

GRASS AS HUMAN FOOD

IN normal agricultural economy the main role of the farm animal is to convert coarse vegetable foodstuffs into palatable and readily digested meat and dairy products. In war-time the value of this function must be reviewed in relation to the exigencies of the shipping situation, and the gain in quality in foodstuffs of animal origin must be balanced against the great loss in quantity which must inevitably occur during the conversion. Some peace-time practices, such as the liberal use of wheat in feeding poultry, are obviously out of place during war-time. It is difficult, however, to forecast what degree of success could be attained in a frontal attack on the position of the farm animal, in which the aim would be to make part of the vast food resources of green pasture directly available for human consumption.

The main objection to the use of grass as a major component of the human diet lies in its high content of cellulose. Since the water content is high, a large bulk would have to be taken to make a significant contribution to the daily calorie requirement, and the undigested residue would prove an intolerable strain on the capabilities of the human intestine. Two distinct possibilities for the use of grass may, however, be recognized. (1) The manufacture of concentrates, free from cellulose, which might be eaten freely as substitutes for meat and cheese. Most of the vitamins would presumably be separated during this procedure, and could be worked up as a by-product. (2) The direct consumption, in salads or otherwise, of small amounts of young tender herbage. This dietary innovation would be valued as a source of vitamins, rather than as a serious contribution to the protein or energy requirements of the body.

In a pamphlet "Eating for Victory", a sequel to "Grass for All", Mr. J. R. B. Branson describes his personal experience of a vegetarian diet containing moderate amounts of fresh or dried grass (Branson's Publications, Headley Mill Farm, Bordon, Hants. 4d.). At the ripe age of sixty-eight, he reports a remarkable physical and spiritual rejuvenation, and describes the performance of tests of physical endurance which were possibly more arduous than scientific. In his opinion the beneficial properties of grass may be related to its chlorophyll content, and reference is made to the experiments of Prof. Buergi of the University of Berne. It may be recalled that this work is frequently quoted in advertisements in the popular Press in support of the supposed rejuvenating properties of a commercial preparation of this pigment.

While it is very doubtful indeed whether authentic medical opinion would support the view that chlorophyll has any real therapeutic virtue, it is possible that Mr. Branson may have benefited from the high vitamin content of his unusual diet. To those who might be persuaded to take advantage of the numerous recipes for the use of grass which he has propounded, we would repeat with emphasis his own advice of *festina lente*. Even small amounts of grass might prove injurious to digestive organs less robust than those of Mr. Branson. The injudicious ingestion of amounts made possible by the zeal of an ardent food reformer might easily give rise to intestinal obstruction, which would certainly be serious and possibly fatal.

FORTHCOMING EVENTS

[Meeting marked with an asterisk is open to the public.]

SATURDAY, JULY 19

ROYAL METEOROLOGICAL SOCIETY (joint meeting with the London Branch of the Institute of Physics) (at 49 Cromwell Road, London, S.W.7), at 2.30 p.m.—Discussion on Thunderstorm Problems.

FRIDAY, JULY 25

PHYSICAL SOCIETY (at the Science Museum, Exhibition Road, London, S.W.7), at 5 p.m.—Prof. Sydney Chapman, F.R.S.: "Chree and his Work on Geomagnetism; Geomagnetic Time Relationships; and The Future of World Magnetic Surveying" (First Charles Chree Address).*

APPOINTMENTS VACANT

APPLICATIONS are invited for the following appointments on or before the dates mentioned:

FIVE ASSISTANTS (MALE OR FEMALE) IN AGRICULTURAL ECONOMICS, ONE (MALE OR FEMALE) ASSISTANT AGRICULTURAL ANALYST AND TWO ASSISTANT FIELD MEN (MALE OR FEMALE)—The Agricultural Office, Department of Agriculture and Horticulture, The University, Bristol (July 26).

LECTURER IN CHEMISTRY (GRADE IIA)—The Secretary, The University, Edmund Street, Birmingham 3 (July 31).

ASSISTANT ENGINEER TO THE MUNICIPAL COMMISSIONERS OF GEORGE TOWN, PENANG—Messrs. Peirce and Williams, 1 Victoria Street, London, S.W.1 (July 31).

PRINCIPAL of the Oldham Municipal Technical College—The Director of Education, Education Offices, Oldham (August 9).

DOMESTIC SCIENCE MISTRESS of the Girls' Intermediate School, Omdurman—The Controller, Sudan Government London Office, Wellington House, Buckingham Gate, London, S.W.1 (endorsed 'Girls' Intermediate School).

REPORTS AND OTHER PUBLICATIONS

Great Britain and Ireland

Fire: Roinn Talmhaidheachta (Department of Agriculture), 'Brainse Iascaigh (Fisheries Branch). Statistics of Salmon, Sea Trout and Eels captured during each of the Years 1939, 1937, 1935, 1933, 1931, 1929, 1927. (P. No. 4658.) Pp. 20. (Dublin: Stationery Office.) 6d. [266]

Jealott's Hill Research Station. Bulletin No. 2: Culture of Plants in Sand and in Solutions. By W. G. Templeman. Pp. 23. (Bracknell: Imperial Chemical Industries, Ltd.) [17]

Other Countries

Brooklyn Botanic Garden Record. Vol. 30, No. 2: Thirtieth Annual Report of the Brooklyn Botanic Garden, 1940. Pp. iv + 37-190. (Brooklyn, N.Y.: Brooklyn Institute of Arts and Sciences.) [256]

U.S. Department of Agriculture. Circular No. 593: Apparatus and Technique for the Study of the Egg Parasites of the Beet Leafhopper. By Chas. F. Henderson. Pp. 19. 5 cents. Farmers' Bulletin No. 1866: Wireworms and their Control on Irrigated Lands. By M. C. Lane. Pp. ii + 22. 10 cents. Technical Bulletin 743: Experiments with *Trichogramma minutum* Riley as a Control of the Sugarcane Borer in Louisiana. By H. A. Jaynes and E. K. Bynum. Pp. 43. 10 cents. Technical Bulletin No. 744: Life History of the Sugar-Beet Wireworm in Southern California. By M. W. Stone. Pp. 88. 15 cents. Technical Bulletin No. 758: Selenium Occurrence in Certain Soils in the United States, with a Discussion of Related Topics—Fifth Report. By K. T. Williams, H. W. Lakin and H. G. Byers. Pp. 70. 15 cents. (Washington, D.C.: Government Printing Office.) [256]

Royal Observatory, Hong Kong. Upper Temperatures and the Properties of Air Masses over Hong Kong. (Appendix B to Hong Kong Meteorological Results, 1940.) By G. S. P. Heywood, under the direction of C. W. Jeffries. Pp. 14 + 5 plates. (Hong Kong: Royal Observatory.) 2 dollars. [266]

Fifty-seventh Annual Report of the Bureau of American Ethnology to the Secretary of the Smithsonian Institution, 1939-1940. Pp. 10. (Washington, D.C.: Government Printing Office.) [266]

Newfoundland Government: Department of Natural Resources. Research Bulletin No. 11: The Newfoundland Lobster Fishery: an Account of Statistics, Methods and Important Laws. By Dr. W. Templeman. Pp. 42. (St. John's: Department of Natural Resources.) 20 cents. [17]

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