

Wrapping and Propping. Neither the one nor the other is practised at Singanallur and its neighbouring villages. Thick crops as the result of close planting and absence of very tall growth in the crop, dispenses with these operations. In parts of the Circars these operations are done when the canes grow very tall but have a weak hold in the ground.

M. Mangesa Rao.

(To be Continued.)

Notes.

Crow as a natural enemy to insect life:—On a certain morning while setting out for work, I happened to observe a crow taking hold of a Rhinoceros Beetle near the Farm manure-pit. Tempted by curiosity, I passed to notice what happens to the creature. The crow first pulled off the legs of the Insect and went on pecking at it for sometime and flew away leaving only the thick hard wings—observed by C. R. S.

Ratoon cholam:—There is a practice of ratooning the cholam crop in the Karur Taluk. The land intended for cholam receives sheep penning generally. In the month of March—April, Chinna Vellai Cholam is sown under well irrigation. If at the harvest time, the stubbles are found to be strong and the yield of grain satisfactory, the crop is harvested leaving 6 inch stubble. Cattle are then allowed to graze. Hoeing is done which is then followed by irrigation. Sometimes the ground is hard when watering is done first and then hoeing. No other operation is done. The crop comes to maturity much earlier than the first crop i. e., in about $2\frac{1}{2}$ months. The yield is generally $\frac{3}{4}$ to $\frac{1}{2}$ of the first crop. All the cholam varieties are treated in this way where the land is rich and the yield good. This goes by the name of "Pudangu Cholam". W. R.

Destruction of sugarcane grub:—The following method for poisoning cane grubs recommended by Mr. Edmund Jarvis has the merit of being cheap and one which would commend itself even to the conservative agriculturist. It consists in growing cowpeas between sugarcane rows, spraying them with arsenical poison and afterwards ploughing them in. This method while serving as a bait for the *cane grub*, improves the condition of soil and also adds valuable nitrogenous manure to the soil. Grub infected tracts may try this simple and harmless remedy. K. K. R.—(*Australian Sugar Journal*).

Utilisation of Pine-apple waste:—A patent has been taken at the United States of America for the utilisation of Pine-apple waste. It is comminuted and pressed, the juice is then strained, and the pulp diffused in water at about 160° Fah (71° cent). 20 lb pressure per square inch is then applied to remove the remaining juice, after which it is dried and used as a source of cellulose. The pressed and diffused juices are mixed, heated to 180° Fah (82° c) to coagulate the albumen, and the albumen recovered. The remaining juice is treated with a neutralising reagent which forms an insoluble compound with Citric acid, and leaves a slight acidity. The juice is filtered from the citrate, concentrated under diminished pressure to precipitate the remaining citrate and again filtered. The syrup obtained is heated to 160° F (71° c) decolorised, and used as a sugar-syrup for canning purposes.

B. V. N.

A water-finder saves our brave troops at Gallipoli:—Those of our readers who were present at the last Agricultural Conference can easily recall to their minds the lively discussion that followed the address of Mr. Narayanamurthi, B. E. on the use of the Water-finder. To a few the discussion looked as if it was entering the regions of mysticism. We were pleasantly surprised to read in

Drainage. The lands with good drainage are generally selected for cane growing. If in the ryot's experience a certain piece of land is badly drained, he would altogether abstain from planting cane there. Good to fairly good drainage is as essential a condition for cane cultivation, as manuring and water supply. In our country we have well drained lands in enough area, and badly drained lands are exceptions to the rule. For the purpose of extension of sugarcane, want of well drained land will not stand in the way. The question of badly drained land and its improvement is not therefore of such immediate importance. But all the care a sugarcane cultivator has to take even on a well drained land is not to allow water to stagnate on the surface for over a day, and to drain off rain water collected in the trenches on receipt of every heavy rainfall. The idea is to keep the soil moist but not so completely blocked up by over saturation as to prevent access of air.

After cultivation. In Singanallur and Sular the ryots give 2 to 3 weedings and the same number of hoeings. The former are given in the first three months of its growth and the latter between the third and the 6th month. But there are many instances of ryots who had been content with giving one weeding and one or two hoeings. In all the sugarcane growing tracts of the Presidency, after cultivation may be said in general terms to consist of about 2 to 3 weedings and 2 to 4 hoeings. But there are places where practically no hoeing is done. Bellary is an instance to the point—where the ryots give only 3 weedings. In South Canara, the cane plants are earthed up three times with a view to fill up the trenches before the heavy rains of South West Monsoon set in, but no weeding is done. The cane field in this place will consequently be foul with weeds which is bound to tell upon the yield to some appreciable extent. Stirring of soil helps to let in air, accelerates nitrification and other chemical changes in the soil beneficial for the production of available plant food. The greater therefore the number of times the land is hoed, the better for the crop. But under no circumstances should this operation be done when the soil is wet—since this will more than defeat the purpose intended.

Wrapping and Propping. Neither the one nor the other is practised at Singanallur and its neighbouring villages. Thick crops as the result of close planting and absence of very tall growth in the crop, dispenses with these operations. In parts of the Circars these operations are done when the canes grow very tall but have a weak hold in the ground.

M. Mangesa Rao.

(To be Continued.)

Notes.

Crow as a natural enemy to insect life:—On a certain morning while setting out for work, I happened to observe a crow taking hold of a Rhinoceros Beetle near the Farm manure-pit. Tempted by curiosity, I passed to notice what happens to the creature. The crow first pulled off the legs of the Insect and went on pecking at it for sometime and flew away leaving only the thick hard wings—observed by C. R. S.

Ratoon cholam:—There is a practice of ratooning the cholam crop in the Karur Taluk. The land intended for cholam receives sheep penning generally. In the month of March—April, Chinna Vellai Cholam is sown under well irrigation. If at the harvest time, the stubbles are found to be strong and the yield of grain satisfactory, the crop is harvested leaving 6 inch stubble. Cattle are then allowed to graze. Hoeing is done which is then followed by irrigation. Sometimes the ground is hard when watering is done first and then hoeing. No other operation is done. The crop comes to maturity much earlier than the first crop i. e., in about $2\frac{1}{2}$ months. The yield is generally $\frac{3}{4}$ to $\frac{1}{2}$ of the first crop. All the cholam varieties are treated in this way where the land is rich and the yield good. This goes by the name of “Pudangu Cholam”. W. R.

Destruction of sugarcane grub:—The following method for poisoning cane grubs recommended by Mr. Edmund Jarvis has the merit of being cheap and one which would commend itself even to the conservative agriculturist. It consists in growing cowpeas between sugarcane rows, spraying them with arsenical poison and afterwards ploughing them in. This method while serving as a bait for the *cane grub*, improves the condition of soil and also adds valuable nitrogenous manure to the soil. Grub infected tracts may try this simple and harmless remedy. K. K. R.—(*Australian Sugar Journal*).

Utilisation of Pine-apple waste:—A patent has been taken at the United States of America for the utilisation of Pine-apple waste. It is comminuted and pressed, the juice is then strained, and the pulp diffused in water at about 160° Fah (71° cent). 20 lb pressure per square inch is then applied to remove the remaining juice, after which it is dried and used as a source of cellulose. The pressed and diffused juices are mixed, heated to 180° Fah (82° c) to coagulate the albumen, and the albumen recovered. The remaining juice is treated with a neutralising reagent which forms an insoluble compound with Citric acid, and leaves a slight acidity. The juice is filtered from the citrate, concentrated under diminished pressure to precipitate the remaining citrate and again filtered. The syrup obtained is heated to 160° F (71° c) decolorised, and used as a sugar-syrup for canning purposes.
B. V. N.

A water-finder saves our brave troops at Gallipoli:—Those of our readers who were present at the last Agricultural Conference can easily recall to their minds the lively discussion that followed the address of Mr. Narayanamurthi, B. E. on the use of the Water-finder. To a few the discussion looked as if it was entering the regions of mysticism. We were pleasantly surprised to read in

the *Madras Times* of the 10th October 1916, that about a month after the discussion at Coimbatore, Sapper Stephen Kelley of the 3rd Australian Light Horse Brigade saved the men from a rather serious situation as regards water supply soon after their landing at Suvla Bay in August 1915. Stephen Kelly who had a reputation among his fellows for his capacity to spot out subterranean water told Brigadier General Higler that there was water in proximity and that he could find it. A thousand men were immediately placed at his disposal with the result that there was soon an abundant supply of cool spring water both for man and beast. Stephen Kelley is a Kentish man and learnt the art from an old man at Queensland. He used a copper rod at Gallipoli made from the band of a shell. T. S. V.

Artificial manures :—The application of artificial manures to the South Indian soils is still in an experimental stage. Their use is restricted to Government Farms and planters. The experiments conducted in the Samalkota Farm have not been quite encouraging. The result of the application of artificial manures to different crops have been published in Bulletin No. 76 of 1915 by the Bombay Agricultural Department. A summary of the result is noted below for the information of those who are keen on using artificial manures.

Tobacco :—Irrigated tobacco gives good result with artificial manures. (Sulphate of potash 224 lbs. per acre, Nitrate of soda 285 lbs. per acre and Super phosphate 336 lbs. per acre). There is no use in applying artificial manures to non-irrigated tobacco.

Potatoes :—For this crop also, artificial manures are not recommended if the crop is not irrigated. Profitable returns have been obtained by the application of the following manure to the irrigated crop :—

Sulphate of Potash	...	150 lbs.
--------------------	-----	----------

Superphosphate	...	112 lbs.
Nitrate of Soda	...	170 lbs.

Wheat:—The use of artificial manures is of doubtful value to this crop. Good yields were however obtained by the use of superphosphate and sulphate of ammonia.

Cotton:—Artificial manures can only be profitably used for cotton where the rainfall is reliable or where there is irrigation. Artificial manures should not be used alone. They should always be supplemented by cattle manure. Potash was found useless. Nitrates of soda and lime were better than Sulphate of ammonia. Artificial manures hastened the maturity of cotton. The mixture recommended is the following:—

- Two tons of Farm yard manure ploughed into the land.
- 200 lbs. of superphosphate drilled with seed.
- 135 lbs. of Nitrate of soda top dressed six weeks after sowing.

Sugarcane:—Ammonium sulphate has been found to be a good substitute for safflower cake in black soils. In sandy soils, safflower alone has given the best results. In our Presidency castor cake is very extensively and profitably used.

Chillies:—Sulphate of Potash appears to be an essential element in the manure. Very good results have been obtained by the use of 180 lbs. of sulphate of potash, 224 lbs. of super phosphate 60 lbs. of sulphate of ammonia and the usual Farm yard manure to the chilli crops of Nasik.

Onions:—Nitrogenous artificial manures—375 lbs. of ammonium sulphate or 500 lbs. of sodium nitrate as top dressing were found very profitable.

Lucerne:—Superphosphate gave good results. 4 lbs. of Farm yard manure, 250 lbs. of superphosphate and only 15 lbs. of ammonium sulphate gave good outturns.

Bananas :—4 lbs. of castor cake plus about $\frac{3}{4}$ lb. of each of the usual artificial manures applied in three lots, one month, 2 months and 3 months after planting respectively gave good results.

K. K. R.

Games.

Foot-ball matches :—

1. A friendly match was played on our grounds between the two teams representing the Stanes and the A. C. R. I. From the kick off the ball was hovering over the opponents goal and our offence could not take advantage of it. On the whole the match was a contested one. The opponents had serious falls on account of the rash play exhibited by some of the half-backs. When the match was over, both the teams were considered to be equal.

2. A second match at foot-ball was played with the L. M. H. School during His Excellency's visit to our College. The play was one sided. Our defence was broken by the absence of Samuel who was suffering from fever. To the opponents' credit they put a goal and they were left the winners of the day.

Hockey matches :—

1. A hockey match was played between A. C. R. I. and the Stanes on the Stanes' grounds. From the bully off the ball was up and down the field paying dangerous visits to both the goals. From the second half the play was favourable to the opponents who took advantage of a corner in scoring a goal. Not satisfied with this they put in another goal to their credit and were the winners of the day.

2. A match was played with the Coimbatore United Club on a rainy day. As the hockey ground was very wet the

match was played on the foot-ball ground which was better. There were many obstacles before a man could reach the goal as the fast running resulted in a fall. The match ended in a win for A. C. R. I. by 1 goal.

Cricket matches :—

1. Two matches were played for this month. The first match was played with the United Club and it ended in a draw. On that day Vittal Rao scored the highest number of runs.

2. The second match was played with Madras Forest College. The Forests won the match by a narrow margin of 22 runs. R. Cecil Wood Esq., the Principal of the College scored the highest number of runs.

Hockey colours have been awarded to the following players :—

Dharmalingam S.

Onkaram P. J.

Abhishekanatham.

Mariasusai.

Departmental Notes.

I. M. R. Ry., T. R. Ranganath, Assistant in Mycology, is granted privilege leave for 1 month from 3rd October 1916.

II. An extension of privilege leave for 7 days from 1st to 10th October 1916, is granted to M. R. Ry., T. V. Rajagopalachari, Farm Manager, Hagari.

III. M. R. Ry., K. Narayana Ayengar, Agricultural Demonstrator, Mayavaram is permitted to avail himself of the two months privilege leave granted to him from the 12th instant.

IV. One month's privilege leave from 25th October 1916 recommended by the Government Mycologist to his Sub-Assistant P. Vishnu Somayajulu is granted.

V. The following transfers are made in the interests of the Public Service :—

1. A. V. Tirumuruganatham Pillai, Farm Manager from Palur to Nandyal to take charge of Nandyal Farm, to join at an early date.

2. N. V. Viswanatha Ayyar, Assistant Agricultural Demonstrator is reposted to Palur Farm from District Work at Tindivanam to be in charge of Palur Farm until relieved by No. 5.

3. V. G. Danukoti Raju, Assistant Farm Manager, on relief by No. 1, to Cotton Improvement Work at Nandyal, vice M. Raghavalu Naidu, Assistant Agricultural Demonstrator granted privilege leave.

4. M. Raghavalu Naidu, Assistant Agricultural Demonstrator, on return from privilege leave to Special duty under the Deputy Director of Agriculture—Live Stock, in connection with the proposed Cattle Farm. Headquarters to be at Guntur.

5. K. Unni Krishna Menon, Agricultural Demonstrator to Palur to be in charge of Palur Farm, vice No. 1 to join on relief by No. 6.

6. T. A. Krishna Ayyar, Assistant Farm Manager from Manganallur to Green Manure Work at Sholavandan, vice No. 5 to join at an early date.

7. M. Viraraghava Rao, Assistant Farm Manager is posted temporarily to Special Duty under the Deputy Director of Agriculture—Live Stock, until relieved by No. 4 with Headquarters at Guntur. To report himself to the Deputy Director of Agriculture—Live Stock when called upon to do so. On relief by No. 4, he will be posted to Coimbatore for special training in Dairy Work.
