

Season.	Name of operation.	Men.	Women.	Cattle (pairs).	Estimated amount.	Actuals paid.	Remarks.
July-August	Transplanted area (3.00 acres)—				Rs. A. P.	Rs. A. P.	
	Puddling three times and levelling ...	27	...	27	20 4 0	...	...
August	Trimming bunds, etc....	6	...	...	1 8 0	1 8 0	Hired labour.
"	Transplantation ...	...	60	...	7 8 0	6 6 0	51 women engaged.
September	Weeding ...	12	...	9	4 2 0	...	Own labour.
December	Harvesting ...	8	40	...	7 0 0	4 4 0	Labour partly engaged.
December	Stacking ...	5	3	...	1 10 0	...	...
1931 January	Threshing, winnowing, etc....	24	9	18	13 14 0	2 4 0	Labour partly engaged. Cattle pairs at As. 6 per pair for threshing and As. 8 for ploughing.
	Grand total ...	103	113	63	83 12 0	30 14 0	
	Cost per acre ...			34½	37½	21	Estimate 27 14 8
	Add land-tax Rs. 15/- per acre ...			...	...	...	Actuals 10 4 8
							15 0 0
					Total ...		42 14 8
	Yields 36 bags of paddy (164 lbs. each) at Rs. 4-8-0 per bag...						162 0 0
	6 carts of straw at Rs. 4/- per cart ...						24 0 0
					Total ...		186 0 0
	Value of yield per acre ...						62 0 0
	Net profit per acre ...						19 1 4
							36 11 4

KOYYATHOTAKURA (AMARANTHUS SP.) AS GREEN FODDER

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This species of *Amaranthus* is cultivated in many places on a small scale for human consumption. But it is noteworthy that in some villages of the Vizagapatam District, it is raised solely as a fodder crop. A short account of its cultivation at Denkada may interest readers of this journal.

2. Rich high level garden lands are selected for this crop. *Pati* soil is also admirably suited to this. The crop is often raised year after year in the same plot, occupying it from January to August-September. Sometimes it is alternated with other garden crops or ragi nurseries. The land is ploughed well and does not generally receive any manure, as, being near the village, it gets enriched by night soil and pig droppings; but if

necessary some *penta* is also applied. It is then laid out into plots about 5 ft. square, with necessary irrigation channels. One Chittak of seed (10 tolas) is sown in 20 such beds and each bed supplies fodder for one pair of cattle every day. The seed is obtained from 'Gavaras' at Vizianagaram at a cost of two to four annas. The first cutting is commenced in about a fortnight after sowing, and thereafter one bed is cut every day, so that each gives a cutting once in twenty days in rotation. When at its best, each bed yields about ten pounds of green fodder at each cutting and about six pounds on an average. The crop is irrigated at intervals of about 5 to 10 days throughout the dry and hot season and goes on giving fair cuttings till the South-west monsoon precipitates heavy rain, which it cannot stand, and therefore dies out gradually by about August-September.

3. This fodder is considered best for working buffaloes; working bullocks are also fed with it. But milch cattle are never fed with it, as it is believed to heat the system and reduce the yield of milk. As human food also it is well known to heat the system. Goats and sheep also eat the fodder but rarely get it.

4. It may be worthwhile analysing this fodder and finding its merits as a fodder crop. It will be seen that, calculated from the yields of the small areas on which it is usually raised, the outturn runs up about 50 tons per acre during the eight months of its growth.

EARLY AGRICULTURAL EXTENSION WORK IN U.S.A.

By B. S. RAO

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Organizations known as Agricultural Societies were in existence somewhere at the beginning of the 19th century. They were either State or regional societies and their object was primarily to improve agriculture. This they did by disseminating agricultural information through their publications and lectures and by promoting the formation of local organizations for people engaged and interested in agriculture. The societies held fairs, where animals were sold, agricultural products were exhibited for prizes, and addresses were made by prominent agriculturists and scientists who were invited to give lectures. A large number of county societies came into existence as a result of their labour. By about the second half of the 19th century State Boards of Agriculture were formed in several States (by legislature). These Boards superseded, and carried on the work done earlier by the above mentioned societies. In addition they held short courses at the County Agricultural College, advocated the formation of Farmers' Clubs and sent lecturers to them.

The Boards expected these Farmers' Clubs to be 'ambulatory schools' which would awaken a deeper interest in agriculture and be the channels for the easy communication of researches and improvements. Local organizations in the counties were holding meetings, discussions and special classes. Such gatherings were similar to the contemplated Farmers'