

**INSTITUTE OF APPLIED RESEARCH IN SUSTAINABLE ECONOMIC
DEVELOPMENT – IPADES**

A SCHOOL OF EXCELLENCE IN A RENOWNED NATIONAL UNIVERSITY

Francisco Benedito da Costa Barbosa

Associate President – IPADES

The Escola Superior de Agricultura Luiz de Queiroz (Esalq), University of São Paulo (USP), was born of inspiration and determination of Luiz Vicente de Souza Queiroz. He attended the schools of agriculture in Grignon, in France, and Zurich, Switzerland from Germany. In 1892 donated to the Government of the State of São Paulo the Saint John mountain farm, where in three June 1901 was inaugurated, the Practical School of Agriculture, the cradle of Esalq.

In November 2014, the Esalq was ranked as one of the top five colleges in the world in the area of agricultural sciences by the American publisher U. S. News and World Report. In front were the Wageningen University and Research Center in the Netherlands, the University of California at Davis and Cornell, both in the United States and the University of Agriculture of China. Note that if connected between the countries of the world's tropical belt, their position is to lead the rankings.

Among the factors that contributed to the classification are global and regional reputation, number of publications and citations, in addition to international collaborations. Already graduated more than 13,900 professionals, being the first faculty of agricultural engineering, in Brazil, the excess of 11 thousand trained agronomists. The contribution of these professionals for the development of agriculture of São Paulo and Brazil is of a significant importance.

In the field of its research works have world impact, where the carbon balance of soil, vegetation and water, started in the late 1980, sparking an interest in the subject in other institutions. The introduction and adaptation of breeds of animals for meat, milk

and eggs, which constituted in an important contribution to the current stage of the Brazilian agribusiness. Your pioneering spirit also is present in biological control, which uses natural enemies to reduce the infestation of pests in agricultural crops. This work began in the decades of 1940 and 1950, which demonstrates his pioneering with excellent results. Today, about three million and 300 thousand hectares of plantations throughout Brazil are controlled with the scooter (*Cotesia flavipes*), that parasite eggs of cane borer (*Diatraea saccharalis*).

In 2012, the company Bug Biological Agents, of Piracicaba, a startup founded in 2001 by students graduate from Esalq, was voted one of the 50 most innovative companies in the world, according to rankings compiled by the American technology magazine Fast Company.

Sugarcane, plant responsible for alcohol complex which leads exports of agribusiness of São Paulo with 44.37% and 37.18% in 2013 and 2014, respectively, for a total of 20.77 and 18.17 billion dollars in 2013 and 2014, respectively, are in the focus of research led by Professor Helaine Carrer, of the laboratory of biotechnology and coordinator of the International Graduate Program in Cellular and Molecular Biology of Esalq.

One of the research conducted in the laboratory resulted in a genetically modified plant more tolerant to water stress than varieties currently used she managed to survive the complete lack of water for two weeks longer than the commercial varieties, a result very important. Currently, the genetically modified plants are being tested in houses of vegetation. It affirms the researcher Helaine.

In the area of agricultural economics, the Center for Advanced Studies in Applied Economics (Cepea, acronym in Portuguese) member of the Department of Economics, Administration and Sociology of Esalq, researches and publishes the price indicators for agricultural and forestry commodities, a reference in the market, with daily searches. Also publishes newsletters, articles and books dealing with the economics of these products.

In your specific area of teaching the Esalq has seven undergraduate courses – administration, life sciences, food science, economics, agricultural engineering, forestry, and environmental management. In grad school pioneered starting 1964 in the areas of experimentation and statistics, plant pathology, plant breeding and genetics, mechanical, engines and agricultural machinery, plant and soil nutrition.

Currently are 16 graduate programs, most of which gets top marks for evaluation by the Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (Capes), between six and seven, i.e. they are considered excellent level. Among them are the graduate programs in entomology, genetics and plant breeding, animal science and pastures, soils and plant nutrition, with seven. The graduate programme in bioenergy has the partnership of Universidade Estadual Paulista (Unesp) and the University of Campinas (Unicamp). It is an innovative line of research involving three universities, USP, Unesp, Unicamp, and fit the Esalq house the program. Esalq also houses the International Graduate Program between the USP and American universities Rutgers, in the States of New Jersey and Ohio. Since 1966, when the first masters defense, have been awarded more than 5,500 titles of masters and PhD 2,700.

Esalq has some peculiarities, the closing of institutions of developed countries, like the United States, which is the donation of large areas for research, made by former students. One of the farms donated, for example, in the city of Londrina, Parana, has 2,000 hectares and 6,000 head of cattle. Another area, in the vicinity of the campus, has 20 hectares preserved with native species. Was donated on the condition that it was used for research by the students of environmental management.

Its research has also been used for public policy decision-making. Some federal government programs have been established in accordance with the results of dissertations, doctoral theses and publications who left the Esalq, largely with support from Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP). One of them is the program for reducing the emission of Greenhouse Gases in Agriculture – or Programa ABC in Portuguese – for rural producers. Also has the participation of Esalq in formatting programs of FAPESP, like research on Global Climate Change Research, Program in Sustainable Conservation of Biodiversity (Biota-FAPESP) and the FAPESP Program of Research in Bioenergy (Bioen).

The success of Esalq, in addition to praise, should serve as an example for other schools of its kind in Brazil, may make similar, in this country which has seven different biomes, multiple ecosystems, is a pioneer of biofuel on a commercial scale, and is today one of the leading players in the global agribusiness.