

## Farewell to the eminent Dr. Hiroshi Ikuta (February 9, 1929 - August 23, 2019)

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On August 23, 2019, in Mogi das Cruzes, SP, at age 90, died Dr. Hiroshi Ikuta. His father, Torao Ikuta was one of the Japanese immigrants who arrived in Brazil in 1918. He settled in Mogi das Cruzes-SP, where he married Tamie. The 10 bushel land he acquired was paid over the years by producing corn, vegetables and selling firewood and charcoal. A few years later, he began growing tomatoes with which he had great economic success.

The couple Torao and Tamie worked very hard to integrate into Brazilian society and, for that, helped a lot learn to speak Portuguese. Contrary to what commonly happened in the Japanese colony, his son Hiroshi Ikuta was encouraged to go to college. In 1954, Ikuta graduated as an agricultural engineer from the Luiz de Queiroz College of Agriculture University of São Paulo (ESALQ/USP), Piracicaba-SP. Two years later Ikuta was invited to be Assistant Professor in the Department of Genetics at ESALQ/USP and started to work in the Vegetable Crops Breeding Sector, led by Professor Marcílio de Souza Dias. Together they pioneered and became reference in the genetic breeding of vegetables for tropical and subtropical conditions.

At that time, the national vegetable growing sector was very incipient and dependent on imported seeds. Most vegetable cultivars introduced from abroad were not adapted to the

edaphoclimatic conditions of the different production zones of São Paulo state and other Brazilian regions. The first initiative of the breeding program outlined by Marcílio Dias and Hiroshi Ikuta was the formation of a germplasm collection introducing cultivars and vegetable strains from official educational and research institutions and seed companies from around the world.

After conducting screenings of the introduced genotypes, they pioneered the beginning of numerous blocks of crosses that culminated in the selection of vegetable cultivars that would change the landscape of vegetable production in Brazil. But to ensure the expansion of the breeding program, ESALQ/USP management decided to establish a physical research and experimentation base in Mogi das Cruzes, which at that time was one of the most important vegetable growing areas in the state of São Paulo. Prof. Ikuta was then commissioned to establish the Experimental Vegetable Station of the Institute of Genetics in the Rio Acima neighborhood, which opened in 1960. Under his direction, the Station received the support of Cotia and Sul Brazil Cooperatives. This partnership proved to be strategic, as it made it possible to carry out its research and experimentation activities with its members, mostly of Japanese origin.

The breeding works developed by Prof. Ikuta resulted in the

release of cultivars of eggplant, cabbage, lettuce, cucumber, carrots, peppers among other species, which revolutionized the cultivation of vegetables not only in São Paulo, but throughout the country. Prof. Ikuta pioneered the development of vegetable hybrids, of which he always was an enthusiast, and developed national hybrids of cauliflower, cabbage, eggplant, peppers, cucumbers, tomatoes, pumpkins and sweet corn.

It should be emphasized that, in addition to conducting breeding programs, the Station played a very important role in enabling practical classes in the ESALQ/USP Department of Genetics, disciplines "Vegetable Crops Breeding" and "Vegetable Crops Seed Production". The Station was also an important center for promotion and technical assistance to vegetable growers of the Green Belt of São Paulo city. In addition, it contributed to the development and diffusion of new production technologies such as the onion bulblet cultivation system that was adopted with great commercial success by the growers of Piedade-SP and region until recently. After retirement, Prof. Ikuta has devoted himself to research on tree fern, a practically extinct plant species in the Atlantic Forest bioma and of fundamental importance for soil conservation and groundwater maintenance. He was also a collaborator at the University of Mogi das Cruzes, where he worked at the Núcleo Integrado de Biotecnologia, coordinating research in the area of genetic breeding of the Golden Rain Orchid (*Oncidium flexiosum*) in agreement with the Via Dutra Region Florists Association (AFLORD) and received support from FAPESP.

In 2009, Prof. Ikuta was granted as President's Honor of the 29<sup>th</sup> Brazilian Congress of Olericulture (29<sup>th</sup>CBO), event held in Águas de Lindóia-SP, and promoted by the Brazilian Horticultural Association (ABH). At the opening of the 29<sup>th</sup>CBO, the then president of ABH, Prof. Paulo César Tavares de Melo, read a text written by Dr. Norberto Silva in honor of

Prof. Ikuta. Prof. Norberto concluded his magnificent text with the following sentence that is the synthesis of the personality of this great scientist who has made so many contributions to the Brazilian vegetable production:

“Despite having received several honors, including the “Marcilio de Souza Dias Award” from the Brazilian Horticultural Association, which most impresses on the personality of Professor Ikuta is the natural and simple way in which he turns complex themes into research results for Brazilian vegetable production. One of his striking phrases referring to improved vegetable populations was: "If you have any important genetic material you should give it to others, so if you get lost you will know where to find it." This philosophy defines the personality of our honoree”.

It was a huge honor to have been invited by Horticultura Brasileira magazine to write this text about Prof. Dr. Hiroshi Ikuta, who figures in the pantheon of the great personalities who built and developed Brazilian vegetable production. His scientific contributions, his simple way of being, and the kindness he treated his peers will be in our memory forever. I am very proud to have been his student in the "Vegetable Crops Breeding" and "Vegetable Crops Seed Production" disciplines. His teachings were essential to my training as a vegetable breeder. Thank you so much, Ikuta!

As his former student Eduardo Kitahara (class ESALQ 74) said:

“Professor Ikuta leaves a legacy of dedication, hard work and success. Mogi das Cruzes loses a great citizen who collaborated to consolidate our Green Belt, the scientific community lost a great researcher and the Japanese colony loses one of its most exponent leaders who expressed itself in Japanese and Portuguese with the same fluency”.

September 9, 2019.