JYOTI KANTO BASU

1901-1963

Elected F.N.I. 1941

Jyoti Kanto Basu was born at Faridpur, now in Bangla Desh, on February 8, 1901. His father, the late Babu Harakanto Bose, a school-master, was then posted in a Government high school at Faridpur. He was a strict disciplinarian and a man of high principles—a real *Brahmo*. He began his life as an assistant master and retired as headmaster of Hare School, one of the premier Government High Schools in Calcutta. Aloofness of character did not hinder him from mixing with his boys in the cricket field. He was a good violinist and he loved singing.

His mother Shrimati Kusum Kumari was a devout lady who died young in giving birth to her fifth child, leaving Jyoti Kanto motherless at the tender age of eight. She was a loving, God-fearing mother who had brought up her family of four children in the best traditions of the *Brahmo* religion. Jyoti Kanto derived much of his amiable and loving character from his mother.

Jyoti Kanto was the fourth of five brothers. His eldest brother A. K. Basu B.A. (Cantab), Bar-at-Law is a well-known figure in the legal profession at the Calcutta Bar. He had practised in the Calcutta High Court and also occasionally in the Federal Court at New Delhi. His second brother N. K. Bose, Ph.D. (Göttingen), F.N.I., retired as Director, Irrigation Research Institute, Punjab, and River Research Institute, West Bengal. At present he is working as Research Professor in the Indian Statistical Institute, Calcutta. His third brother Dr. N. K. Basu, M.B., Calcutta has spent the major part of his career as Research Worker, at first on indigenous drugs of India and later on vitamins and nutrition. His fifth brother Mr. P. K. Basu, M.Sc. was working in the All India Radio, Delhi Station, as Station Engineer.

Family Life

In 1932, Jyoti Kanto married Shrimati Lila Mukherjee, the eldest daughter of Shri Ramesh Chandra Mukherjee of Dhubri, Assam. They had a very happy family life and were blessed with two sons and two daughters. Their eldest daughter Shrimati Subha was married to Shri Mrinal Gupta B.E., Jadavpur, now a Wing Commander in the Indian Air Force (Technical Branch). Their second child Shri Sati Kanto Basu B.E., Poona, is now working as Senior Technical Officer in Air India. Their third child

Shri Rathi Kanto Basu M.A. has joined Indian Administrative Service. Their fourth and youngest child Shrimati Supriya Basu is now doing Post-graduate Course at Jadavpur University, Calcutta. He had a very happy and full family life. He was a benevolent father and was greatly loved and respected by his family.

School and University Education, Service Life

In school Jyoti Kanto used to secure high marks in mathematics and science. He passed Matriculation Examination of the Calcutta University in 1919 in the first division. In his M.Sc. Examination in Physical Chemistry of the Calcutta University, he stood first in the first class in 1925. Thereafter he started research under Prof. Dr. J. N. Mukherjee in Colloid Chemistry as a Khaira Research Scholar of the Science College, Calcutta. In October, 1927 he proceeded to England to work at the Agricultural Experiment Station at Rothamsted for his Doctorate degree of the University of London. There, in collaboration with Dr. E. M. Crowther he continued his work on Soil Colloids in addition to his work in soil bacteriology with Dr. H. G. Thornton. While working at Rothamsted, he devised an Electrodialysis Apparatus for the rapid determination of the exchangeable bases in soil. This apparatus was subsequently taken up by the Gallen-Kamps of London for commercial production.

After obtaining the Doctor's degree from the University of London, Dr. Basu underwent a training in Soil Survey and Land Reclamation work under Dr. A. A. J. De Sigmond of the University of Technical Sciences, Budapest. Before returning to India in 1931 he visited various Soil Science laboratories and agricultural research stations in England, France, Belgium, Denmark, Germany, Switzerland and Austria.

During 1931-'32 Dr. Basu worked with Dr. B. A. Keen at the Imperial Agricultural Institute, Pusa, on the Kalar Soil Profiles of Sindh, and other soil problems. In 1932 he joined the Sugarcane Research Scheme of the Imperial Council of Agricultural Research as Soil Physicist. It is here he made his pioneering and monumental work on the genetic classification of black soils. In 1944 he joined the Government of Bombay as Soil Physicist and was posted at Sholapur, Bombay.

Dr. Basu was appointed Principal of the College of Agriculture, Poona, for a period of eight months in 1953 in addition to his duties as Soil Physicist to the Government of Bombay. He was also in charge of the post-graduate work in Soil Science of the University of Poona. He joined the Ministry of Food and Agriculture, Government of India, as Director of Soil Conservation in 1954. From July 1958 he worked as Senior Director in charge of planning and coordination of all soil conservation activities of the Central Soil Conservation Board including advisory work on agriculture matters. He was one of the main architects to evolve the famous improved Bombay

Dry Farming method and the technique of contourstrip cropping for erosion control.

During 1952-53 Dr. Basu visited scientific institutions in New South Wales, Queensland, Victoria and South Australia to study soil and moisture conservation problems. During 1959 (August to October) Dr. Basu attended the F.A.O. seminar on Watershed Management and had a study tour in the U.S.A.

After retiring from the Ministry of Food and Agriculture in 1960 he was appointed the Chairman of the Land Utilisation Committee by the Government of Rajasthan. He worked in this capacity for three months; he toured all over Rajasthan, studied the problems and submitted his committee's report and recommendations.

In July 1960 he got an assignment with the F.A.O. under its Land and Water Development Division. He was sent to Sudan as Land Use Expert and carried on his duties in between his treatment in London. He came to India in September 1962 and died on March 8, 1963.

Contribution to Science

Dr. Basu's contribution was mainly to Agricultural and Soil Sciences. In view of his experience and research he was consulted by various agencies in India and abroad on problems relating to agriculture and soil. He was associated with the following scientific societies as President, Chairman or Member:

1. President of the Indian Society of Soil Science (1949-51)
2. Founder Chairman of the Soil Conservation Society of India (1952-54)
3. President of the Section of Agricultural Sciences, Indian Science Congress (1951)
4. Chairman of the Saline Section of the International Congress of Soil Science (1950) Amsterdam and a Member of International Society of Soil Science
5. Full Member of the International Geographical Society (to represent India on Soil Erosion Section)
6. Fellow of the National Institute of Sciences, India, and member of various Scientific Societies
7. Member of the UNESCO International Panel for Humid Tropics Research
8. Vice-President, International Society of Soil Science, Commission IV
9. Chairman, Soil Science Committee, Indian Council of Agricultural Research

Dr. Basu was honoured with an invitation to be the Chairman of the section for Soil Sciences of the IV International Congress of Soil Science held in Amsterdam in 1950.

Dr. Basu was fully conscious of the socio-economic aspect of the results of his research work; he was aware of the importance of agricultural and soil science research to India, and most of his research projects were intended to provide answers to problems which needed urgent remedy. No doubt, his sad demise was a great loss to India.

N. K. Bose

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