

difference between the laticiferous systems of Hevea and Funtumia, and the presence in Castilloa, Funtumia, and Landolphia of a striking development of laticiferous tissue in the xylem (medullary rays), connecting the latex-tubes in the phloem radially with those in the pith, are but instances of a significant state of affairs. A thorough study of this question could not fail to lead to important scientific knowledge which, in competent hands, might well result in practical applications. Again, such striking facts as the occurrence in *Funtumia elastica* of an excellent latex rich in caoutchouc, while in the closely related

*F. latifolia* (often found growing with the former species) there is a commercially useless latex containing abundant "resins" in place of caoutchouc, present problems, difficult indeed, that might well receive more attention at the hands of biological chemists. The preliminary anatomical work would be best carried out in the tropics, but with a little organisation much might be accomplished in this country, as is evident from the fact that observations which may prove to be the key to the correct understanding of a baffling disease of Hevea have recently been made in London.

See also 1923 *J.L.* 17 p 234

### Dairy Cattle and Milk Production.

THE urgency of the problem of milk supply has of late years caused much attention to be devoted to the improvement of dairy cattle, and to the increase of milk supply on an economic basis. During the last twenty-five years the Danish Milk Recording Societies (*Journ. Min. Agric.*, October and November 1921) have been working towards the improvement of herds by the gradual elimination of unproductive cows, and Government grants have been made to aid them in the formation of strains of dairy cattle producing a higher yield of butter. The keeping of private and official handbooks is encouraged, and a special feature is made of two-year competitions between entire herds, the best herds being awarded prizes and officially recognised as breeding centres. The earlier work dealt entirely with the yield of cows, but later it was realised that the character of the bull was of equal importance with regard to milk production, as high milk-yielding capacity is a character that can be inherited through the sire as well as the dam. By close observation of records and careful breeding, attempts have been made to obtain bulls with a good influence on the milk yield, with considerable success. As Denmark is chiefly a butter-producing country, the main object of the milk-recording societies has been to raise the percentage of butter fat, thus aiming at improvement of quality more than at increase of quantity.

The milk problem is by no means confined to European countries, but various aspects of dairying are being investigated elsewhere, as in the Madras Agricultural College, India (*Bull. No. 79*). Special consideration is given to business aspects as well as to the technical methods of dairying. Approved methods of selection are applied to the dairy herd, unprofitable cows being weeded out, and pedigree

registers are maintained. A creamery is also run for the preparation of butter on a commercial scale, milk being purchased from outside to supplement the home supply. The prospects of success are good, and a future seems to be before the dairy industry of India if it is managed with scientific and business knowledge.

One point which has a close bearing on dairy-farming is the varying cost of milk production, which has ranged from 3½d. to 4s. 7½d. per gallon since 1908 on Yorkshire farms for which records are available (*Scottish Journ. Agric.*, vol. 4, No. 4). Some of the factors concerned are not under the control of the producer, and are due to increase in the labour and food bills, and to the increased depreciation of the cows. In pre-war time the cost of attention per cow per week varied from 1s. 6d. to 2s., but owing to the rise in agricultural wages it is now 4s. 6d. to 6s., an increase which is estimated to have added 4d. per gallon to the pre-war cost of milk production. The cost of food has risen on every hand. Grazing is far more expensive owing to increased cost of manure and upkeep, home-grown food costs at least twice as much to produce, and, above all, purchased food has risen so much in price that it is probably the one factor more than any other which has been responsible for the high prices of milk during recent years. During the war, too, the difference in value between in-milk and dry cows greatly increased, and this depreciation in value has had its effect upon the cost of milk production. The tables drawn up indicate that in some cases the total costs have exceeded pre-war costs by 300 per cent., but happily there are indications that the inflated prices are easing off, and they show signs of being still lower in the near future.

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### University and Educational Intelligence.

CAMBRIDGE.—The Smith's prizes have been awarded to E. A. Milne, Trinity College, for an essay on "Studies in the Theory of Radiative Equilibrium," and to G. C. Steward, Gonville and Caius College, for an essay on "The Aberration-Diffraction Problem." A Rayleigh Prize has been awarded to T. A. Brown, Trinity College, for an essay "On a Class of Factorial Series."

J. A. Carroll, Sidney Sussex College, has been elected to an Isaac Newton Studentship, and the Studentship of W. M. H. Greaves, St. John's College, has been renewed for a year.

Regulations have been proposed for the degrees of M.Litt. and M.Sc. The chief difference from the Ph.D. regulations are that a student must for these degrees do research for two years as against three for the Ph.D. The Board of Research Studies publishes its second annual report. There have now been 143 research students admitted, of whom 5 have already taken the degree of Ph.D. Of these

95 are working in scientific subjects—physics with 22, chemistry with 16, and botany with 12, head the list.

LONDON.—The under-mentioned French professors in the Faculty of Medicine of the University of Paris will lecture (in French) at the Rooms of the Royal Society of Medicine, 1 Wimpole Street, W.1, at 5 P.M., on the dates stated:—

March 20, Prof. H. Roger (Dean of the Faculty), "Les fonctions du Poumon"; March 23, Prof. A. Chauffard, "Syndrome Humoral de la Goutte"; March 27, Prof. P. Duval, "Données actuelles de la Chirurgie Intra-Thoracique."

PROF. H. R. DEAN has been appointed as from June 1 next to the University Chair of Bacteriology tenable at University College Hospital Medical School. Since 1915 Prof. Dean has been Professor of Pathology and Pathological Anatomy in the University of Manchester. He has been Horace Dobell Lecturer for the Royal College of Physicians, and is the author of numerous papers on pathological and bacteriological subjects.