immunogenetics, molecular diagnostics of phytopathogens, stress-inducing proteins in burden of animal body, theoretical principles of application of biologically active substances and organisms.

Financial means from internal sources and grant agencies are used for financing of research activities.

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