

## RESEARCH IN DAIRYING\*

PROF. H. D. Kay, Director of the National Institute for Research in Dairying, who is on a short visit to this country gave an interesting talk on the recent developments in Dairy Science, with special reference to his work in England. Outlining the origin and development of dairy research in Great Britain, he described the present relationship of the Dairy Research Institutes to the Agricultural Research Council and to other Institutes dealing with various aspects of the agricultural and industrial research. The National Institute for Research in Dairying at Reading is closely associated with the University of Reading but enjoys a good deal of autonomy and is administered by its own governing body. Co-ordination of work within the Institute is secured by a small professional Staff Committee comprised of senior members of the research staff. In addition to permanent members of the staff, post-graduate research students and visiting research workers from overseas are engaged in the various departments of the Institute on special problems. At present, five Departments exist, i.e., Husbandry, Physiology, Bacteriology, Chemistry and Nutrition. In addition, a new section, the Dairy Machinery Section, is likely to reach departmental status very soon. Between them these departments cover the wide range of Dairy Science, breeding, feeding and management of dairy cows for milk production on the one hand and methods of milk distribution and even of keeping milk in the consumer's home on the other.

Dr. Kay described a few of the research problems which had been dealt by the Institute in the recent past and present. He pointed out the direct importance to the whole community of knowledge obtained of the effect of feeding and other controllable factors on the nutritional and other qualities of the milk produced. He gave an account of recent work on the control

of milk quantity and quality by means of hormones and the methods by which milk had been produced from virgin and from barren animals. As regards Dairy Technology, improvements in methods of pasteurisation and the control of heat-treated milk were described. The desirability of making use of bacteriological advice in the devising and improvement of dairy appliances and dairy machinery of all kinds was emphasised. A number of problems concerned with the chemical composition of milk had been tackled and solved within the past few years. A recent and interesting finding had been that underfeeding of cows that had taken place in some districts in Britain during the war years had resulted in a fall not only in the volume but also in the nutritional quality of the milk produced. Objective methods of assessing the quality of dairy products by direct measurement of their physical characteristics had also been developed. Dr. Kay thought that in every Dairy Research Institute a Nutritional Section, where the nutritional value of milk and constituents of milk could be accurately assessed by chemical, physical and biological methods was a necessity. He also illustrated the need for the closest collaboration between the staff of the dairy research organisations dealing with specialist subjects which in many cases had an important bearing on the progress in dairy science. In his view there was a large number of unsolved dairy problems peculiar to India, in milk production, in the handling and processing of liquid milk and also in the making of Indian dairy products and in the utilisation of by-products. If these problems remained unsolved, they would continue to handicap severely the production and consumption of milk and milk products in this country and in consequence, the nutritional status of the population. It was clear that one of the most important national tasks facing India was to ensure an increased production and consumption of milk and milk products of really satisfactory quality.

\* Abstract of a lecture delivered by Prof. H. D. Kay, C.B.E., D.Sc., F.R.S., on the 11th March 1946, at the Imperial Dairy Research Institute, Bangalore.

## THE LATE MR. KAPILRAM H. VAKIL, M.Sc. (Tech.), F.I.C., F.C.S. A PERSONAL ESTIMATE

By S. G. SASTRY

[T was at the palatial and hospitable residence of Sir Lala Shreeram that I last met Mr. Kapilram Vakil. The occasion was the second meeting of Panel on Heavy Chemical Industries of which he was a member and Sir Lala, the Chairman. Just before lunch, all the guests had gathered in the verandah. It was given to me to discharge a very pleasant social duty. To Sir T. S. Venkataraman, the celebrated sugarcane expert, I had the privilege of presenting the late Mr. Kapilram Vakil as "the Doyen of heavy chemical industries in India". The two heroes clasped each other's hands and were beaming at each other and exchanged thoughts and ideas—so much so

that Sir Lala had to gently remind them that lunch was waiting.

The incident narrated above indicates the estimate in which I held the late Mr. Kapilram. For nearly thirty-five years, he laboured in the field of chemical industries in India,—specially heavy chemical industries—as a pioneer. He went through all the vicissitudes and tribulations that beset the path of a pioneer in any country, the more so a pioneer in the field of heavy chemical industries in India. When I entered the field as a fellow-worker, Mr. Kapilram had already ten years of solid work to his credit. He welcomed me as a brother. On many an occasion when we