

Reviews.

Pusa Bulletin No. 126—Cawnpore American Cotton II—by B. C. Burt, M. B. E., B. Sc., Secretary Ind. Central Cotton Committee.

In this bulletin, the author sets forth the results that have been obtained since the publication of Bulletin No. 88, wherein certain definite conclusions had been reached as to the prospects of Cawnpore American Cotton in the canal districts of the Central Circle. He summarises his present results as follows:—"By pure line selection with the necessary precautions against cross-fertilisation, a pure race has been isolated from the mixed acclimatised Exotic, known as Cawnpore American cotton. This yields well, has a staple of $1\frac{1}{6}$ " to $1\frac{1}{8}$ " and is suitable for spinning 25's warps and 30's wefts in Cawnpore and up to 36's in Lancashire. Over, 1,100 acres of this selection were grown by cultivators in 1920 and sufficient seed is now available to replace the original Cawnpore—American entirely. An independent market unginning American cotton (*kapas*) has been established in Cawnpur.

Y. R. R.

Journal of the Mysore Agricultural and Experimental Union, December 1921.

The December number, which reached us about the middle of last month, maintains its usual high tone and proves to be full of interest. Besides the Editorial comments and various interesting extracts, it contains an account of the proceedings of the Fourth Annual Meeting of the Mysore Agricultural and Experimental Union. The opening speech of the President, Dr. L. C. Coleman, is highly instructive and the defence he has put up on behalf of the Mysore Agricultural Department against criticisms levelled at it in the Mysore Representative Assembly and in the Mysore Legislative Council, is armed with convincing figures, and ought, we are sure, to set at rest the doubts of the unbelievers. Though each Province and State in India has its own peculiar problems to solve and moreover has a very varying individual record of *fait accompli*, yet we

are sure the general line of defence taken by Dr. Coleman will apply with almost equal force to the criticisms made in the various provinces. The issue also includes papers read by various members at the meeting and it must be noted that most of them deal with the actual results of experiments undertaken by them on their own lands. There is besides an article on the Insect Pests of Mysore.

We note that with the beginning of the IV Volume, the journal will have changed hands. From January 1922, the journal, which has passed three difficult years of infancy in the safe hands of Mr. Yegnanarayana Ayyar, will pass over to the fostering care of a large Editorial Board with Dr. Narasimha Ayyangar, B. A., Ph. D. as Chairman. We wish the Journal a long and prosperous life.

Notes and Extracts.

Fall in value of crops. The total value of *Farm Crops* has been dropping in the United States of America since 1919 owing to the general fall in prices of farm products.

The total value for 1921 was 5,676 millions.

1920	9,075	,,
1919	13,689	

Agricultural Review, January 1922.

V. M. A.

The aim of teaching in agriculture must be practical. There must be a practical ring about it, instruction tempered by demonstration with life in it to keep attention fixed on it. Slavishly imitating town teaching is like serving pap with a hatchet, calculated rather to frighten the child than to feed it.

H. Wolff.

R. S. R.

Poison gas against rats. Hawaii contemplates starting a poison gas offensive against rats in that island. The Hawaiian planters are said to have looked up their books and found to their dismay that in certain of their plantations as much as one tenth of the cane

grown is damaged by these rodents. Hence the campaign. The gas would be of the kind that was used by the American army in Europe recently. We wish the cane planters all success and trust that no breach of 'international' law is involved in the contemplated operations.

T. S. V.

The Hon. John Dymond. The Honourable John Dymond, Editor of the Louisiana Planter and Sugar manufacturer from the time of its inception, passed away on 5th March 1922 as a result of a severe cold due to exhaustion leading to pneumonia. This is a great loss to the sugar cane World and a void has been created in it not easily to be filled in. He was the first man in the sugar world to weigh the sugar cane received at the mill, as a basis for a comprehensive system of cost determination, this latter developing into the scientific chemical control now practised at modern sugar factories everywhere.

(The Louisiana planter—March 11—1922.).

R. S. Rao.

Importance of irrigation. That water is the limiting factor in production of crops is well known to all agriculturists, The importance of irrigation in increased crop production especially in laterite soils has been worked out by the Bengal Agricultural Department and the results are favourable as shown under :—

Crop.	Irrigated.	Unirrigated.	Defference in yield.
	Mds—Seers.	Mds—Seers.	Mds—Seers.
Wheat Irrigated	20—38	11—27	9—11
Barely thrice	26— 8	23—15	2—32
Wheat.			
Pusa 12	24— 0	16— 0	8— 0
,, 4	15— 0	10— 0	5— 0
Local.	15— 0	13— 0	2— 0
Potatoes.	156—14	94—1	62—13

(The Bengal Agricultural Journal December 1921.)

R. S. Rao.

Water power in the British Empire. The water Power Committee of the conjoint Board of Scientific Societies notes with satisfaction that the Government of India have been given instructions for a course of lectures in the major Engineering Colleges in Madras, Bombay, Bengal and the United Provinces by an expert in hydroelectric Engineering and says "The Development of Indian water power would appear to offer a most promising field to British manufacturers and one in which some initial sacrifice would be amply repaid"

	Hydraulic Horse power available.	developed.	Per cent. developed.
Europe	47,300,000	8,450,000	18·0
United States of America	32,000 000	65,00, 000	23·3
British Empire	60,000,000	3,000,000	5·0

(Mysore Economic Journal, February 1922).

V. M. A.

Seed Testing Station. A New Seed Testing Station was opened in Ipswich, England, on 17th February 1922. The building cost £45,000 and with its six floors has a floor capacity of 38,000 sq. ft. The building has been erected from the accumulated twenty years savings of the East Anglia Farmers' Association. One noticeable feature is the provision of the dark room, specially constructed so as not to affect the colour and growth of seeds.

From the Scottish Farmer, February 25, 1922.

V. M. A.

Farming business. The building up of a farm business is the hardest and most precarious undertaking in the world to day. No other business on earth can stand the handicaps which confront the farmer. The American farmer (in fact the farmer of any country) to day is the most burdened, perplexed and overworked member of society.

The work of the farm is a combination of many different arts and operations that require endless fitting and readjustment to meet

continually varied conditions. Neither the theory nor the practice of agriculture can be reduced to the simple system or prescribed routine of an industrial operation.

Farming is facilitated by modern implements in the sense that fewer men are required, but running complicated machines and keeping them in repair is harder and more exacting work than the old hand labour. Certainly the conditions and comforts of farm life have not improved in proportion to the use of machinery.

The chief social effect of labour saving inventions is that most people find ways to return from the work of production and live in idleness or engage in non productive urban activities.

(O. E. Cook,—Journal of Heredity).

R. S. Rao.

Proposed Cotton Cess. The Government of India seem to have approved the recommendations of the Indian Central Cotton Committee in regard to the levy of cotton cess, which, briefly were:—

1. To levy a cess of 4 as. per bale of 400 lbs. on all cotton as well as on exports for a period of 5 years.
2. To devote the proceeds of the cess exclusively towards the expenses of the Central Cotton Committee to meet the cost of technological and agricultural research on cotton.

The estimate of initial expenditure involved in the appointment of a technologist with a suitable laboratory and apparatus was Rs. 3½ lakhs together with a recurring grant of Rs. 1 lakh. In addition the annual budget of the Cotton Committee itself, apart from research work, was estimated at about a lakh of rupees.

The average annual exports of Cotton during the 5 years ending 1920—21 were slightly over 3 million bales of 400 lbs each, so that a cess at the rate of 4 as. per bale on exports alone would yield a revenue of about Rs. 5 lakhs, which would be sufficient to meet the cost of the Technologist and his laboratory as well as the operations of the Committee. If the cess were levied on all cotton, including mill consumption, it will be reduced to a rate sufficient to provide the funds required.

The Committee of the Bombay Chamber of Commerce in response to an enquiry express their agreement with the views of the Government, and suggest that the simplest method of collecting the cess would be at the mills and at the ports. They, further, opine that the proposed cess will not be prejudicial to the cultivator in as much as the whole of it would be paid by the consumer, though theoretically the incidence of the cess should be evenly divided between the cultivator and the consumer and each would have to pay 0.005 annas per pound.

(The Indian Trade Journal April 6—1922.)

Panama Disease of Bananas or Banana Wilt. This disease is reported to be a serious disease of Bananas in Central America and part of the West Indies. It is reported to be caused by a fungus (*Fusarium Cubense*) the spores of which occur in the soil, and enter the plant through the roots into the bulb, and thence spread through the plant. The banana plant infested by this fungus begins to wilt suddenly, the leaves droop, fold down and dry up quickly. In case, when a wedge is cut out of the stem a foot above the base, yellow, red or brown streaks are noticeable, one may be sure that the Panama disease is present. The new unfolded leaf at the top will be found black and rotting. It is an insidious disease and remedial measures are very difficult, as it enters through the roots. It has been the cause of immense loss to Banana growers. In British Honduras 6000 acres planted to bananas were wiped out before the first crop was reaped and in Central America many thousands of pounds loss was occasioned. One should therefore beware of its introduction into India.

(From the Journal of Jamaica Agricultural Society, Dec. 1921.)

Y. R. R.

A remedy against mosquitos. Experiments conducted in France have shown that mosquitos prefer rabbits to human beings when both are available. As a result of the discovery it is said that in localities where mosquitos are common the inhabitants keep rabbits along with poultry to offer the necessary counter-attraction and it is said, with successful results.

It is to be hoped that rabbits in turn will not harbour any destructive virus, which may lead to the development of a serious malady in mankind.

(From the Modern Review, April 1922).

T. S. V.

Cattle and Malaria. Medical opinion is veering round to the position that cattle play an increasing part in the prevention of malaria. It is observed that in Algeria, it is easiest to catch adult mosquitos in the pig-stye in day time and that in Batavia certain species actually prefer to feed on bullocks rather than on man.

Would this explain the provision of Cattle stalls in the entrance of dwellings especially in malarial areas of Bengal or Orissa ?

V. M. A.

Cattle and malaria. In connection with the question of the role of cattle in the prevention of Malaria, Mons. Roubaud observes that in certain districts of France, a particular malaria-carrying mosquito—*Anopheles maculipennis*—has of recent years been noticed to transfer its attentions from man to cattle consequent on an increase of the latter in numbers, and in such areas he states malaria has diminished considerably or even disappeared. According to this author, wherever the proportion of mosquitos to cattle is greater, the mosquitos are known, though evidently much against their will, to bite Man and thereby give rise to a certain amount of malaria. He further seeks to prove that this mosquito has by the influence of natural selection gradually developed larger number of teeth in their maxillae, so as to fit them for attacking the tougher skin of cattle.

In India too, Mr. A. B. Fry in discussing this question in the Indian Medical Gazette, Calcutta, January, 1922, regards that the low percentage of malarial infection among the population of Bengal is really due to the greater attraction the cowsheds seem to possess for the Anophelines than the sleeping apartments of man. According to Ross's Formula, the chief factor that influences a malaria epidemic is the proportion of the mosquitos that succeed in

biting man and this factor is certainly controlled by the presence of cattle; and Mr. Fry believes that the presence of cattle may act as a two-fold weapon and attract mosquitos even while it protects human beings outside the actual cattle zone.

(From, the Rev. App. Entomology—Vol. X, Ser B, Pt. 3—
March 1822). Y. R. R.

Hints for making an agricultural enquiry. All information regarding local practices of a tract is got by observation and enquiry. Enquiry is carried out by a set of questions and a great deal of care should be exercised in framing these questions. The principal points to be borne in mind are set out by Mr. M. A. Hopkins in his article on 'The outline for a study of the cost of Milk Production' in the Journal of Dairy Science Vol. V No. I 1922. Though they were raised in reference to an enquiry with Dairy farmers, they will apply equally well and may be used as a guidance with advantage by all officers engaged in agricultural enquiry.

1. The questions must be so clear as to be proof against misunderstanding or confusion on the part of the Dairymen.

2. They must be so formulated that there will be no possibility of their antagonising the farmer.

3. The questions must be in the *farmers' vernacular* and *free from Scientific abstractions*.

4. The questionnaire should cover every factor of the business that could possibly influence the facts which are being sought.

5. At the same time, the questionnaire should not be so long as to tire the farmer before he has discussed all the important factors.

6. Where it is possible, checkquestions should be incorporated in the questionnaire in order to verify important points. The man who is collecting the data must always be able to supplement the farmers' answers with observation. They must be able to use tact and diplomacy in questioning further on points where farmer's answers appear to depart from facts.

R. S. R.

Food value of Eggs and Milk. In the March number of the Journal of Agriculture Victoria, we find a paper³ by Professor Dryden on the above subject quoted verbatim. The writer avers "The Egg has only one real competitor in the world among essential foods for human beings, and that is milk. The lowly cow and the humble hen carry the burden of the world as far as it relates to the physical well-being of the races." Speaking of the races of humanity, he thinks that the reason why "the peoples of Europe and America are the largest in the world, have the lowest death-rate, the longest span of life and the lowest infant mortality, and further have become the great masters of the forces of nature," is because of a difference of diet. They have been making greater use of milk and eggs than the races of the Orient.

He further remarks "Chemical analysis has failed to give us a correct understanding of the nutritive needs of animals as well as of human beings. The value of a food has been judged largely, if not wholly, by its protein content and often by its heat units as determined by Chemical analysis. The newer nutrition clearly proves that chemical feed formulas have had their day. For instance Dr. Mecollum proved by experiments on young rats and pigs, that when fed on wheat alone, or with a mixture of corn, wheat, oats, peas, barley, rye—or with the addition of vegetable oils such as those of almond, peanut, and cotton seed they did not make growth, while normal growth was obtained when butter fat or yolk fat was added." From further experiments it would appear that they did not live when fed on a ration of purified protein, carbohydrates, fats and mineral salts: and that "the substance in Butterfat responsible for growth is as yet an undefined Chemical substance—called "fat-soluble A." There is yet another substance—called "Water-soluble B"—which is present in yolk fats and butterfats and in various seed plants, and without which purified yolk and butter fats do not produce growth.

The great value of milk and eggs would—he concludes—be explained by the fact that these two essential substances are found abundantly only in these two foods.

Y. R. R.

Milk from Rice. In view of the great difficulty nowadays of obtaining pure cow's milk and also of its prohibitive price, attempts appear to have been made to get milk from other sources or to find a substitute possessing similar properties. In this connection the Rice Journal (Beaumont, Texas) relates "the discovery by two American experts of the art of extracting from the rice plant a liquid not only equal but actually superior to ordinary milk. The natural chemistry of the process by which this new milk is produced is thus described. "In the rice plant the sun's heat performs the work directly and in a most perfect manner requiring more time than the cow to complete the process of making its milk. The result is the rice kernel which is nothing more than a concentrated crystallised milk which in turn may, by a natural process, be turned into the flowing liquid form." These two experts after elaborate experiments in the extensive rice areas of California have produced an excellent rice milk with a fat content of 7%. Proposals are said to be afoot to start a big factory in San Francisco to produce this new food, which will not only be cheaper but richer, while its vitamin content will be greater. The importance of the rice industry is much enhanced by this discovery and the rice milk is likely to become the basis of a number of nutritious foods—news worth noting by the rice growers of India.

(The Statesman quoted in the "Indian Scout" Vol. IV, No. 9, March 1922).

C. S. G.

Commercial utilization of Cotton Stalks. The annual method in India is to utilise the cotton stalks as fuel, but the practice is objectionable as it helps in some cases to shelter some of the cotton pests during the off season. Various methods have been tried in Egypt and America and lately in the Imperial Institute, London, to make use of it in other ways. Firstly, the bark yields a fibre of a character somewhat resembling Bengal Jute, but the experiments prove that the cost of extraction is greater than the price obtainable for the product. Secondly manufacture of paper-pulp is another way of utilising the cotton stalks.

Earlier attempts in the United States did not promise success, but more recently improvements have, we hear, been effected. At the Imperial Institute, trials made with cotton stalks received from the Panjab and the Central Provinces, have shown that with the caustic soda process these Indian stalks can yield paper-pulp of fair quality, which can be bleached to a pale cream tint. The yield of pulp is however, rather low. As a practical proposition, however, further investigations are deemed necessary, as for instance, as to the question of the transport of such a bulky material to the factories. Thirdly by destructive distillation, a soft charcoal which, however, could not compare with lamp-black or carbon-black, a fair quality of wood naphtha which would find a ready sale in India, and acetic acid (the yield being rather low) and a thin tar are obtainable. Further trials are needed to find whether it would pay on a commercial scale.

(From the Mysore Economic Journal Jan. 1922)

Y. R. R.

Purity and virtue in Sugar. A recent issue of the West India committee Circular seeks to maintain that *perfect purity* in cane sugar is *not a virtue* but a disability. The public, it is stated, are often misled by the idea of "whiteness" and what it implies. The objection to "plantation sugar" is not that it is not white, but that the colour does not keep and that after sometime it becomes darker. The cause of this discolouration according to the journal, is the presence of a small quantity of cane juice products and is the very factor that gives it its great dietetic superiority over "refined sugar." "The snowy lustre of American granulated sugar, or the clear, translucent depth of a well-made British cube appeals to a mental idea of purity in the consumer. "Though the execution of these sugars may be faultless" says the journal "and their tone excellent, yet they lack the dietetic soul, the soul of the cane juice which the plantation sugars possess."

In support of this argument, the paper cites the well-known instances of the inferiority of the food value of *polished rice*, bread made of *white flour*, pure *white* butter and pure *white* cheese.

A solution of this question is of undoubted importance but belongs to the difficult domain of *Physiological Chemistry*. Nevertheless, the argument that applies to plantation sugar will, we believe, apply with double force to the cruder forms of India such as "gur" or jaggery and "unrefined" sugars on which the poor millions of India mainly depend.

(From "the Agricultural News"—Feb. 4—1922.)

Y. R. R.

Provincial Board of Agriculture. The Board of Agricultural Department in Bengal. This has been reconstructed on a more popular and representative basis. Both officials and non-officials (7 in number) form the members of the Board. The officials with the Director of Agriculture as president (ex-officio) are the Deputy Directors, the Agricultural Experts and the Special officers for Agricultural Education.

The non-official members will hold office for a period of two years.

The duties of the Board will be mainly advisory; they will advise the Government on matters referred to them for opinion or on any other matter which the President may consider suitable for discussion. There will be regular quarterly meetings of the Board to which visitors may be invited. The President is also empowered to convene meetings to be held at other times when he considers it necessary to do so. There will also be an annual general meeting which will be held on such date and at such place as the President may decide and to which the Department of Industries and the Co-operative and Veterinary departments will send representatives. The Director of Agriculture is empowered to invite other officials interested in Agriculture, large land-owners, representative agriculturists, representatives of allied trades and others interested in rural development selected so as to represent the agricultural interest of every district in the Presidency.

The Board as constituted at present is a comprehensive one embracing the agricultural interest of the whole presidency, and includes among the non-official members one M. L. C. and one M. L. A.

We wish the formation of a similar Board will take place in our Presidency so that the work of the Department may be brought home to or guided by responsible non-official bodies.

(From The Indian Trade Journal, April, 20, 1922.)

Empire Cotton Growing Association. The following extract from the report of the Administrative Council, adopted at the first general meeting of the Empire Cotton Growing Corporation held at London on 8th February 1922, describing the prospects of cotton growing in different parts of the Empire, will be of interest to our readers:—

India. The Indian Cotton Committee has recommended (a) legislation to control the transport in certain areas of loose cotton and cotton seed in order to lessen the chances of mixing up varieties and (b) the compulsory imposition of a small cess on all cotton used in the country or exported, the receipts to be devoted to the development of cotton production. The two proposals are under consideration by the Government of India, and, as the proposal regarding the compulsory cess will be strongly supported by the provinces, its passage into law is extremely probable.

British West Indies. There is much difficulty in disposing of the crop of Sea Island Cotton owing to fall in prices and lack of demand. The Imperial Commission for Agriculture suggested a system of advances to growers to ensure cultivation for next year. A considerable rise in prices, however, occurred after the above decision, so that the cotton growers will be able to dispense with the aid offered to them.

Tanganyika. (Formerly German East Africa). The prospects seem to be considerable. The Empire cotton Growing Corporation arranged with the Governor of the Province and the Treasury to undertake the responsibility for the repayment of a sum of £ 100,000 to be advanced as a grant-in-aid for the purchase of cotton from the growers. The present crop is estimated at 7,500 bales. Based on the report of the possibility of the Territory from Major Hastings Horne of the Colonial Civil Service and a note submitted by the Director, the Empire Cotton Growing Corporation applied to the Government of India for the loan, for two years, of an officer of considerable distinction both as an expert in cotton growing and in general administration, to advance the nascent industry on proper lines and to avoid initial mistake. Our readers need not be told that the officer selected

is no other than our Principal, Mr. R. Cecil Wood, who is already on his way to Tanganyika.

Nigeria. Sir Hector Duff of the Colonial office has submitted an account showing the opportunity for growing cotton and the difficulties likely to be experienced and discussing the principles to be followed in all efforts to encourage cotton growing by the natives. The matter awaits the decision of the Governor and the Colonial office.

Nyasaland. The Empire Cotton Growing Committee received a request from the Governor of Nyasaland asking for an expert to advise the Agricultural Department in its work on cotton last season. The Committee were fortunate in securing the services of Mr. Sampson who was then the senior Deputy Director of Agriculture in Madras. Mr. Sampson was able to make only a very short tour in the Protectorate when he was recalled to Madras to take up the duties of the Head of the Department here. Short as the tour was, his report is said to be of extreme interest, and, as would be expected from an officer of Mr. Sampson's specialised experience, the subject was treated from a technical standpoint. The Cotton Growing Committee have accepted his recommendations on administrative matters and as to the experience and qualifications necessary in the staff who are to work in the tropics. With regard to the provision of a highly trained staff, an advance has already been made by the institution of several studentships.

The Sudan. An eventful feature of the year was the development of irrigation, but the work of the Empire Cotton Growing Committee in this country, however, is extremely difficult as it is inextricably connected with the Egyptian political situation, and the Sudan question is left as a legacy to the successors of the present Committee.

(From the Indian Trade Journal, 20th April). M. R. R.

The Empire Cotton Growing Association affords a brilliant example of what can be achieved by the co-operation of

a number of cotton merchants; and it is gratifying to see that the Corporation is indebted to Madras for the supply of two of its experts—Messrs. Sampson and Wood—who have acquired most of their experience in Cotton growing and in administration during their long service in the Presidency. (Editor.)

Prices of Chilean Nitrate of Soda. The Chilean Nitrate Producers' Association telegraphs to the following effect regarding the selling prices fixed by them for nitrate of soda for 1922—23.

From July 1st 1922 the price of ordinary nitrate free alongside Chilean ports will be 18s. 6d. per 100 kilos (220·4 lbs.) which is £ 9. 8s. per ton of 2240 lbs. From July 16th 18s. 9d. August 1st 19s. 0d, August 16th 19s. 3d, September 1st 19s. 6, September 16th 19s. 9, October 1st £ 1, October 16th £ 1 0s, 3d, November 1st £ 1. 0s. 4d, November 16th £ 1. 0s. 6d, 1st December 1922 to 30th April 1923 the price will be £ 1 0s. 8d, equal to 9s. 6d, per Spanish quintal or as nearly as possible £ 10. 10s, per ton of 2240 lbs. For May 1923 the price will be 19s. 9d, per 100 kilos and for June 18s. 6d.

Refined nitrate (96%) will be priced 9d. per 100 kilos higher.

Estate News.

Hill Recess. The following Heads of Sections, viz., Messrs. F. R. Parnell, G. R. Hilson, R. D. Anestead and Rao Sahib M. R. Ramaswami Sivan are now on the Nilgiri Hills, engaged in the preparation of reports etc. As per sanction of the Director of Agriculture, Heads of sections can stay at their own cost on the Hills for a period not exceeding a month and a half attending to office work.

Mr. B. C. Burt, M. C. E. B. Sc. Mr. Burt, Secretary, Indian Central Cotton Committee, after attending a meeting of the Committee in Madras, paid a visit to Coimbatore early in May, and made a short stay here.

Visit of the Minister of Development. Rai Bahadur K. Venkata Reddi Nayudu Garu, Minister of Development, paid a short visit to the Agricultural College on the forenoon of Monday the 1st May. He was accompanied by Mr. Vellingiri Goundar, M. L. C. and other gentlemen, and inspected the various sections spending a short time in each. It is expected that he would visit the College again in June and spend a longer time in each section.

Conference of officers of the Agricultural and Co-operative Departments, Southern Districts. On the 10th May was held an inter-departmental conference made up of officers of the Agricultural and Co-operative Departments, including the Director of Agriculture, the Registrar of Co-operative Societies, Deputy Directors and Assistant Directors of Agriculture and officers of the Co-operative Department, South Division. We are led to understand that questions affecting both the departments in common were discussed. We hear a similar Conference will be held sometime later among the officers of the Northern Division.

Ramachandra Water lift. A specimen of this lift is being installed on the Farm for purposes of demonstration and Mr. Ramachandra Aiyar—the patentee of the “Ramachandra” Water Lift—was here for about a week supervising its erection.

Relief in the Quarters Question. Recently there has been some relief in the vexed question of quarters for the members of the Estate, owing to the understanding that some new C's and 'Inters' will be soon ready for occupation. An allocation of quarters has been made by the College Board recently with the aim of satisfying the demands as equitably as possible.

Departmental Notes.

A New Farm Sanctioned:—

The Government have sanctioned the opening of a farm in the Guntur District on a portion of the Lam and Gorantla reserves measuring 300 acres and have accepted the proposal to finance the station during 1922-23 from provision made in the budget for the Bantanahal and Sirvel farms which will be closed. The crops which will receive special study are "Cocanada" cotton and tobacco.

Appointments, Transfers & Reversions:—

Mr. W. Arokiaswami Pillai, Assistant Curator, to officiate as Curator during the absence of Mr. Butcher on leave.

Mr. M. Mangesha Rao, from III grade permanent and II grade S. P. T. to II grade permanent (provisional).

Mr. M. Kunhambu Nambiar, from IV grade permanent and III grade S. P. T. to III grade permanent (provisional).

Mr. M. Viraraghava Rao, from V grade permanent and IV grade S. P. T. to IV grade permanent (provisional).

Rao Sahib A. Rama Rao, from III grade permanent and II grade S. P. T. to II grade permanent (provisional).

Mr. W. Raghava Charya, from IV grade permanent and III grade S. P. T. to III grade permanent (provisional).

Mr. Swami Rao, from V grade permanent and IV grade S. P. T. to IV grade permanent (provisional).

Mr. C. V. Seshacharya, from IV grade permanent and III grade S. P. T. to III grade permanent (provisional).

Mr. L. V. Narasimha Acharya, from V grade permanent and IV grade S. P. T. to IV grade permanent (provisional).

Mr. R. Swami Rao, Teaching Assistant, to II Circle as Farm Manager, in charge of the newly sanctioned agricultural station, Guntur, to be relieved forthwith.

Mr. S. Narayana Ayya, on return from leave which expires on 25th May, to the Agricultural College, Coimbatore, as Teaching Assistant.

Mr. G. Rajagopal Mal from district work VI circle to the charge of Koilpatti agricultural station.

Mr. K. Narayana Ayyangar, Farm Manager, Koilpatti, to the Central Farm, Coimbatore.

Mr. V. G. Dhanakoti Raju, Farm Manager, Central Farm, on the expiry of the leave to be Farm Manager of the newly sanctioned agricultural station, Guntur.

Mr. R. Swami Rao on relief by Mr. V. G. Dhanakoti Raju, to III Circle.

Mr. K. E. Viswam Ayyar, transfer from II circle to IV circle as Assistant Agricultural Demonstrator.

Mr. K. P. Sankunni Menon, reversion to his permanent appointment in the lower division, V grade, with effect from 1-5-1922.

Mr. Bhairy Siva Rao is transferred from the I circle to the IV circle for district work in Chittoor.

Leave :—

Mr. Roger Thomas, Deputy Director of Agriculture, Madras, (now on deputation under Mesopotamia Government) leave on average pay for 9 months with effect from date of relief.

Mr. C. Sundararama Ayyar, Assistant Lecturer in Agricultural Engineering, privilege leave for one month and a half from or after 20-4-1922.

Rao Sahib Y. Ramachandra Rao, Assistant Entomologist, privilege leave for one month from 3-5-1922.

Mr. Saadat-ulla-khan, Probationary Deputy Director of Agriculture, Madras, extension of leave on half average pay for three weeks in continuation of the leave already granted.

Mr. V. G. Dhanakoti Raju, Farm Manager, privilege leave for two months from or after 15th June 1922.

Mr. L. S. Natesa Ayyar, Assistant Farm Manager, privilege leave for one month from or after 15th May 1922.

Mr. M. K. Nambiyar, Agricultural Demonstrator, Tellicherry, privilege leave for 3 weeks from 1-5-1922.

Mr. S. Narayana Ayyar, Farm Manager, extension of privilege leave for one month on half average pay.

Mr. M. Viraragha Rao, Farm Manager, privilege leave for 15 days from 15th May 1922.

Mr. S. R. Srinivasa Ayyangar, Agricultural Demonstrator, privilege leave for one month with effect from 11-5-1922.

Mr. T. K. Balaji Rao, Assistant in Botany, extension of privilege leave for a week.

Mr. P. Vishnuomayajulu, Assistant in Mycology, privilege leave for one month from 5-6-1922.

Mr. A. K. Ganesha Ayyar, Assistant Agricultural Demonstrator, privilege leave on average pay for two months from or after 10-6-1922.

Mr. A. Kondayya Sarma, extension of leave on average pay for one month and 15 days.

Mr. V. Chidambaram Pillai, Assistant Agricultural Demonstrator, leave on average pay for four months from or after 22-5-1922.

Mr. V. Narasimhanurti, privilege leave for one month from 15-5-1922.

Mr. P. M. Appaswamy Pillai, Assistant Agricultural Demonstrator, Jalarpet, privilege leave for one month from 10-5-1922.

Mr. T. Lakshmiopathi Rao, Assistant Agricultural Demonstrator, extension of privilege leave for 26 days.

Mr. C. V. Sankaranarayana Ayyar, Sub Assistant in Botany, privilege leave for 15 days from 22-5-1922.

Mr. P. Doraiswami Mudaliar, second artist, privilege leave for one month from 5-5-1922.

Mr. S. Dharmalinga Mudaliar, Assistant in Botany, privilege leave for two months from or after 20th May 1922.

Mr. P. S. Srinivasa Ayyar, Assistant Agricultural Demonstrator, privilege leave for three months from the date of relief.

Mr. T. S. Ramasubrahmanya Ayyar, extension of privilege leave by two months.

Mr. K. Sankaranarayana Ayyar, Assistant to the Lecturer in Engineering, privilege leave from 29-4-1922 to 12-5-1922.

Mr. K. Raghavachari, Agricultural Demonstrator, privilege leave for 15 days from 15-5-1922.

Mr. K. T. Bhandary, privilege leave for 15 days from 25th May 1922.

Mr. P. N. Krishna Iyer's leave on average pay for one month is extended by another month.
