

## NOTES.

## Tanjore-Trichy Mirasdars at Aduthorai.

The departmental officers met the Tanjore-Trichy mirasdars at a conference for a second time this year in January. In response to invitations, over 250 rich landowners assembled at the Aduthorai Paddy-Breeding station at 8 A.M. on the 10th. They were shown round the farm by Messrs. N. S. Kulandaiswami Pillai, the Assistant Director in-charge and M. Anandan, Assistant in charge of the Station and the work in progress was explained.

A small show and demonstration was arranged for the occasion. Several paddy types evolved at the station, varieties of groundnut, cotton and samples of artificial and chemical manures were on view. Methods of seed selection and the modes of attack of pests and diseases were described with the help of charts. Neat little sheds made of bamboos and coconut leaves showed on one side the cheapest method of preserving cattle dung whether under the loose-box system or the dry system. In another part, in one field, the iron plough was working side by side with the country-plough and showed itself superior.

After dinner, the conference met at 1-30 P.M. under the Presidentship of M. R. Ry., Rao Bahadur C. S. Subramanya Ayya Garu, a rich landholder and an ex. M. L. A. Mr. R. O. Iliffe, Paddy Specialist also attended. Mr. N. S. Kulandaiswami Pillai welcomed the guests, dwelt on the need for improving agriculture and vividly set forth the many obstacles in the way of adopting improvements. In the course of his speech, the President appealed on the one hand to Government to allot more funds for agriculture and to appoint more agricultural demonstrators and veterinary assistants to help the ryot and on the other he pleaded with the ryot to adopt the improvements advocated and exhorted young men to go back to the land and to take to the plough.

The following resolutions were then passed by the meeting :—

- (1) This conference requests the Government to provide larger amounts for agricultural work in the budget for 1926-27.
- (2) This conference requests the Government to establish veterinary dispensaries at each taluk head-quarters.
- (3) This conference reiterates its request to Government for arranging for the prohibition of the export of bones and fish-guano



out of India and for the imposition of an export duty on oil-cakes, cotton seeds and other fodder and manurial substances.

(4) This conference requests the Government to establish bone-crushing installations or to give liberal aid for co-operative undertakings and existing installations.

(5) This conference requests the Government to arrange for the keeping of a service bull at the Veterinary Dispensaries.

(6) This conference requests the Government to establish an agricultural middle school in the district.

(7) This conference requests Government to provide more demonstrators to this (5th) circle, as there are only 10 demonstrators for 11 taluks.

(8) This conference requests Government to provide labour saving machines for ploughing etc., at Aduthorai or any other suitable place.

and (9) This conference requests the Government to take early steps to establish a Mortgage Bank in the district.

Mr. Anandan then read a paper on the work done at the station. (This appears in this issue of the Journal.)

The programme ended with a magic lantern exhibition at 7 P.M. when short lectures were delivered on agricultural improvements suited to the district.

The success of the meeting was due as much to the geniality and alertness of Messrs. N. S. Kulandaiswami Pillai, M. Anandan and their staff as to the kind cooperation of the enlightened mirasdars of the district.

### The maximum Population of the World.

Sir. George H. Knibbs in Scientia gives various estimates of the possible population ranging from 2,942 millions if the existing population increased in ratio of O. R. Banker's estimate of possible increase in the U. S. agricultural area to 9,792 millions if all existing arable land in the world could support three persons an acre and a final maximum of 13,440 millions if an average of a person per  $2\frac{1}{2}$  acres applied to the whole land surface of the world. Sir.



George considers it doubtful whether the population will ever reach the 5,000 million limit. If man better coordinates his efforts so as to involve less expense in non-productive effort, then, possibly science may enable the 7,000 million limit to be reached. The friendly study of universal economic conditions and of adjustment of all territorial and economic relations together with advances made through systematised knowledge would perhaps make possible a population of 9,000 millions which may leave very little area per individual.

(From Nature dated 16th January 26).

### The British Association.

The annual meeting of this association will be held at Oxford on August 8 to 11. The Presidential address by H. R. H. The Prince of Wales, will, it is understood, deal with relations between scientific research, the community, and the State, both in Britain and the Overseas dominions. Among the subjects to be dealt with in sectional addresses on Economics and agriculture are "the economic development of British Tropical Africa. Inheritance as an Economic factor, Economic aspects of the Financial and labour outlooks, Vegetative propagation, Agricultural education, Cultivation methods, and Dairy problems."

### A Missing Link.

A writer in a recent issue of the Scottish Journal of Agriculture, pointed to the fact that his own country made the first winner in the latter part of the eighteenth century on the model of the one surreptitiously obtained from Holland where it had been in use about a hundred years. He records that a tradition was current in that country that the Dutch themselves were indebted to their colonies in the East for this useful piece of farm machinery. It might therefore be presumed that each country in the East had perfected its farm implements and machinery suited to its local conditions. From the sample of a wooden plough with a mould-board which Mr. H. C. Sampson brought with him from Cambodia and added to the collections in the Central Farm, one might infer that Java and Cambodia were using implements which but for the material used, compared favourably with the improved implements of the west, in the principle of construction.



As Java and Combodia were the outposts of old Indian civilization and as the implements in the Deccan have extorted the admiration of unbiased observers it is difficult to account for the absence of the mould-board plough and winnower in India. Will any student of history or archaeology be able to solve the problem?

### Mechanical Tree Felling with a Saw-Plane.

A French Engineer has invented a new machine for the felling of trees by machinery, also plank sawing, etc., which is giving very interesting results. This machine weighing 270 lbs. called "Saw-Plane" by its inventor, has just been adopted by the French Ministry of War, and by most of the French Timber and Forestry concerns. The process of cutting is quite *sui generis*, the sawing is done per medium of a cutting chain, which encircles the tree and turns at a lineal speed of 7 metres per second. Trees may be cut level and square with the ground. The chain is composed of links bearing each two tracing knives and a plane, hence the name of Saw-Plane. The sawing speed is about one second per inch of thickness for soft wood and about two seconds for hardwoods.

A poplar hole of 40 centimeters diameter is cut in thirtyfive seconds, oaks measuring 90 centimetres, in two minutes. The biggest oaks measuring  $1\frac{1}{2}$  metre take 12 minutes. It is worthy of note that the machine fells trees of any diameter with the same facility and passes from one diameter to another without loss of time.

As the sawing goes on the tree sags on the saw-line without jamming the cogs and it finally falls on the opposite side of the machine. The sawing of a tree with a saw-plane does not entail the use of ropes or of a jack and reduces felling expenses by 75 per cent.

(From the Queensland Agricultural Journal Vol; XXV. March 26.)

### Rainfall and Temperature of C.U.B.A.

A conspicuous feature of the rainfall in Cuba is its degree of dependability during the usual crop growing months from May, until November. Since 1900 the average rainfall has never been



less than  $2\frac{1}{2}$  inches for any month during the period from May to November and the rainfall has averaged 5.6 inches for the driest month.

During the 25 year period 1899-1924, the greatest rainfall for the entire island was 68.26 inches in 1906 and the smallest 38.71 inches in 1907 showing a ratio between the extremes of rainfall of 1.8. It is considered that a ratio of 2 for annual rainfall is satisfactory and Cuba's extremes are within this limit. The ratios for the seasons naturally show greater variations, that for the summer is placed at 2.4, autumn 2.2, winter and spring showing more variable rain. The winter season shows a variation of 34 per cent of the normal, spring 21 per cent, summer 14 per cent and autumn 16 per cent.

The distribution is comparatively even, there were heavier rainfalls in the western provinces than in the eastern. All provinces have a minimum rainfall in January or February with a steady increase to maximum in May or June, followed by a decrease in July, with a secondary maximum in September or October.

Normal annual temperatures are reported as 76.4 F., with the lowest in January of 71.1 and the highest in August of 80.7. August showed the highest maximum mean temperature of 5.6 and January the lowest of 79.7. In the minimum temperature January showed the lowest 62.6 and July the highest 73.9. (The Planter Oct. 3)

---

### Edward DeMille Campbell.

"WHERE THERE IS A WILL, THERE IS A WAY."

On September 18, 1925, the scientific world lost Prof. Edward DeMille Campbell whose life was a typical realisation of the old time saying: "Where there's a will, there's a way."

Professor Campbell was born in Detroit in 1863. At the age of twenty-six, he was appointed Assistant Professor of Metallurgy in the University of Michigan. After barely two years in



this position, he lost his eyesight as the result of an explosion that occurred while he was experimenting on the cause of the hardening of steel. Ten days after the unfortunate accident, he resumed his teaching work.

"His life soon became ordered to the new conditions—a daily hour of physical exercise in the gymnasium, hours when assistants read to him the preparation of notes written by himself with the Brail typewriter, and many hours of planning. It was this latter element which permitted him to obtain his remarkable success as an investigator, utilising the hands and eyes of those who were frequently merely undergraduates. No research problem was undertaken unless it could be planned so that the variables could be measured quantitatively and little be left to the uncertain judgment of the experimenter. He developed his memory marvellously. He would take the results of experimental work day by day, make approximate mental calculations and visualize the trend of a series of tests in a way which was extraordinary. He once said that he himself aimed to know more about each student's work than the student did himself and he did."

In spite of his serious handicap, Professor Campbell remained in the University of Michigan until his death. He published not less than seventy-seven research papers. In 1902 he organised the course in chemical engineering and since 1905 was Director of the Chemical Laboratory. He also served in the Senate of the University.

"No one possessed of his normal faculties can fail to find encouragement in the thought that here was a man, blind since 1892 who nevertheless continued steadfastly in a profession where progress would seem to be impossible without eyesight, and achieved the distinction of becoming chairman of a great department in a great University.

"If one so handicapped could be cheerful, productive in his work, and constructive in his thinking, how can the average man complain of his lot and be satisfied with less than his best."

F. O. SANTOS.

The Phillippine Agriculturist—Vol. 14-No. 9 February 1926.



### How To Kill An Association.

(1) Don't come to the meetings. (2) But if you do come, come late. (3) If the weather does not suit you, don't think of coming. (4) If you do attend a meeting, find fault with the work of the officers and other members. (5) Never accept an office, as it is easier to criticise than to do things. (6) Nevertheless get sore if you are not appointed on a committee; but if you are, do not attend committee meetings. (7) If asked by the Chairman to give your opinion regarding some important matter, tell him you have nothing to say. After the meeting tell every one how things ought to be done. (8) Do nothing more than is absolutely necessary; but when other members roll up their sleeves and willingly, unselfishly, use their ability to help matters along, howl that the association is running by a clique. (9) Hold back your dues as long as possible, or don't pay at all. (10) Don't bother about getting new members. Let the secretary do it. (11) When a banquet is given, tell everybody money is being wasted on blow-outs which make a big noise and accomplish nothing. (12) When no banquets are given, say the association is dead and needs a can tied to it. (13) Don't ask for a banquet ticket until all are sold. (14) Then swear you have been cheated out of yours. (15) If you do get a ticket, don't pay for it. (16) If asked to sit at the speakers' table, modestly refuse. (17) If you are not asked, resign from the association. (18) If you don't receive a bill for your dues, don't pay. (19) If you receive a bill after you have paid, resign from the association. (20) Don't tell the association how it can help you; but if it does not help you, resign. (21) If you receive service without joining, don't think of joining. (22) If the association does not correct abuses in your neighbour's business, howl that nothing is done. (23) If it calls attention to abuses in your own, resign from the associations. (24) Keep your eyes open for something wrong, and when you find it resign. (25) At every opportunity, threaten to resign, and then get your friends to resign. (26) When you attend a meeting, vote to do something and then go home and do the opposite. (27) Agree with everything said at the meeting and disagree with it outside. (28) When asked for information don't give it. (29) Cuss the association for the incompleteness of its information. (30) Get all the association gives you but don't give it anything except....(31) Talk co-operation for the other fellow with you, but never co-operate with him. (32) When everything else fails, cuss the secretary.

(From Scottish Farmer 16-1-1926).



## Co-operation in Japan.

The co-operative movement in Japan dates from 1892. In 1900, a Co-operative Society Act was passed and this provides for four distinct classes of societies, namely (1) for supply of credit, (2) for sale of produce, (3) for purchase of supplies and (4) for the common use of land, buildings and machinery. There are 14,259 societies with a membership of  $2\frac{3}{4}$  millions and a capital of 40 million pounds. Over 77 per cent of the members are agriculturists.

## Duties of an Educational Institution.

"At the present time and particularly in technical institutions the vast majority of students have in view their future life and the need of earning a livelihood. Any educational institution, if it is to bear the well-being of such students in mind has a moral duty to see that only those are admitted who possess a reasonable prospect of finding employment after finishing their course. It is morally bound, therefore, to enquire the objects which a student has in mind when making application for admission and, if not actually bound to refuse admission in unsuitable cases, it is at least bound to point out the attendant dangers so that the student enters with open eyes. and there is a moral duty incumbent on us to point out the facts to such applicants as, being without capital or influence, apply in the expectation that a course at the college will pave the way to profitable employment. To do otherwise would be, in our view, a breach of trust and neglect of moral responsibility."

Extract from the "West Indies-Tropical Agriculture."  
(November, 25.)

## UNIVERSITY OF MADRAS.

B. SC. AG. DEGREE EXAMINATION, 1926. PART II.

*Agricultural Botany I.* Monday, 12th April, 7 to 10 A.M.

(Answer only 5 questions. Questions 4 and 5 are compulsory).

1. Describe in technical language the fruit of the mango, tamarind, jack, pomegranate and sweet sop, giving their respective botanic names, with the families to which they belong.