

GLEANINGS.

A Welcome Resolution. Nearly 2,000 Muslim cultivators assembled at a meeting in Dacca, passed resolutions condemning the borrowing of money from money-lenders. Money lenders are generally Hindus in those parts, so that the resolution is really said to mean that cultivators have decided not to be borrowers. This is welcome news as it forcibly cuts at the very root of peasant indebtedness.

(*The Christian Patriot*, dated 4-2-24) V. M. A.

Encouraging Sugar Industry. The Australian Government have sanctioned proposals to provide three travelling scholarships of £300 per year tenable for four years for encouraging the scientific aspect of sugarcane industry. One scholarship will be for Sugar Engineering and Chemistry, one for Plant Pathology, and one for Soil problems. It is to be hoped that similar steps will be taken to help the sugar industry of India where sugarcane occupies a much more important position than in Australia.

K. K. RAO.

Breeding Laws. Breeding is presumed to be governed by certain so-called laws, but these at best can be vaguely described, and how far these laws may be influenced by chance conditions is altogether uncertain. Nevertheless, enough knowledge has been gained concerning this subject to enable breeders to carry out their work with a reasonable prospect of success; and it is consequent on this that probable results from 6 given lines of work are referred to as "laws." The principal of these laws are:—(1) That quality reproduces itself, and can also be developed; (2) That atavism, or reversion towards original characteristics, has always to be guarded against; (3) That unaccountable variations may be expected to occur at all times between the progeny of any mating over a succession of years.

Jour. Dep. Agr. Vict. February 23.

Pedigree. A pedigree is a concise record of an animal's lineal descent from ancestral stock, and those who are acquainted with the breeding of an animal through its pedigree are thus enabled to continue the work which former breeders of that line of stock followed. Again, where it is hoped to improve some particular feature in one strain by mating with animals from another, a study of the pedigree of both may assist greatly by showing where a blood line exists which is common to both strains. By such knowledge success may be insured more readily, for without it there is every possibility of atavism presenting itself.

Journal of Dept. of Agr. Victoria—February 23.

Serum-Simultaneous Inoculation in the Philippines. Last year saw the closing of the simultaneous immunization stations for the immunization of native cattle and carabaos against rinderpest, which was a mistake in many prospects. This method for controlling rinderpest had its ups and downs for several years, but had reached the point where its value as a protection against this dreaded disease was no longer doubtful. Some may challenge this statement on the grounds that the simultaneous method is expensive and sometimes unpopular with the owners of animals, owing to the length of time it takes to complete the treatment. We cannot get something of value for nothing, and neither is it possible to satisfy everybody. These stations were not closed because results were not obtained, but because politics entered in, and politics many times have a tendency to be destructive rather than constructive. There is nothing that has given the veterinarian more satisfaction in this work than to see animals immunized by this method remain free from rinderpest when placed in the same pasture with sick animals. [Extracted from the Presidential Address by Harry F. Kearne—Philippine Vet. Med. Association.]
(*The Philippine Agricultural Review*, Vol. XVI. No. 3, 3rd quarter 23.)

Incredible swarms of cotton moths: Swarms of the cotton moth, *Alabama argillacea* Hubn. appeared in Bridgeport, Conn. September 12. According to the newspapers they were so abundant in the streets as to cause the skidding of automobiles which crushed and passed over them. Be that as it may, they fluttered over and rested upon the show windows and flew into the faces of pedestrians and automobilists. Mr. Zappe observed them resting on light posts and the walls of buildings all over the city. They literally covered the posts of the "White way" lights in Bridgeport, and he also observed them in Stamford. The moths were also present in New Haven, though much less abundant. In 1911 a similar swarm of these moths occurred in New Haven the last week in September, and in 1912 the moths also appeared, though in much smaller numbers and not until October 11 and 12.

W. E. BRITTON.

Jour. Econ. Entom. Oct. 1923

Chara — an aquatic plant — kills mosquito wrigglers:—Having produced the toxic effect of *Chara foetida* on mosquito larvae (R. A. E.; B. X. 136) the author has undertaken experiments to determine whether other species of the same genus of plant have the same effect. In water taken from the basin of a fountain near Barcelona in which *C. fragilis* was growing abundantly, larvae of *Aedes (Stegomyia)* Sp. introduced on the 28th July were all dead by 1st August, indicating that water in which *Chara* has lived has a toxic effect as well as the weed itself. A vessel containing this plant from another locality into which similar larvae were introduced

showed them all to be dead within six days. In some cases, where the growth of the plant in the laboratory was defective and the stems remained almost colourless, the larvae were able to develop into adults, although very slowly, but with normal development the larvicidal properties were obvious. Another species not yet determined, but probably *C. intermedia*, killed all larvae within 48 hours after their introduction into the water in which it was growing, and is obviously a powerful larvicide. Several pieces of water in the regions of Castellon and Barcelona, in which in 1920 mosquito larvae were present but no *Chara*, were found on re-examination in the following year to contain a certain amount of *Chara*, while all mosquito larvae had disappeared.

A. Caballero :— Bol. R. Soc. Espan. Hist. Nat. XXII No. 9
pp 418—421—Madrid—Nov. 1922.

Aims and Organisation of Plant Pathological Service in Canada.

In view of the great diversities in climatic and other conditions affecting plant life in a great stretch of country like Canada, the problems confronting the growers of crops are very varied. In order to maintain the closest touch with the actual cultivators throughout the Dominion, a chain of plant pathological laboratories has been established throughout the length and breadth of the land, where pathological problems confronting the different regions can be better studied than in a central laboratory. This also enables the department to maintain a very close plant disease survey and to secure accurate information regarding the prevalence of diseases.

Research work conducted in the branch laboratories regarding *Puccinia graminis* (black stem rust of wheat) has revealed the existence of a considerable number of biologic strains of the fungus and attempts are being made to breed rust proof varieties of commercial value. Diseases of potatoes—particularly mosaic and leaf-roll—control of scab of apples and European apple tree canker and physiological effects resulting from irrigation of orchards are also dealt with in some of the laboratories. Besides directing the work of these branch laboratories, researches on the diseases of forest trees, tobacco diseases, bacterial diseases and special lines of investigation in plant pathology and physiology such as the relation of temperature and light to plant life are undertaken at head-quarters. There is also a dominion-wide system of field and tuber inspection of potatoes for seed purposes made according to a high standard of freedom from diseases. This has been going on for the last 8 years. 11,250 acres of potatoes were examined in 1922 and the country now possesses a large amount of seed potatoes particularly free from disease.

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