

Crop and Trade Reports.

Cotton Raw in the Madras Presidency. The receipts of loose cotton at presses and spinning mills in the Madras Presidency from 1st February 1937 to 7th September 1937 amounted to 449,926 bales of 400 lb. lint as against an estimate of 533,100 bales of the total crop of 1936-37. The receipts in the corresponding period of the previous year were 523,949 bales. 331,999 bales mainly of pressed cotton were received at spinning mills and 192,184 bales were exported by sea while 86,249 bales were imported by sea mainly from Karachi and Bombay. (Director of Agriculture.)

Ginger—First forecast report. The area under ginger up to the 25th August 1937 in the Malabar district is estimated at 11,000 acres as against 10,000 acres for the corresponding period of the previous year. The condition of the crop is satisfactory. (Director of Industries.)

College News & Notes.

Students' Corner. The college was closed for the Michaelmas holidays on 15-9-87.

Students' Club. Under the auspices of the Students' Club, Mr. K. N. Aiyah Iyer delivered a lecture on 6-9-37 on his experiences in Russia. Mr. R. S. Sankara Iyer, Retired Dt. Judge, presided. There was a good gathering of students and officers to hear Mr. Aiyah Iyer's lecture which was much appreciated.

Games-Cricket. What turned out to be the most important match of the Y. M. C. A. Cricket tournament was played on the College grounds on the 8th September between the Agricultural College and the Coimbatore Cricket Club and ended in a victory for the college. Both the teams were well represented and a keen fight was anticipated. Winning the toss, the visitors elected to field. The College team lost a wicket before any run was registered but a good partnership between C. Ramaswami and C. N. Baboo changed the aspect of the game. The college were all out for 139 runs of which Ramaswami made 55 and Baboo 27. Thangavelu took 2 wickets for 27, Potts 3 for 62 and Muthuswami 3 for 16. The Club made a promising start but later dwindled down till fresh life was induced by some hectic hitting by Padmanabhan. They were all out for 113, of which Ward (22), Suri (19), Padmanabhan (19 not out) and Natarajan (18), were the chief contributors. The bowling honours were shared by Kodandaraman (4 for 34), C. Ramaswami (3 for 35) and Dinker Rao (2 for 34). The College is now leading all other teams in the tournament and stands the best chance for annexing the Shield.

Games Tour. The Cricket team of the College led by Mr. Shiva Rao has left on a holiday tour of Mangalore, Mercara and Tellicherry where they will be playing a series of matches against local colleges and clubs.

Our members abroad. We are glad to learn that Mr. V. Panduranga Rao, M.A., who went last year for special training under Dr. Weaver of Nebraska, U. S. A., has secured the M. Sc. degree of the University of Nebraska for his thesis on "Ecological Studies on the Roots of Sorghum and Millets". Mr. Rao is expected back in Madras in October '37.

ASSOCIATION OF ECONOMIC BIOLOGISTS, COIMBATORE. The following papers were presented at a meeting of the association held on 9th September 1937:—

Some experimental evidence for the origin of the indigenous canes of India. By E. K. Janaki Ammal. The indigenous cultivated canes of India, the so called *S. barberi* and *S. sinense* of Jesweit, occupy taxonomically a position intermediate between the noble cane *S. officinarum* and the wild species, *S. spontaneum*.

Cytologically these latter represent a polyploid series ranging from $2n=48$ to $2n=80$ in India (so far collected) and $2n=80$ to $2n=124$ in further India and East Indies. In *S. barberi* and *S. sinense*, aneuploid numbers ranging only from $2n-82$ to $2n-124$ have been observed.

Evidence for the origin of these canes from *S. spontaneum* has been obtained from (1) the study of occasional giant triploids amongst selfed progenies of *S. spontaneum* in which resemblance to *S. barberi* is very pronounced, (2) the occurrence of giant intraspecific hybrids from fertilisation of unreduced gametes in one of the parents, (3) from the phenomena of heterosis met with in crosses between widely separated chromosomal types of *S. spontaneum*, and (4) variation in sucrose content observed in populations of *S. spontaneum* seedlings.

The part interspecific and intergeneric hybridization might have played in the origin of some Indian canes is also presented by the study of their resemblance to such hybrids produced experimentally. (Author's abstract.)

The relative functions of the enzyme pectinase and oxalic acid in the parasitism of fungi. By K. M. Thomas. Workers on the physiology of fungi are divided in their opinion on the *modus operandi* of the invasion of the host by parasitic fungi.

The enzyme production of three fungi viz., *Botrytis cinerea*, *Sclerotinia sclerotiorum* and *Sclerotium Rolfsii* was studied with special reference to their capacity to produce oxalic acid. All the three fungi were found to produce a cell wall dissolving enzyme, but the enzyme of each showed specific differences in the wide variations of the optimum pH for their action. In the production of oxalic acid, *S. Rolfsii* produced the largest amount (2% on potato), *S. sclerotiorum* less, and *B. cinerea* only a trace. The amount of oxalic acid decreases with the increased acidity of the medium. The enzyme is produced and functions even when no oxalic acid is formed.

In the case of *S. Rolfsii*, the acid provides the suitable pH for the action of the enzyme. There is some evidence that the acid kills epidermal tissues and the unspecialised parasitism of *S. Rolfsii* is attributed to this character.

(Author's abstract)

Visit to the Imperial Cane Breeding Station, Coimbatore. The members of the association paid a visit to the Sugarcane Breeding Station on the evening of 23rd August 1937.

They assembled first at the Thick Cane Station where Mr. N. L. Dutt, the second Sugarcane Expert, received them and explained with the aid of interesting specimens the dual origin of sugarcane, viz., the thin-medium cane from India and the thick juicy canes from the South Pacific. With the help of charts he then explained the mass of data obtained regarding the germination and storage of sugarcane pollen, as also certain interesting studies on the seeds of thick canes. The members were then taken round the cane plots where the superior and vigorous growth of the thick seedling canes by the side of the standard varieties was marked. The most outstanding of these are Co. 419 and Co. 421, the former a 'thick cane' growing well in tropical parts of India and the latter a 'medium cane' giving a good account of itself in several parts of North India.

At the main station, Rao Bahadur T. S. Venkatraman, the Sugarcane Expert, received the party and explained to them the several ways by which mutations

in sugarcane could be induced artificially. They were shown a large collection of *Saccharum spontaneum* from all over India, which species of *Saccharum* was deliberately used at Coimbatore to produce vigorous seedlings. The encouraging results obtained by the crossing of sugarcane with sorghum gave a fillip to the selection of parents widely differing from sugarcane. Recently a successful cross has been effected between sugarcane and bamboo, and the members evinced great interest in the hybrid seedlings now growing in the seedling house area at the station. The hybrids exhibit several bamboo characters. The future of this cross will be watched with great interest.

Dr. E. K. Janaki Ammal, the Sugarcane Geneticist, then explained to the gathering the cytological evidence of the origin of several forms of *S. spontaneum* now growing wild in various parts of India and other countries and also how from such evidence she has formulated theories regarding the inheritance of certain characters in sugarcane.

Rao Bahadur T. S. Venkatraman and other members of the station were 'At Home' to the members of the association.

Weather Review—AUGUST 1937.

RAINFALL DATA

Division	Station	Actual for month	Departure from normal @	Total since January 1st	Division	Station	Actual for month	Departure from normal @	Total since January 1st
Circars	Gopalpore	6.5	-1.3	29.1	South	Negapatam	2.2	-1.4	11.0
	Calingapatam	2.7	-5.2	17.5		Aduthurai *	4.6	+1.8	10.8
	Vizagapatam	5.3	-0.1	16.8		Madura	4.5	+0.2	7.0
	Anakapalli *	6.9	+1.6	26.7		Pamban	3.5	+2.8	14.5
	Samalkota *	5.9	+1.0	22.0		Koilpatti *	1.9	+0.1	9.6
	Maruteru *	10.1	-3.4	19.9		Palamkottah	1.2	+0.6	8.1
	Cocanada	7.7	+2.2	24.9	West Coast	Trivandrum	4.0	-0.1	37.7
	Masulipatam	6.5	-0.4	20.4		Cochin	12.9	...	97.0
	Guntur *	3.7	-1.1	17.3		Calicut	11.2	-4.4	105.6
Ceded Dists.	Kurnool	1.0	-4.0	13.1		Pattambi *	8.6	-6.9	66.3
	Nandyal *	0.8	-4.4	19.0		Taliparamba *
	Hagari *	0.6	-1.8	6.2		Kasargode *	15.7	-8.0	141.7
	Bellary	0.4	-1.9	7.7		Nileshwar *	16.6	-9.1	131.2
	Anantapur	0.9	-1.3	12.7		Mangalore	15.4	-7.1	122.9
	Rentachintala	2.3	...	19.6	Mysore and Coorg	Chitaldrug	1.5	-1.5	7.4
	Cuddapah	0.8	-5.0	10.6		Bangalore	2.3	-3.2	22.5
	Anantharajupet *	1.9	+1.0	15.2		Mysore	3.2	-0.2	22.2
Carnatic	Nellore	1.6	-1.7	35.2		Mercara	23.8	-1.7	100.2
	Madras	7.1	+2.5	15.2	Hills	Kodaikanal	5.4	-1.6	30.9
	Palur *	2.6	-2.8	9.3		Coonoor	2.4	...	34.1
	Tindivanam *	6.4	+1.7	11.8		Ootacamund *	5.8	-1.0	34.6
	Cuddalore	2.6	-2.4	8.7		Nanjanad *	5.5	-1.3	30.8
Central	Vellore	3.7	-2.6	14.3					
	Salem	4.5	-2.3	16.3					
	Hosur *	1.6	-1.4	20.8					
	Coimbatore	2.3	+1.2	10.4					
	Coimbatore								
	A. C. & R. I. *	2.1	+1.1	13.6					
	Trichinopoly	9.6	+5.8	21.1					

* Meteorological Stations of the Madras Agricultural Department.

@ From average rainfall for the month calculated upto 1935 published in Fort St. George Gazette.