In connection with animal nutrition the Cambridge station is trying to obtain growth-curves showing the relation between the food consumed, the live and dead weight, and the useful meat, fat, and offal for each stage of the animal's development, while the station at Aberdeen is paying particular attention to the importance of vitamins in the nutrition of farm animals.

At Long Ashton and East Malling researches are being made in fruit growing and preserving, so that some quick method of storing fruit for future use may be available whenever a glut occurs in the market. Research on plant disease is being conducted more with the object of producing immune varieties than of finding curative methods. That this is the right line to take is shown by the fact that whereas all attempts to free a soil from wart-disease infection have been unsuccessful, there are certain immune potatoes which will grow without blemish in the most heavily infected soils.

The lecturer remarked that although our organisation for agricultural research is young, and we cannot compare with America or with Germany before the war, either in the number of workers engaged or in expenditure, yet "it is not too much to claim that the majority of really fruitful ideas and conceptions that have recently been current in agricultural science have sprung from English laboratories."

Meteorology of the Philippines.[1]

THIS work is rightly claimed in the preface by the director of the Philippine census to be of "great practical value." Observations from sixty official stations and fifty-three voluntary stations have been dealt with, and the maps and plates aid much in the simplification of the large amount of data contributed to the world's meteorology. The elements dealt with are temperatures, rainfall, humidity, cloudiness, wind direction and force, and typhoons.

Temperature is treated, as to both exposure and method of obtaining averages, in a manner quite comparable with the most approved European system. The mean annual temperature for the whole archipelago obtained from stations near the sea level is 26·9° C. (80·4° F.). The seven warmest months are April to October, and the five coldest November to March. May is the warmest, and January the coldest. Tables are given showing in great detail the mean, extreme, and range of temperature at all stations.

Rainfall distribution throughout the year forms the most interesting feature of the weather of the Philippines. The exposure to the prevailing winds occasions great differences in the amount of rain, in spite of the relatively small extent of the archipelago. The winter rains come direct from the Pacific and cause large falls over the eastern part of the archipelago; these are called the north-east monsoon rains. The summer and autumn rains are due chiefly to the influence of typhoons; these rains are most abundant in Luzon and the Visayas. The thunderstorm rains which occur in spring are of little importance compared with the other rains.

The annual means of seventy stations give 2366·1 mm. (93·18 in.) as the annual average rainfall for the Philippines. The annual averages at the several stations range from 4597·6 mm. (181·05 in.) to 989·8 mm. (38·98 in.). The greatest fall is at Baguio, due to its elevation and the local topographical features; the least at Zamboanga. The annual extremes are very divergent. The heaviest annual fall at Baguio is 9038·3 mm. (355·91 in.) in 1911.

A feature of some interest is the summary of the weather of official holidays in Manila for the sixteen years. This is a step in advance of European official discussions. C. H.

[1] "The Climate and Weather of the Philippines, 1903 to 1918." By the Rev. José Coronas, S.J., Chief of the Meteorological Division, Philippine Weather Bureau. Pp. 195+29 plates and 3 illustrated maps.

University and Educational Intelligence.

LEEDS.—The James Edmondson Ackroyd memorial fellowship has been awarded to Mr. F. W. Dry, who will undertake a research on the comparative anatomy, histology, and pigmentation of mammalian hair as a basis for breeding and other experiments. The value of the fellowship is 300*l.* per annum, renewable for a period of three years.

MANCHESTER.—Mr. J. M. Nuttall, senior lecturer in physics, has been appointed assistant director of the physical laboratories, and Mr. D. C. Henry lecturer in chemistry.

Mr. A. J. Hailwood has been awarded the Moseley memorial prize in physics.

THE Berlin correspondent of the *Times* announces that Prof. Walter Nernst has been elected Rector of the Berlin University.

DR. LIVINGSTON FARRAND has accepted election to the presidency of Cornell University in succession to Dr. J. G. Schurman, recently appointed American Minister to China. After graduating at Princeton in 1888 and at the Columbia College of Physicians and Surgeons in 1891, Dr. Farrand spent two years in study at Cambridge and Berlin. From 1893 to 1914 he was connected with Columbia University, first as instructor in psychology and later as professor of anthropology. He was president of Colorado University from 1914 until after the armistice, when he joined the American Red Cross. In 1917 and 1918 he directed the anti-tuberculosis work of the International Health Board in France. Dr. Farrand was at one time editor of the American *Journal of Public Health*, and has contributed largely to psychological and anthropological publications. In 1904 he published a study of the Indian population and physical geography of North America entitled "Basis of American History."

THE Roll of War Service of the University of London Officers Training Corps has been published by the Military Education Committee of the University. The first section, devoted to the roll of the fallen, contains the names and other particulars of 665 officers who were members or former members of the contingent. Section ii. records 1726 honours and distinctions awarded to 1068 officers. The roll of war service forming the third section gives particulars of 4276 officers and former officers and cadets of the contingent who served as officers in the war. The appendices contain statistical and historical information. Of the 4218 former cadets who served as officers during the war 1579 were first enrolled in the contingent before the war, the remainder (2639) during the war, but only 202 obtained their commissions before the war. The colleges of the University contributing the largest number of cadets are University College, 558; King's College, 484; Imperial College, 471; Guy's Hospital, 235; and St. Bartholomew's Hospital, 230. The illustrations include portraits of the late Lt.-Col. A. G. E. Egerton, Coldstream Guards, first Adjutant 1909–13, and the five former cadets who were awarded the V.C. The volume is published by the Military Education Committee of the University of London at 46 Russell Square, London,

W.C.1, at 1 guinea, packing and postage 1s. extra; half leather binding 1½ guineas, postage extra; and full leather binding 2 guineas, postage extra.

PROF. EINSTEIN'S main object in recently visiting America was to meet the Jewish community of the United States in order to enlist its support for the proposed University of Jerusalem. The foundation-stones of this University were laid in 1918, and preparations are being made to erect an institution worthy of the noblest ideals of modern knowledge. It is proposed to commence with physical and chemical departments, a medical faculty, an arts faculty, departments of law and commerce, and a Jewish faculty. The object of the promoters is to make the institution serve the interests of the Palestinian population as well as those of general culture. The University will be up to date in equipment and representative of the highest scholarship in each department: the association with the institution of men like Einstein, Wassermann, Bergson, Alexander, Lord Rothschild, etc., makes this perfectly clear. The University will be in no sense exclusive. So far as possible, Hebrew will be the medium of instruction, this being the language spoken by the Jews of Palestine, but it need scarcely be said that religious and racial tests will be unknown. Mr. C. Crossland, Director of the Fishery Service, Sudan Government, writes to us to express the fear that the University will be Jewish in a clerical sense, but we believe this need not be entertained for a moment, because Jews all over the world, and especially in Palestine, are absolutely opposed to any form of clericalism in social, political, or cultural life. The University of Jerusalem will be the only real university for a considerable section of the Orient, and it is to be hoped that it will become a great centre of culture for the Near East, acting as a link between the East and West, and thus helping to encourage feelings of friendship and co-operation between the representatives of the great civilisations of the past and of the modern world. Of course, as regards methods of teaching and research the University will be modelled entirely on European and American standards. The outcome of Prof. Einstein's visit is that the medical faculty of the University is now assured, and we can expect in the near future to have this faculty established in a country where the combating of disease is of particular importance. Other faculties and departments will follow as the means are obtained for them.

THE RIGHT HON. VISCOUNT HALDANE delivered an address on November 9 last before the Old Students' Association of the Royal College of Science, South Kensington, dealing with the subject of the nationalisation of the universities. The address has recently been issued in pamphlet form by H.M. Stationery Office. The title, as Lord Haldane observes, "is somewhat of a paradox, so far as I am concerned," since he proceeds to declare his unrelenting opposition to any suggestion that the universities of the United Kingdom should come under the control of any State Department. He submits that the most vital element in a university is that of an atmosphere "which in itself is the most excellent of things, and would be as difficult as it is rare were it not for that divine spark in the human soul which means that those who are gifted need but little to bring them to devote their whole energies to concentration on the highest ideas." That atmosphere no State Department can produce. Nevertheless, the State as representing the nation must have a care for the abiding well-being of the people. The highest education, that offered by the universities, touches, after all, but a fraction of the people. Not one in ten of the population get any education at all after they leave school at the age of fourteen, and not one in a thousand get the advantage of the higher education of the universities. The problem is how to bring higher education to bear upon the democracy. One crucial difficulty is the cost, only a fraction of which, about 28 per cent., is met by the fees which well-to-do parents vainly imagine represent the real cost of the education which their sons and daughters receive. Apart from the endowments of past benefactors, the balance must be found by the gifts of the benevolent, which represents in the United Kingdom less than half a million sterling annually against the five millions contributed in the United States. The rest of the expenditure must be met from public sources, either from the rates or from the Exchequer, but the universities must be left free as to the means and methods which they employ in order to realise their obligations to the community, which are not only to train duly prepared students for their various faculties, humanistic and scientific, but also to undertake extra-mural work such as the Workers' Educational Association demands.

THE University of Bristol has issued a striking and beautifully illustrated appeal with the view of raising, under the novel form of "a group scheme," a five-year million fund, the participants in which may spread their contributions over a period of five years. The appeal is headed "The First Line of National Defence," as, indeed, rightly considered, a university significantly is. Already more than one million pounds sterling has been contributed in money, land, and buildings, chiefly by the inhabitants of Bristol, and notably by the Wills family, and now the University owns 19 acres of land within the city area, upon which its various fine buildings have been erected or are in course of erection. The University obtained its charter in 1909, and its course of instruction for degrees includes the customary faculties of arts, science, medicine, and engineering, inclusive also of agriculture and theology, together with many forms of extra-mural activities dealing with adult education. It is specially devoted to research in the various faculties. More endowed chairs and an increased staff of lecturers are needed, together with money for the establishment of fellowships, for departmental libraries, for equipment, and for research. One thousand two hundred full-time students and more than 1000 part-time students are in attendance, and the demand will grow as facilities for secondary education are increased and developed. The area embraced within the operations of this "University of the West" extends from the Cotswolds throughout the four south-western counties to Land's End. It is confidently to be hoped that within this area there may be found, not only on the part of private benefactors, but also on that of the local authorities, an eager willingness to support the efforts which the Council of the University is making to bring within the reach of the inhabitants of the four counties the highest possible facilities of learning and research in all departments of knowledge. The Treasury grant is to be raised in 1922 from one million to a million and a half sterling, and the University of Bristol can participate in it in proportion to the amount publicly subscribed. All the universities of the kingdom are in like straits for means of development, and it is worth while in this connection to direct attention to the munificence displayed in the United States by private persons, who gave in one year, 1917–18, in support of the universities and colleges of that country, nearly 5,500,000*l*., whilst benefactions to such institutions in the United Kingdom amounted in the three years, 1916–19, to only 1,192,000*l*.