

if the committee makes serious proposals, it is not unreasonable to expect that the endowment of the Zemindars may be handed to the Union which is now thoroughly recognised everywhere, for being administered by that body. Rather than use up the Fund in a number of ways, the system of scholarships should be persevered in, as it will benefit present and past students.

An old Student.

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### Notes.

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*Coconut fibre* :—Enormous quantity of coconut fibre yarns and ropes made out of it are annually exported from the West Coast. The export figures had come almost to a climax, just before the beginning of the Great War. It is proposed to deal in this note with the fibre only.

The process of fibre extraction is very simple. Fresh pericarp of the coconuts, as soon as they are husked green, are carted and soaked along river banks often a little away from the river where it is miry and salt water gets in.

Pits about 9' by 9' and about 6' deep are made; each such pit holds the pericarp of 1000 nuts. About a foot of earth is put at the tops of the pericarp. The sides and tops of the pit are lined with coconut leaf mats. The retting and extraction of fibre go on from September to the next May, in some parts all round the year. The colour of the fibre and retting depend very much on the nature of the soil in which the fibre is buried. The water which gets in must be brackish. If the soil be very clayey and black, the fibre becomes black and dirty. If too sandy, retting takes too much time and there is wastage in fibre. The soil must therefore be more or less loamy. Under ordinary conditions it takes about 6 to 8 months for the pericarps to rot properly. The pericarps are removed, washed and beaten with wooden sticks about 1½' long. Palmyra stem which is heavy and hard is also much

used for this purpose. The beaten fibre is then dried in the sun. Dried pericarp is never soaked.

The pericarp of 3000 nuts are required to obtain 1 candy of fibre. One fibre candy at Tellicherry is  $36 \times 20 = 720$  lb. So much is reckoned. 640 lb in big firms; probably 80 lb is a set off for dirt and imperfect drying.

Expenses of making a candy of fibre are given below. The price of 1 candy of fibre was as high as Rs. 40—50 before the war. It has much gone down now,

There are different grades of fibre. Gold coloured—without husk particles, is considered the best. Next is white, which changes to dirty white. Blue or black is the worst. If the pericarp is fresh when soaked and retting is done in suitable loamy soil and it is taken out in time and beaten, good fibre is invariably obtained. If the nut is too well matured and the husk changed colour as a consequence, the fibre becomes unsatisfactory.

	Rs.	A.	P.
The price of 3000 pericarps at $7\frac{1}{2}$ Rs. per 1000	22	8	0
Cost of carting ... ..	2	4	0
Making pits and soaking ... ..	0	12	0
Coconut leaves etc., for pits ... ..	0	12	0
Taking out the pericarp, at 12 as. per 1000 ...	2	4	0
Expenses of beating and taking out the } fibre at $2\frac{1}{2}$ as., per 100 (contract rate). }	4	11	0
Drying, packing etc., ... ..	1	0	0
Total Rs.	34	3	0

The price per candy is Rs. 40 — Rs. 50.

M. G. K.

*Correlative Characters in the Rice plant* :—(Some of the results obtained in the Phillipines). The period of time required to mature a crop of rice, if not less than 120 days nor more than 180

days, does not have any appreciable effect on yield of grain, if growth takes place under normal conditions.

For varieties which take less than 120 days to mature, any extra early maturity is to be had only at the expense of yield. Very late maturity affords too many opportunities for unfavourable weather conditions, diseases and pests to injure the plants and thus lower the yield of grain. In paddy, tillering, the number of grains per panicle, and grain or seed size, are elastic or compensating characters and each in turn is affected by the one preceding it and the development of the character is extended or curtailed as the case may be, by the prevalent environmental conditions and is based upon the extent of the development of the preceding character.

In passing judgment on a variety, the number of tillers per unit of area, the average number of grains per panicle, and the net kernel weight and volumetric measurement must be accurately determined.

The height of plants has noteworthy influence on yield. If the straw length is less than 1.5 meters, the yield per hectare (2.47 acres) diminishes as the average straw length becomes shorter. The number of grains per panicle has no influence on yield. The number of grains for a variety is dependent on the tillering habit, the grain dimensions and density.

The number of grains borne on the panicle is an elastic or compensating character. If a variety has an unusually large number of grains per panicle, it is quite probable also that it is late maturing.

The real aim of the plant breeder must be to *approximate* excellence in all essential features. The *superlative* may be the aim but experience shows that this degree is usually attained only at the cost of some highly desired character. Most of the characters

of the rice plant vary considerably and to some extent independently of the other characters, but when the combination of these several characters is effected, each in a moderate degree, the highest consistent yield of grain will result. (Phillipine Agricultural review). K. R.

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*Cause of yellow colour in maturation*:—As the seeds develop, most part of the substance of the plant including mineral elements becomes concentrated in the seeds. Of these minerals, magnesium is one which in common with phosphorous and sulphur accumulates in the largest quantities, up to 50%. Magnesium, however, of all the elements, is the only mineral present in chlorophyll. The migration and fixation of this element in the seeds, therefore, must cause the disintegration of a considerable portion of the chlorophyll or the prevention of the regeneration of chlorophyll. The result is yellow colouration of the leaves. M. R. R.

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*Drainage*:—One of the practical and successful systems of drainage which can be recommended for trial on saline lands for getting rid of salts or on stiff clay lands for improving their drainage is noted below.

“ Dig drains across the natural drainage of the land 2½ feet deep and fill the same with twigs of Babool (*Acacia arabica Tam Karuvel marum*), etc. up to about 6 inches from the surface and then cover the drains. These small drains to be connected with the main drains, which should be about 6 inches deeper. The distance between the small drains to be about 20 feet and that between the main drains to be 80 feet apart.”  
Bombay Bulletin No. 39.—K. K. R.

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*Harvesting by machinery at Hagari Agricultural Station*:—17 acres of Fodder cholam which was in a fit state to be cut, was

harvested with the Mc Cormick's Vertical Mower. It may be mentioned here that this is the first year in which a regular use of this mower was attempted and but for the interruptions caused by the weather conditions combined with some trouble with the lever arm of this machine which broke 5 times during the course of the work and had to be repaired, it would have been possible to record in this report facts and figures in respect of the working cost of this machine. However it is clear from the short experience gained, that the use of this machine economises a good deal of time at a period when labour is not quite so cheap to procure to harvest large areas within a limited period at the disposal of the farmer.—Progress Report of the Hagari Agricultural Station for the month of October 1916.

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Paddy fields lying in the valleys round Parlakimidi which are liable to inundation by floods during times of heavy rains are always broad-casted but never transplanted. Excessive seed-rate, 120-150 pounds per acre is broad-casted in well prepared and heavily manured fields with the help of the first showers of the south-west monsoon, early in June. After the crop is about 6 weeks old when plenty of water is available, the fields are flooded and ploughed round and round in a continuous line starting on the margins of the fields and finishing in the centre as is done in transplanting *Ganti* (Cumbu) and dry *Chodi* (Ragi). Then the levelling board is passed and water allowed to remain to a depth of 5 to 6 inches for 3 days and then drained off. The paddy plants then show their heads up while all the weeds and the uprooted plants rot. This operation is an excuse for weeding, thinning, interculturing, and what not. The ryots give the following reasons for adopting this practice :—

1. The rainfall is not certain and sufficient water for puddling and preparing fields for transplanting is not available when needed.

2. During times of heavy rains water flows in torrents over the fields when transplants are more easily washed off than plants which have already had a better footing in the ground.

3. Labour is not available at that time of the year and even if available exorbitant wages in kind have to be paid.

(A. D. N. D's June Monthly Report).

G. N. R.

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### Estate Notes.

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*Officers Club*:—On Friday the 24th November 1916, the Officers' Club had the privilege of hearing a most interesting talk about "the Rubbish-heaps of Egypt, or a sheaf of ancient letters unearthed" by Rev. Dr. Moulton D.D. Holding the chair of comparative philology in the University of *Manchester* he is a great scholar in classical literature and has done much original work in deciphering and translating ancient greek letters etc., unearthed by investigators in Egypt.

Egypt is an almost rainless country and any dry material such as scraps of papyrus or potsherds—both of which seem to have served the purpose of note-paper in those days thrown away by people in ancient times along with sweepings became soon covered over and in due course buried deep by sifting sand and thus became admirably preserved. Such old rubbish-heaps, the sites of which are easily located after some experience, were found to contain papyrus scraps and bits of brokne pottery in an almost fresh condition. Strips of such papyrus letters were also found in the interior of mummified sacred crocodiles. These letters were invariably written in Greek which was the language of the majority of the people in Egypt between about 300 B. C. and 200 A. D., and as they represented the correspondence between not very literate people, the language used in these letters was not of the finest and was indeed usually

full of mistakes. The great point about them, however, is the fact that they teem with human interest, As instances may be mentioned a letter from a profligate and disowned son to his mother professing bitter repentance and praying to be taken back, a second full of reproach from an uncared for and suffering wife to her selfish husband who has apparently on account of poverty taken refuge in a cerapium or a temple under profession of fulfilling a vow, and a third—with touches here and there of stinging sarcasm—from the pen of a much-petted son—evidently the tyrant of the family, addressed to a father, who obviously to escape from the petty tyranny of the little despot had decamped on board a boat to enjoy a short respite. All these echoing, as they do, incidents of everyday occurrence even at the present time, remind us with peculiar emphasis, that, in spite of the lapse of numerous centuries, in spite of the enormous changes that have taken place in the interim and in spite of differences of caste, race or creed, human nature in its failings, as in its merits, has always remained and probably will ever remain, unaltered and unalterable.

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### Departmental Notes.

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1. Mr. John A. Muliyl, B. A., is appointed to act as Assistant in Entomology on Rs. 75, 75, 75—5—125, in the vacancy caused by the deputation of Mr. E. Ballard, on Military duty.
2. M. R. Ry., P. S. Jivanna Rao, is granted Privilege leave for three months from or after the 2nd January 1917.
3. Assistant Farm Manager, M. R. Ry., D. Panakala Rao to be Assistant Farm Manager, Sugarcane Station on return from Privilege leave' on 3rd January 1917.
4. M. R. Ry., V. S. Ramaswami Ayyar, Assistant Farm Manager, Sugarcane Station, is granted two months Privilege leave from date of relief by D. Panakala Rao.
5. M. R. Ry., T. Lakshmana Rao, Assistant in Chemistry, is granted extension of Privilege leave for 27 days in continuation of 6 weeks Privilege leave already sanctioned.