
OBITUARY

Dr K. RAMIAH*

(1892–1988)

With the recent passing away of Dr Krishnasamy Ramiah at Bangalore, a proud chapter in India's agricultural history comes to an end. His was a remarkable life — a life marked by total dedication to crop improvement and agricultural development by harnessing the best tools of science and technology, to stimulating young scholars to take to agricultural research, to institution building nationally and internationally, to persuading policy makers to give meaning and content to the saying, "If agriculture goes wrong, nothing else will go right" and to serving as a friend, philosopher and guide to numerous scientists, both old and young. He played a truly historic role in shaping our agricultural destiny. The brief account which follows would give a glimpse of the wide spectrum of his contributions and the depth and width of his knowledge and of its impact.

(a) *Science*: From 1914 to 1946, Dr Ramiah devoted his time and talent to apply the tools of genetics to the improvement of rice and cotton. His deep knowledge of genetics and biometrics acquired during his education at the Madras and Cambridge (UK) Universities helped him to develop a multi-pronged strategy for elevating and stabilising rice yields. In the early years of his professional career, he concentrated on direct selection and hybridization, resulting in rich varieties such as ADT 3, CO 4 and GEB 24. Later, in collaboration with Dr N. Parthasarathy, he initiated work on wide hybridization and induction of mutations with X-rays. His contributions to our understanding of the genetics of rice were wide ranging, covering both qualitative and quantitative traits. His work on gene identification and symbolization, construction of linkage maps and classification of rice varieties according to grain quality still remains a classic. Above all, he was one of the earliest to understand the close correlation between plant architecture and response to good soil fertility and water management. This led him to propose at a meeting of the International Rice Commission of FAO an extensive hybridization programme between *japonica* and *indica* rices in order to breed varieties combining

the ability of *japonica* varieties to respond to fertilizer and water with the long and non-sticky grain quality of the *indica* strains grown in India, Pakistan, Bangladesh, Burma, Malaysia, Thailand, Philippines and other South and southeast Asian countries. The FAO initiated this programme at the Central Rice Research Institute at Cuttack in 1952. ADT-27 in Tamil Nadu and Mahinja and Mahsuri in Malaysia are some of the outstanding strains which resulted from this programme.

In 1937, he started his work on cotton genetics and breeding at the Institute of Plant Industry in Indore. He worked at Indore until 1945 and during this period, he worked with the late Prof. Sir Joseph B. Hutchinson on the standardisation of descriptors for cotton varieties. This work was published as a monograph. He also prepared a monograph on "Rice Breeding and Genetics" which was published by the ICAR in 1953. I have watched him prepare articles and books — all written with meticulous care in his beautiful handwriting. He taught others by example rather than by preaching. He was a field worker and hence knew thoroughly the problems which the plant faces from the day the seed is sown to the day the plant is harvested. His deep understanding of the theoretical and practical aspects of rice improvement earned him the title "Mr Rice" throughout the rice growing world.

(b) *Institution Building*: Ramiah knew that just as yield is the product of interaction between the genetic efficiency of the plant and the management efficiency of the farmer, the output of scientists is a product of interaction between their innate capability and dedication and the management efficiency of the scientific institution where the work is done. He inspired his co-workers at Coimbatore by his single minded devotion to scientific research. In 1946, he became the founder director of the Central Rice Research Institute (CRRI) at Cuttack, a position which was later occupied by his close colleague, Dr N. Parthasarathy. India has the largest area under rice in the world and it was Ramiah's dream that CRRI should become the Centre of origin of many new findings relevant to the improvement of the quality of life of rice growing families. He was instrumental in getting CRRI designated by FAO as the principal centre for undertaking hybridization

* Born on 15th April, 1892, at Kilakarai, Ramnad District. Passed away on 2nd August, 1988 at Bangalore.

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Between 1965 and 1968, he served as the Vice-Chancellor of the University of Agricultural Sciences and Technology at Bhubaneswar. During this period, he gave concrete shape to the concept of an Agricultural University, namely first, it should pay integrated attention to teaching, research and extension education, and secondly, it should foster a systems approach to the use of the climatic, land, water, labour and credit resources available to the farming family through integrated attention to crops, livestock and fisheries.

(c) *International Role*: In 1951, Ramiah was appointed as the first FAO expert on rice and he was stationed at Bangkok. His job was to help in restoring the war-ravaged rice economies of Asia. The memory of the Bengal Famine of World War II was still fresh and Ramiah undertook long visits to every rice growing country to work with national scientists and policy makers in getting an effective rice research, training and development programme organised. Recognising the critical role of genetic material in rice breeding, he helped FAO in the preparation of a World Catalogue of Rice Genetic Stocks. He actively promoted purposeful co-operation in research and training among rice growing nations. The need for a structured institutional mechanism for promoting such cooperation led to the establishment of the International Rice Research Institute (IRRI) in 1960 in Philippines by the Ford and Rockefeller Foundations in collaboration with the Government of the Philippines and the University of the Philippines at Los Banos. He played a key role in shaping IRRI's research priorities in its formative years.

(d) *Impact on National Policies*: Dr Ramiah's seminal role in shaping policies and programmes in the field of agriculture for over 5 decades in various capacities, including as a nominated Member of the Rajya Sabha from 1968 to 1974 are widely known and recognised. Together with Dr B. P. Pal he helped to establish the Indian Society of Genetics and Plant Breeding and several other scientific

societies. What is however not known so widely is the critical role he played between 1964 and 1967 as Chairman of the Panel of Scientists appointed by the then Union Minister of Agriculture, Shri C. Subramaniam, in shaping the present phase of India's agricultural evolution. One of the first acts of Shri C. Subramaniam when he assumed the Agricultural portfolio in the Lal Bahadur Shastri Government, at a time when India's food situation used to be described in the international press in terms, such as "ship to mouth" existence because of our heavy dependence on imported grains to balance the national food budget, was to set up a Panel of Scientists headed by Dr Ramiah, with Dr B. P. Pal serving as Convenor, to advise Government on how to achieve a scientific transformation of our agriculture. The High-Yielding Varieties Programme in wheat, rice and other crops was an outcome of the Panel's recommendation. In 1987, the country witnessed serious drought and Ramiah was deeply concerned at both the dwindling grain reserves and the deteriorating environmental foundation of agriculture. He was concerned that in spite of huge expenditure on drought and flood relief year after year, so little attention was being paid to strengthening the ecological and institutional infrastructure essential for a stable and prosperous agriculture.

Dr Ramiah was a Foundation Fellow of the Indian Academy of Sciences and a Fellow of the Indian National Science Academy. He was also the Secretary for the Current Science Association during 1959-61. I am not listing the honours given to him, since I feel he has not been sufficiently honoured. The best tribute we can pay to his memory is to continue to work for his goal to make our agriculture to go right, so that the other sectors of the Indian economy will have a chance to succeed.

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