

The increase in yield from 10 to 48 nuts per tree is very large and was secured at an outlay of manure of about 6 to 8 annas per tree. The enormous profit made is at once visible.

The undernoted figures represent the yield obtained by another cultivator. Presuming that the nuts were sold @ Rs. 5/- per 100, the increased income in 1914 was Rs. 125/- against the cost of manure applied Rs. 62/- which leaves an *increased* profit of Rs. 63/:-

1912 nuts gathered	4011	-	average per tree	62.
1913 do.	4405	-	" " "	69.
1914 do.	6512	-	" " "	101.

The above mentioned results were obtained from Messrs. Peirce, Leslie & Co. Ltd's., Special Coconut mixture and there is little doubt but that any one can obtain a similar increase in his coconut crop by applying this manure.

[*Note by Editor* :—The above contribution was sent by the agent of Messrs. Peirce, Leslie and Co, Calicut, and we shall be glad to publish actual experiences by individual cultivators. We may, however, state that Kainit which is imported from Germany may well be replaced by saltpetre and to a lesser extent by plant ashes.]

Notes.

“No single advantage could be afforded to the vast rural population of India that would equal the introduction of an improved system of agriculture”.—Court of Directors in the Educ. Despatch of 1854.

The great European war and the consequent dislocation of sailings throughout the world has created a novel situation in the Hawaiian islands. The sugar factories are experiencing serious shortage in bags (gunny?). About 11 millions of bags are annually imported into Hawai for the Sugarcane crop alone while coffee, rice and other industries take up another million. To get

over this difficulty it is in the air to try and compress the sugar into large blocks. We should soon be prepared to see large blocks of Sugar being rolled into, and out of, steamers trading in sugar.—T. S. V. (*From the Louisiana Planter*).

The March 20th number of the 'Illustrated London News' contains the picture of a churn worked by a revolving wheel behind the present battle line in France. The wheel is driven by a large dog of the Retriever type caged inside it. The dog is made to run inside the wheel and its continuously shifting weight rotates it. This reminds one of the see-saw waterlift, wherein the weight of an animal was utilised, which the late Rao Bahadur C. K. Subba Rao tried to bring into use for irrigation purposes. He demonstrated one such in the Government Farm at Palur near Nellikuppam about the year 1907 but unfortunately he did not live to see it completed. His appliance consisted of an enormous wheel attached to a see-saw with a bull treading on the latter and causing the wheel to rotate. This was made to work a chain of self discharging buckets fixed to the well from which it was desired to lift water. (T. S. V.)

Part of cane stalk most suitable for cuttings :— For various reasons the general consensus of opinion is that tops are most suitable. Points which seem of importance are (1) that, in general, the top sets are to some extent protected by leaf sheaths and the eyes are consequently better protected from injury (2) eyes of top sets are fresher and more ready to germinate when put in the soil, while on the contrary eyes of body sets often have dry hard scales which might hinder germination, and (3) eyes of body sets are more often killed by either the ring disease or the red rot or by the stalk borer. A fourth consideration is that body sets have sugar that must be converted into other materials before it is available as plant food, while the top seed actually has its food

in an available form. Thus the germination of the body sets would be delayed. J. C. R. (*Bulletin of the Sugar Producers' Association of Porto Rico.*)

The Effects of Electric Discharge on Plants:—Many experiments have been made during recent years in which plants have been subjected to an electric discharge from an overhead system of wires during a considerable portion of their growing period, and, as a result, *acceleration of growth* and *increase in yield* have been reported. Priestly, as the result of experiments, in collaboration with Knight, showed that direct currents have no effect on the *respiration* of peas (plant experimented). These results do not, of course, mean that the acceleration is inexplicable, for one result of electrification may be increased *transpiration*, which alone would account for a more rapid attainment of maturity by the plant, while various observers have found that electrification produces increased activity of constructive metabolism the process of building up food materials in the plant.

K. Cherian Jacob. (*"From Knowledge."*)

Seed Selection:—The fact that certain individuals are better than others has long been acknowledged and, wherever the principle of selection has been recognised and applied in practice, successful results have been obtained by the stock breeder and the horticulturist, in the production of a better class of animals and fruits respectively. The principle has recently been made use of in the growing of cereal crops. One European plant breeder has evolved a wheat plant, after careful and repeated selections, which has now become a highly productive variety. Barley has similarly been worked by another. In a rice field, every plant is not necessarily like every other of the same variety. Some individuals are met with which possess an inborn capacity to produce much grain and can transmit that capacity to their progeny. There is nothing so potent in plant industry as the

knowledge that production can be largely increased and desirable qualities enhanced by the simple methods of seed selection.—K. Ramiah. (*From the Phillippine Agricultural Review.*)

In the case of ragi crop, a practice of getting a firm seedbed is obtained by passing a paluku over the broadcasted seed and then allowing sheep to tread. This is in vogue in portions of the Uttankarai Tq. of the Salem Dt. The paluku is used for inter-culturing later when the plant is about a span high. This is done only for ragi and not for other crops. This ragi is of course rainfed. The yield is about 480 mm. per acre. W. R.

There is a variety of ragi in Jammanahalle firka of the Uttankarai Taluq which goes by the name of "Peria angam." It is a six months' crop. This is said to be resistant of disease and the best yielder of grain, and it is rain fed. W. R.

Prickly pear is palatable to dairy cows and, when fed in amounts varying from 60 to 100 lbs. a day, makes the cow very thrifty and productive. Larger amounts are too laxative in effect. 1 lb. of cotton seed hulls equals 8.8 lbs. of pear. By substituting 60 to 75 lbs. of pear for a portion of dry roughage, the percent of fat in the milk dropped 42 per cent on the average, but the milk flow increased. Cows fed with pear drank less water. This shows pear to be a valuable food when there is scarcity of water. One man can singe a ton of pear in fifty minutes with a gasoline torch, using $1\frac{3}{4}$ gallons of gasoline. Prickly pear must be given mixed with cotton meal and other dry roughage and should never be the sole ration. K. K. RAO. (*From the Journal of Agriculture, Victoria.*)

Weeds:—A novel method of destroying weeds along railway tracks comes from Illinois, America. A brush heavily charged with electricity is drawn along a few inches from the ground. Every plant touched is killed, and the cost of treatment is said

to be insignificant. J. RAO. (*Journal of the Department of Agriculture, Victoria*).

Sugar wards off fatigue:—General Joffre is not much of a smoker but invariably carries a supply of sweets to munch. Scientific experiments carried out with the aid of the ergograph—an instrument designed for registering variations in muscular power—show that sugar gives an increase in physical power of from 60 to 75%. It may be that the final settlement of the European War will be determined by the quantity of sugar each nation is able to obtain. T. S. V. *The Louisiana Planter*.

Bamboos clumps in the forests have this year flowered spontaneously in South Canara. Such clumps as have flowered are all dead and the general information is that such things happen once in 60 years. May I know if a similar observation has been made by others? Has this any bearing on the flowering of sugarcane?—B. S. Tolar.

The pans introduced in South Canara from Coimbatore for boiling sugarcane juice are now used largely for boiling paddy. The boiling is quite uniform and is certainly considered here an improvement over the old fashioned vessels.—B. S. Tolar.

Diploma Examinations, 1915.

PART I.

Mycology. *Examiners.* { Dr. L. C. Coleman.
Mr. W. MacRae.

First Class.

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| 1. { Narasimhachari, L. | 5. { Duraisawmi Aiyangar, G. |
| 3. { Sankaran Pillai, K. S. | 8. { Gopalakrishnayya, A. |
| 4. { Gopalan Nair, A. | 9. { Srinivasan, C. R. |
| 2. { Ramanatha Aiyar, V. | 6. { Shinappa Tolar, B. |
| | 7. { Adinarayana Rao, K. |

Provincial service. As good men are required for the Educational Department, and as such men are expected to remain in the Department, we respectfully beg to invite the attention of the Director of Public Instruction, either to give Agricultural Instructors progressive salaries on the same scale as in the Agricultural Department, or to adopt the system followed in the recruitment of the staff of the Engineering College, whereby, according to a mutual arrangement between the Heads of the two Departments, agricultural subordinates may be lent to the Educational Department, and vice versa, for specified periods. Our readers will remember that this subject was one on which the members of the Union decided to make a representation to the Director of Agriculture, two years ago, through their then Vice President, the late Rao Bahadur J. Dharmaranga Raju.

The Ex-Students of the late College of Agriculture at Saidapet will be gratified at the following testimonials given by the present sympathetic Head of the Agricultural department, extracted from his Notes on the Origin and Development of the Department in Madras:—

1. From among the staff of the old department and from the old students of the Saidapet College it was possible to collect a few well trained subordinates, who, for the first five years, have been the backbone of the department and have done excellent work. Without them, it would have been impossible to achieve as much as has been done. Coimbatore does not disown Saidapet, nor does the new department scorn the experience and results of those earlier days.

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2. It must be recognised that these results could not have been obtained in such a short time without the residuum of trained men bequeathed from Saidapet.

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3. The department, as recently developed, knows and recognises what it owes to the men trained at Saidapet. K. K. Rao.

A meeting of the resident Officers on the Estate was held about the middle of April, with Mr. R. C. Wood, Principal, in the chair, when it was resolved to send voluntary contributions towards the Hospital ship "Madras" for a period of 6 months. A sum of Rs. 70/- will be sent monthly from the colony.

We are glad to announce that the Hon'ble Mr. Muppil Nayar of Kavalapara has kindly consented to become a patron of the Union. He is our first patron. It is gratifying to note that the enlightened aristocracy of the country is taking interest in our work. We confidently hope to add to the list of patrons before the next Conference in July.

Mr. Patel, L. Ag., extra Deputy Director of Agriculture, Konkan Division, Bombay and Mr. Raman Menon (Cambridge), Director of Agriculture, Cochin State visited the College and Farm during the month. Under the auspices of the Officers' Club, Mr. Patel gave an interesting account of Agriculture and Agricultural education in different European Countries to which he had been deputed by the Bombay Department of Agriculture 3 years ago.

Mr. M. Viraraghava Rao, L. Ag. has been appointed Assistant Farm Manager *vice* Mr. S. Subbaya on other duty as Farm Manager, 2nd Grade, *sub-protam*, and is posted to Anakapalle.

Mr. S. Sitaram Patrudu, L. Ag; has been appointed Assistant Farm Manager, *vice* Mr. T. Budhavidheya Rao on the other duty, and is posted to Anakapalle.
