that various parts of the body do not grow at the same rate. All curves record a rapid rate of growth up to about the time of weaning, and then a decided slowing down. Dr. B. M. Harrison and Miss Bessie Nyi presented a paper on "The Embryological Development of the Lacrimal Gland of the Horse." It was reported that the anlagen appear in the 27 mm stage and in succeeding stages increase in number to a maximum of twenty-two, from which they decrease to thirteen, in the 13 cm embryo. Under the title of "Some Stages in the Development of the Glands of the Urethral Tract of the Horse Embryo," Dr. B. M. Harrison and L. A. Bavetta showed that Cowper's gland appears at the 4.4 cm stage, the prostate at 5.3 cm and the Glands of Littre at the 9.2 cm stage. Two reels of moving pictures of the bird life on Hat Island of Great Salt Lake were shown by C. G. Plummer. He estimated that 100,000 birds come to Hat Island each year.

### WESTERN SOCIETY OF SOIL SCIENCE

*(Report by J. C. Martin, secretary-elect)*

Two half-day sessions of the society were devoted to a symposium on soil moisture.

Dr. W. L. Powers' paper on the relation of confined air to movement of soil water was read. In laboratory studies using burettes, it was found that with a constant head of 5 cm the rate of wetting of sandy loam and silty clay loam soils where the base was open, was about twice that in closed columns. Dr. G. B. Bodman and Dr. N. E. Edlefsen reported on the result of field measurements of the permeability to water of a silt loam soil at Davis, California. Dr. N. E. Edlefsen discussed the meaning of dielectric constant of a material, calling attention to water having a value of about 80, whereas that of most materials in the soil is of the order of 4. Equipment developed for the measurement of the dielectric constant of moist soil was described. Measurements in the laboratory and in the field indicate the dielectric constant of a moist soil to be a linear function of the quantity of water present. L. A. Richards and Dr. H. L. Blood described certain improvements they have made in the construction of auto-irrigator apparatus to overcome the difficulty of preventing air leaks in prevailing types of two piece double-walled irrigator pots. Dr. F. J. Veihmeyer and Dr. A. H. Hendrickson report that the permanent wilting percentages obtained by growing sunflowers in small containers of soil prove to be a reliable measure of those observed with permanently wilted crops in the field. Dr. Willard Gardner discussed dynamical principles underlying the movement of soil moisture, pointing out that for the movement of moisture in unsaturated soils the potential function as well as the transmission constant depends upon the moisture content of the soil.

A round-table discussion of problems in soil moisture was led by Dr. F. S. Harris. M. D. Thomas introduced the discussion showing peculiar vapor-pressure moisture relationships in soils saturated with sodium.

One half day was spent in observing, under the guidance of M. D. Thomas, some of the soil profiles on the upper bench lands and the alkali soils near Salt Lake, including an early reclamation project.

The last half-day session was devoted to miscellaneous papers.

R. C. Cole made a progress report on methods of measuring soil structure. As soils are slaked in water, they quickly reach an equilibrium where the particles are somewhat stable and whose stability seems not to be affected by prolonged standing in water. Mechanical agitation of slaked soils causes a breaking up of the aggregates.

The following papers are reported by title, since no abstracts have been obtained:

*Activity of replaceable bases in bentonite:* D. S. JENNINGS, DEWITT SMITH and M. D. THOMAS.

*Nitrogen losses on the dry lands of Utah:* A. F. BRACKEN and DR. J. E. GREAVES.

*Studies in organic decomposition in the soil:* DR. T. L. MARTIN.

*Soil moisture studies under dry farming:* A. F. BRACKEN.

# SCIENTIFIC EVENTS

## SALARIES OF SCIENTIFIC MEN WORKING UNDER THE BRITISH GOVERNMENT[1]

THE restoration of the economy cuts in salaries made by county councils and other public bodies in Great Britain within the last six months raises the important question as to when the government proposes to follow suit. These cuts have inflicted considerable hardship on a large body of scientific workers in government employment, and they were always avowedly temporary in their incidence. The ten per cent. reductions have now been operative for two years, and in very many cases they were imposed on basic salaries that were in no way adequate considering the scientific attainments of the victims. Admittedly they were a breach of contract, and there is considerable force in the contention that the government is in honor bound to follow the example of

[1] From *Nature*.

municipal bodies, and to restore these cuts at the earliest possible moment. The country's financial position is very different now from what it was in October, 1931. The national finances have been stabilized. Successive conversion schemes have reduced the burden of debt charges. The estimated revenue from the new tariffs for the current year is £24,500,000. Moreover, during the current year the revenue has received a windfall of more than £8,000,000 from death duties on the estate of the late Sir John Ellerman alone.

Trade is improving, and the adverse balance of trade is smaller than it has been for some considerable time. Employment is improving, whilst unemployment is decreasing. New industries are being launched, such as coal hydrogenation, which will be productive of increased employment and revenue. These new industries are frequently the outcome of scientific research; and it is not too much for scientific workers to expect that the conditions under which they have labored during the past two years shall, at least, be restored to the level of 1931. Point is added to this expectation when it is borne in mind that the government from time to time creates fresh appointments of a non-scientific character which carry no such burdens as salary cuts. A whole batch of appointments has recently been created under the Milk Marketing Board, none of which appears to have salary cuts imposed—notably a general manager has been appointed to this board at a commencing salary of £5,000 rising to £7,000; that is to say, this general manager's salary is not subject to the cut which is imposed on the Prime Minister's, and will eventually be higher than the Prime Minister's basic salary. Then recently a fresh appointment was made at the post office, and there was no mention of the salary being subject to an economy cut. It is obvious that the time is ripe for reviewing the whole situation.

## THE NINTH INTERNATIONAL CONGRESS OF PURE AND APPLIED CHEMISTRY AT MADRID

*Industrial and Engineering Chemistry* gives an account of plans for the scientific organization of the Ninth International Congress of Pure and Applied Chemistry which were discussed at a gathering of chemists of Spain and other countries held at the summer university of Santander from August 8 to 18. Most of these chemists were present as lecturers in the summer school. The others were invited to attend these lectures and join in the exchange of opinions upon the best method of assuring the success of the Madrid congress.

Those present and the countries they represented were: E. Biilmann (Denmark); G. Barger (England); F. Haber and R. Willstätter (Germany); C. Matignon and J. Gérard (France); N. Parravano (Italy); Fr. Fichter (Switzerland); E. Cohen (Holland); H. von Euler (Sweden); P. de B. Carneiro (Brazil), and A. Seidell (U. S. A.). The Spanish organizing committee and their collaborators included: H. Hauser, *president;* E. Moles, *secretary,* and J. A. de Artigas, E. Barrón, A. Campo, O. Fernandez, J. Giral, A. Madinaveita, F. Calvet, I. Ribas, C. del Fresno and A. Perez Vitoria.

The journal continues: The conditions under which the conferences were held were most delightful. The chemists were guests at the beautiful Palace of the Magdalena, the seat of the summer university of Santander, where every provision was made for their comfort and pleasure. Lectures were given by chemists of exceptional distinction, visits were made to the industries and points of interest in the surrounding region, and once each day there was a round table discussion of plans for the next International Congress of Chemistry.

The date of the congress early received attention. Although the Spanish committee pointed out the advantages of the month of June in regard to agreeable weather and greater facility in securing hotel, dormitory and meeting-place accommodations, practically every representative of the other European countries considered that a date in April, immediately following the Easter holidays, would permit a larger attendance of chemists from their respective countries. The Spanish committee immediately assented, and April 5 to 11, inclusive, was chosen as the date of the congress. The opening session will be held on April 5 at 11:30 A. M.; the ordinary sessions on April 6, 7, 9, 10 and 11, and the closing session on April 11. Sunday, April 8, will be set aside for excursions.

It was decided that a general lecture should be given on each of the five days devoted to the scientific program: two dealing with pure chemistry; two, with applied, and one, with a question of outstanding biological chemical importance. The choice of the particular subjects for these principal addresses was given most careful consideration and a decision will be reached and announced later. It is expected that these addresses, as well as the papers presented before the sectional meetings, will be printed and distributed in advance. Individual communications will, of course, be welcome, but in order to be placed on the final program they should be submitted prior to February 5, 1934. The committee plans, however, to make such thorough preparation in advance that little will be left to uncertainty.

The congress will also include the usual social and excursion features. On account of the exceptional artistic, architectural and historical richness of Spain, the excursions should be of unusual interest. It should