

## SCIENCE NOTES AND NEWS

### Leafy Tuft Disease of Sugarcane

Shri S. L. Sharma, Central Sugarcane Research Station, Pusa, Bihar, observes that the disease now prevalent in Co.419 in Bombay State and designated 'Grassy Shoot' should be called 'Leafy Tuft' which is more appropriate because there is practically no formation of a shoot as understood in sugarcane. The clump develops into a bushy growth consisting only of greatly reduced leaves which arise almost at the ground level, so as to form a tuft.

This disease was first noted in May 1953 in Co.604 at Pusa and has been the subject of many investigations because of its very rare occurrence in Bihar, but its symptoms were published by the author in 1951. In this article the disease was named 'Leafy Tuft' and the name has since been internationally recognized. (*Proc. IXth Cong. Int. Soc. Sugarcane Tech. India, 1956.*)

### Leaf-spot Disease of Papaya Plants

Messrs. B. L. Chona, G. Lall and J. N. Kapoor, Division of Mycology and Plant Pathology, Indian Agricultural Research Institute, New Delhi, report a leaf-spot disease of papaya plants from Delhi; it is caused by *Cercospora papayæ* Hansford, which is being reported for the first time from India.

### *Annals of Physics*

*Annals of Physics*, a new monthly journal of physics, has been announced by Academic Press, Publishers, New York. Original articles on research in any branch of physics will be welcome. *Annals of Physics* hopes to provide a medium for the publication of important articles which are internally complete and thus are generally understandable to professional physicists working in other fields. The length of articles will not be a limiting factor.

Volume 1, Number 1, is scheduled for release in April 1957. Manuscripts should be submitted to the Editor, Professor Philip M. Morse, Department of Physics, Massachusetts Institute of Technology, Cambridge 39, Massachusetts.

### Ultra-Pure Silicon

Commercially available silicon, even of the highest purity, contains significant amounts of impurities which must be removed if the mate-

rial is to be used for semiconductor devices. Of these impurities, the most difficult to remove is boron.

H. C. Theuerer of Bell Telephone Laboratories has found that boron can be removed from molten silicon by reaction with water vapour. This reaction oxidises the boron, and the oxidation products evaporate.

To carry out the reaction, a liquid silicon zone supported only by surface tension is caused to traverse a vertical silicon rod around which flows a mixture of hydrogen and water vapour. This technique prevents contamination from crucibles and provides a large interface between the silicon and the atmosphere. Under these conditions, removal of boron is very effective, increasing both with time and with water vapour concentration. This method, used in conjunction with the zone refining technique, makes possible the production of silicon containing boron at a concentration below one part in ten billion and having a resistivity greater than 3,000 ohm-cm. Improved transistors and other semiconductor devices may result from this ultra-pure material.

### Blood Groups and Disease

A correlation between a person's blood group and the diseases to which he is susceptible was reported by J. A. Fraser Roberts of the London School of Hygiene and Tropical Medicine, at the recent Annual Meeting of the British Association for the Advancement of Science. With reference to the blood groups A, B and O, (i) the incidence of duodenal ulcer is now known to be 40% higher in persons with group O blood than in those with other types of blood; (ii) gastric ulcer is 25% more common among members of the same group, and persons in group A appear to be abnormally susceptible to cancer of the stomach; and (iii) persons with O or B blood are more than normally likely to get diabetes and pernicious anaemia.

### XVI International Congress of Pure and Applied Chemistry

The above Congress is to be held in Paris during July 18-24. Besides the usual sections on physical, inorganic and organic chemistry, there will also be symposia on the following subjects: Plastics, Electrochemical methods of

Analysis, Criteria for the purity of the proteins and Geochemistry. Those intending to participate in the Congress are requested to send their applications and resumé of papers through the Secretary, Council of Scientific and Industrial Research, Old Mill Road, New Delhi, before January 31.

### Third Commonwealth Standards Conference

The Third Commonwealth Standards Conference will be held in New Delhi from 21 January to 3 February 1957. The New Delhi Conference will be the first of its kind to be held outside London. The object of the Conference will be to secure greater alignment of industrial standards and standardization policies of Commonwealth countries in the interest of inter-Commonwealth relations and trade.

The technical discussions at the Conference will be held in four separate sessions, each covering the subjects of steel, electric cables, electric equipment of machine tools and safety requirements for domestic electrical appliances. The general questions of policy will be reviewed in separate sessions at which consideration will be given to various problems of common interest like the metric and the inch-pound systems of measurements, certification marking, modular co-ordination, standards for consumer goods, general alignment of standards, terminology, approval schemes and ABC work. The Conference will also review the recommendations of the Second Conference and implementation thereof.

### Forest Research Institute and Colleges, Dehra Dun

The Forest Research Institute and Colleges, Dehra Dun, celebrated their 50th anniversary on December 6-8, 1956. Starting from a modest beginning in 1906 as an adjunct and in the premises of the then Imperial Forest School, the Institute has grown from strength to strength till it has now become the largest institute of forest education and research in the whole of Asia. It has the unique distinction of being the only Institute in the world which conducts research on forestry and forest products and at the same time imparts education in forestry for officers and rangers for the whole of India. The researches conducted at the Institute comprise a wide range and have

secured for it international recognition. Our heartiest good wishes for the further progress of this great institution.

### Lady Tata Scientific Research Scholarships, 1957-58

The Trustees of the Lady Tata Memorial Trust are offering six scholarships of Rs. 250 each per month for the year 1957-58 commencing from 1st July 1957. Applicants must be of Indian nationality and graduates in Medicine or Science of a recognised University. The scholarships are tenable in India only and the holders must undertake to work whole-time under the direction of a scientist of standing in a recognised research institute or Laboratory on a subject of scientific investigation that must have a bearing either directly or indirectly on the alleviation of human suffering from disease. Applications must conform to the instructions drawn up by the Trust and should reach by March 15, 1957. Candidates can obtain these instructions and other information they desire from the Secretary, the Lady Tata Memorial Trust, Bombay House, Bruce Street, Fort, Bombay-1.

### Raptakos Medical Fellowships Award

The Raptakos Medical Research Board Fellowships for 1957 have been awarded to the following candidates: E. R. Divakaran, Physiology Department, Presidency College, Calcutta-12; S. H. Kamath, Institute of Science, Bombay-1; P. Aiyappan Pillai, Indian Cancer Research Centre, Parel, Bombay-12; Shashi Bala Prasad, Department of Pathology and Bacteriology, King George's Medical College, Lucknow.

### Award of Research Degree

The Andhra University has awarded the D.Sc. Degree in Technology to Sri. V. N. Kumarkrishna Rao and K. V. Kurmanadha Rao for their theses entitled "High Pressure Vapor-Liquid equilibria of non-ideal solutions" and "Studies in Vapor-Liquid equilibria", respectively.

The University of Poona has awarded the Ph.D. Degree in Chemistry to Shri B. B. Ghatgey and M. S. Narasinga Rao for their theses entitled, "Studies in Essential Oils" and "A Study of the Inter-action of Metal Ions with Bovine Serum Albumin" respectively.