

is strongly recommended to every man who keeps cattle and uses their excreta for manuring his land that the above system of collecting manure may be adopted in the place of the wasteful one now in vogue.

If it is not possible to keep the manure such a length of time in the sheds, then as a first step it may be periodically removed (about once a month) to a pit dug in the ground close to the shed. It is important that this pit should be properly roofed so that rain water will be prevented from washing away the valuable manurial ingredients. The manure thus collected will be of superior quality and at the same time a greater quantity than that commonly obtained by the present wasteful system.

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Notes.

Manure Society in Tanjore District:—Our readers will remember that one of our Saidapet diplomates, Rai Sahib, A Seturama Aiyer, read a paper at the Agricultural Conference, 1915, on the possibility of putting up machinery on a small scale for crushing bones and phosphatic nodules for use as manure on the soils of Tanjore which, as the Soil Survey of the District indicates, are generally deficient in phosphoric acid. We are glad to hear that Mr. Seturama Aiyer erected a disintegrator to be worked by his 9 H. P. Oil engine already existing in his garden at Needamangalam and also constructed a store room at a cost of Rs. 1500.

An application has been submitted by several prominent Mirasidars of the District, himself being one of the signatories, to the Registrar for registering a Co-operative Manure Society which will undertake to purchase, crush, mix and sell manures, primarily to members. Apart from the usual distribution of

profits to the share-holders, according to the number of shares held and to the purchasers, according to the quantity purchased, a distinct feature of the Society is that the pariahs who generally gather the bones will receive, in addition to the cost price of the bones, a share of the profit calculated on the quantity supplied by them. These people do not subscribe to the share capital, but will be called Associates. It is good that the high caste Hindu Mirasidars are going to *associate* themselves with the depressed classes. Orthodoxy may deter a caste Hindu from gathering whole bones, but are the Mirasidars going to depend on the pariahs to spread the crushed bone meal on their lands? Apparently not. (M. R. R.)

Cattle poisoning by young cholam :—Experiments conducted at Bihar about this show that even under similar conditions of climate and rainfall the same varieties of cholam of the same age give widely varying quantities of the poison; that the crop of one field may be dangerous, but that of a neighbouring field may be quite innocuous. It is possible that this is due to the difference in the rate of germination, owing to the differences in the moisture contents of the soil in which they grow.

It has not been exactly ascertained under what condition of cultivation and growth and at what periods, accumulation of the poisonous element in the cholam becomes greatest.

A healthy and a very vigorous growing crop contains considerably less amounts of the poison than a poor stunted crop. If owing to persistent unfavourable conditions a fodder does not grow and remains stunted and poor, containing a dangerous amount of the poison the cultivator will be well advised to store the green fodder in silo. The experiments show a crop contained on the 14th July as much as 3 grains of the poison per pound. Only 16 lbs. of this stuff is quite sufficient to kill a cow. A month after putting the same crop into a silo the quantity of

available poison was reduced to .008 grain per pound and 500 to 600 lbs. of this stuff will be required to produce fatal effects in a cow. It appears therefore clear that even stunted and poor grown choiam will be perfectly safe when fed to cattle after storing in for a few weeks. *Bihar Agricultural Journal.* (K. R.)

Process of making milk with soya bean:—According to a United States patent artificial milk is prepared from Soya bean as follows:—Soya beans are ground to a coarse powder, a small quantity of coconut oil added if desired, and the mass emulsified with about an equal amount of water at a temperature above 80° F (27° C) in presence of the alkali, e. g., sodium bicarbonate and lime the liquid portion is separated and heated for several hours below its boiling point; or the emulsion is heated first and filtered afterwards. (B. V. N.)

Estate Notes.

The Officers' Club:—At a meeting of the General Body held on the 3rd July for the election of the Office-bearers for the new year 1916—1917, Mr. K. Rangachariar was re-elected President, Mr. Y. Ramachandra Rao was re-elected Secretary, and Messrs. M. R. Ramasami Sivan, P. A. Subramania Aiyar and K. S. Puttaiyar were elected members of the Managing-committee, Messrs. K. S. Subramania Aiyar and M. R. Venkatarama Aiyar were elected Auditors.

The Officers' Mess:—On account of certain restrictions placed on the bachelor officers of the colony with regard to messing in the Students' Hostel, a separate private mess was started by them in July. It was first lodged at Mr. Raghavachariar's quarters with his kind permission as he happened to be a "grass-widower" at the time. Recently it has been shifted temporarily, through the kind permission of the Principal, to the kitchen and dining

hall of the vacant students' Block No. 1. There are some proposals in the air for making the mess an adjunct of the club so as to ensure its permanency even in case the members change, and to provide a small out-house near the club-building to house the lodge. It is also proposed incidentally to enlarge the building by constructing verandahs on the other three sides so as to remedy the cramped condition of the club of evenings.

Conversazioni :—i. On June 29th Dr. C. B. Rama Rao gave the members of the club the benefit of his experiences during his tour round the world, and his stay in Great Britain. He declared it was not impossible for a strict vegetarian like himself to go round the world without violating his principles.

ii. On July 6th—Mr. Lakshman Reddi, Bar-at-law who had come from Ooty on a visit to the Agricultural College, gave an informal talk about the "Indian Students in England".

Tournaments among the members in Tennis, Badminton, Ping-pong and Cards have been started in connection with the ensuing Second Anniversary celebration of the New Club Building.

Games.

Hockey with the Reserve Police :—An interesting Hockey Match was played between the Reserve Police and A. C. and R. I. Attacking vigorously from the start Mr. Parnell drew first blood for A. C. and R. I. Then again play veered round the opponents' goal. The half-time intervened, shortly after and on the teams crossing over play continued much the same as it was in the early half the A. C. and R. I. scoring one more goal by Mr. Parnell. The opponents resumed the aggressive and with a beautiful combination they were visiting the A. C. and R. I. goal every now and then. When the match was about to be closed, the opponents had scored two goals and the game was drawn.