

The Twelfth International Horticultural Congress, Berlin, 1938.

SCIENCE AND SPORT have no frontiers, and it is natural that international meetings in connection with either of these departments of human activity should be the order of the day. Berlin was the stage of the Twelfth International Horticultural Congress in August this year (1938).

The Indian delegation to the Horticultural Congress consisted of Dr. W. Burns (Agricultural Expert, Imperial Council of Agricultural Research), Dr. H. Chaudhuri of the Punjab University, and Mr. K. C. Naik, B.Ag., M.Sc., Superintendent of the Fruit Experimental Station at Kodur (Madras). As the Congress was divided into no less than 20 sections, the three delegates arranged as far as possible to attend different sections, in order to give and get as much information as possible. All, however, attended the session of the Tropical Section of the Congress, of which Dr. Chaudhuri (at the invitation of the German organisers of the Congress) had the honour to be the first president and to deliver the presidential address. During the discussion Dr. Burns gave an account of the organisation of horticultural research in India.

All meetings were held in the Kroll Opera House, which has, in addition to its main great auditorium, many rooms of all kinds which were used for the sectional meetings, and for some of the social events. The opening meeting of the Congress was held in the great auditorium which was decorated for the occasion with that colour and lavishness that one expects from a régime that has perfected the art of mass displays. Behind the rostrum was a vast map of the world; against it were ranked the banners of over fifty nations, and in the centre was suspended an enormous golden rose, the symbol of the Congress, also worn on the badges of all delegates.

Arrangements had been made for all meetings held in this hall and also in some of the smaller rooms whereby delegates could hear any speech in any one of four languages: German, Italian, French or English. This was done by a system of interpreters each speaking into a telephone while the listener had at his seat another telephone and a switch that enabled him to listen to any one of these interpreters.

The Congress was officially opened by the Reich Minister for Food and Agriculture (Herr R. Walther Darré) who welcomed the delegates and pointed out how the International Horticultural Congress had grown from small beginnings to be the forum of horticultural specialists from all parts of the world. He emphasised the fact that there is scarcely any field of activity so varied as horticulture, proceeded to point out the increasing importance of fruit and vegetables in world trade and human diet and remarked on the number of new problems that all this had raised. He also stressed the cultural significance of horticulture (for the Congress had several sections dealing with the cultural and æsthetic side of the subject).

Some of the papers on this aspect of horticulture were distinctly stimulating, particularly perhaps the paper on "Park and Garden Planning" by Dr. Jensen of the United States who was against all clipped hedges, in fact, anything artificial and wanted a park or garden to be a

living example of the cultural life of the people. He mentioned as an instance of the Lincoln Memorial Garden (planned by himself) designed to express beauty and strength, the beauty of the land and the strength of character of Lincoln.

Dr. Wirz (Germany) gave an interesting lecture on "The Significance of Fruit and Vegetables for National Health and Vitality" followed by a practical demonstration in the shape of a breakfast of fruit and vegetable dishes prepared in a wonderful variety of ways. Dr. Trouvelot (France) dealt with outstanding success in biological control of pests of horticultural crops. These lectures belonged to the general part of the programme as did the excellent lecture by Col. Durham (Secretary of the Royal Horticultural Society of England) on "The Object and Purpose of Exhibitions and Trials of New Varieties in regard to the Advancement of Horticultural Breeding".

Among the sectional papers, a notable one was that of Mr. Charley of Long Ashton (England) dealing with fruit beverages of the unfermented group, a subject of much interest to India, and one in which considerable headway has been made at the Agricultural College in the Punjab (work jointly financed by the Punjab Government and the Imperial Council of Agricultural Research).

A section of considerable potential interest to India was that on "Storage of Fruit and Vegetables". The main speaker did not deal much with tropical fruits, but this lack was made good by the communication of Dr. Wardlaw of Trinidad, already well known to tropical workers from his series of papers on cold storage, in the *Journal of Tropical Agriculture*. He stressed the need for finding the best stage of maturity and the best temperature for each kind of fruit and pointed out that the long transport that had to be endured by tropical fruit meant a higher storage temperature and an earlier stage of maturity at picking. He emphasised the need to get tropical fruit into store as quickly as possible to avoid wound parasites and to prevent the onset of ripening due to the warm environment, and pointed out that well-equipped shipping was a fundamental requirement.

It is impossible to deal even slightly with the many admirable communications, but mention must be made of the paper by Dr. Hatton (East Malling, England) on "The Present Status of Research on Rootstock Plants and the Use of Rootstock Plants," in which he traversed a field where his own experiment station has given a brilliant lead. During the discussion on this paper, Mr. Naik dealt with rootstock problems in mangoes and citrus species and mentioned the fruit research schemes subsidised by the Imperial Council of Agricultural Research.

During the Congress one member of the Indian delegation visited the world-famous Plant Breeding Institute founded by the late Prof. Edwin Baur at Müncheberg, and another visited the Horticultural Experiment and Research Institute at Dahlem.

The social entertainments by the Reich Government and by the Central Association of

German Horticulturists were enjoyable affairs and also led to a great number of useful personal contacts. These personal contacts are one of the most valuable results of such international congresses. The man one meets is no longer a mere name but a person with whom one can have a correspondence with friendship and understanding behind it.

From this Congress has been gained a series of summaries of the present state of knowledge in horticulture and also useful details in many branches of horticultural practice. India's horticultural problems and achievements were presented and many friends made. Lastly, India had the chairmanship of an important section.

W. B.

SCIENCE NOTES.

The Mohenjodaro Civilization.—The work executed during the four seasons 1927-31, detailed accounts of which are given in a recent publication entitled "Further Excavations at Mohenjodaro" by Dr. Ernest J. H. Mackay, has thrown more light on the life of the ancients who peopled the Indus Valley 5,000 years ago. The presence of the Indus Valley seals in Sumarian cities, points to the trade connections between the two countries. The city's sanitation appears to have been very carefully looked after. A mound, proved to be a heap of rubbish, has been discovered, at some distance from the area occupied by the houses, showing that the idea of removing rubbish was being acted upon. Relics of the playful pastimes of children has been unearthed: carts of pottery pulled by toy bullocks are among the interesting finds made as a result of the excavations.

* * *

Assam's Coal Resources.—Recent investigations by the Geological Survey of India, mainly concerned with the unravelling of the structure of the rocks and incidentally with the continuity of the coal seams, have revealed the existence of workable coal in the south-eastern part of the Garo Hills and South-western area of the Khasi Hills, in Assam.

There appear to be two main seams of coal—an upper, varying from 18 inches to 4 feet, and a lower, varying from 3 feet to over 6 feet. The upper is relatively inferior while the lower seam is of good quality coal.

Presuming the coal seams to be continuously present under the areas indicated, it is computed that the reserves of coal, in the low seam only, average about 75,000,000 each in the Langrin and Nongstoin areas within a depth of 500 feet of the surface, and probably over 500,000,000 tons in the area south of the Tura range west of Chutmang mountain, at depths from 200 to 1,000 feet.

The Daranggiri coalfield reserves are estimated at 75,000,000 tons with coal lying at depths of 300 to 400 feet. In all these cases expensive boring must be carried out to prove the lower seam, and coal will ultimately have to be worked from shafts varying from 200 to perhaps 800 feet deep, and in most cases a railway or ropeway communication should constitute an important consideration.

* * *

India's Educational Problems.—The Wardha Education Scheme was the main subject of deliberation before the Central Advisory Board of Education, which met in New Delhi on December 3, 1938.

In January, 1938, the Board appointed a Sub-Committee under the chairmanship of the Hon'ble Mr. B. G. Kher, Premier and Education Minister, Government of Bombay, to examine the scheme of educational reconstruction incorporated in the Wardha Scheme in the light of the Wood-Abbott Report on General and Vocational Education and other relevant documents. This Sub-Committee met in Simla in June last and submitted its report to the Board on December 3, 1938. The Board generally approved the recommendations.

The Sub-Committee first attempted to clear the misunderstandings and misconceptions which had gathered round the Wardha Scheme and then considered its various aspects. In its opinion, these misunderstandings had arisen from either a misconception of the fundamental ideas on which the scheme rests or from the statements made by its enthusiastic but misguided protagonists or from some of the phraseology of the Zakir Husain Report itself which is the authoritative Wardha Scheme of Education. The Sub-Committee observed that the Wardha Scheme as presented in the Zakir Husain Report was one of education through activity and not of production as is generally believed, and that this scheme was in full agreement with the recommendations made in the Wood-Abbott Report so far as the principle of learning by doing was concerned.

The Sub-Committee discussed whether or not it was possible to teach through the basic craft all subjects to the standard anticipated. There was general agreement that in the lowest classes education could be satisfactorily carried out through activities, but certain elements of cultural subjects which could not be correlated with the basic craft must be taught independently. Again, spinning and weaving should not be the only basic craft but any craft of equal or higher educative possibilities could be taught. Stress was laid on the report of the Sub-Committee on the training of teachers, the raising of their status and pay, etc. While generally approving these recommendations, the Board decided that copies of the Sub-Committee's report should be forwarded to Provincial Governments for consideration.

The Sub-Committee did not consider the question of financing the Wardha Scheme as this was outside its terms of reference, nor did it make any recommendation as regards the co-ordination of this scheme with higher education. To examine these questions of finance and co-ordination and certain other matters arising out of the Wardha Scheme, the Board appointed another Sub-Committee of which the Hon'ble