

What is urgently wanted may be to find out the most useful variety to produce an ideal plant with sufficient means to prevent its deterioration. An easy formula of a mixture of manures, and a method of treatment to improve already existing plants that are comparatively poorer although they are not far from the sea board, will be another line of improvement to be sought for. Improving the present output of coconut jaggery would certainly add to the wealth of a coconut planter. After a time when enough light has been thrown on the possibilities of coconut cultivation, both selection and manuring might merge into one producing better results which would seem fabulous to the present grower. Little work in the form of a systematic study of coconuts has as yet been done. It is hoped that the proposal already on foot to establish a coconut farm on the West Coast will soon be an accomplished fact and that the study of coconuts in all its aspects producing results which would benefit the enormous number of men engaged in coconut planting and allied industries, would be taken up.

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### **Hand Water Lifts in the Circars.**

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Ryots in the Northern Circars use a number of waterlifts. Some of them are *karem*, *yetam* (picotah) of several types, *chetiguda* and swing basket.

Near Kadium, *karem* first attracts one's attention in addition to the universal swing basket in use every where for lifting water from very small depths. *Karem* consists of a narrow and long wooden canoe or a hollowedout trunk of a palmyra, one end of which is suspended to a long horizontal lever while the other end is resting on the ground. It is similar to, if not identical with, the ordinary "don" illustrated in Fig: 51 in Mukerji's Hand Book of Agriculture. Tin canoes, being lighter and cheaper are now re-

placing wooden or palmyra ones. *Karem* is chiefly used for paddy cultivation on slightly elevated fields by lifting water from very low depths. Once a field is transplanted, one is able to irrigate  $1\frac{1}{2}$  or 2 acres a day provided the lift does not exceed two feet. The advantage of this over the swing basket is that *karem* can be worked by a single man while two are needed for the other.

At Samalkota we come across with picotahs of different types. The one in use in the uplands differs from the others in the methods of its working. Instead of a man walking up and down the lever, ropes are attached to the other end which the coolies pull down and fall back into a pit to add their weight also to lift the bucket. As the empty basket is again lowered down for the next charge by the man working at the bucket end, coolies at the other end get up the pit to be ready to pull the next bucket. The number of coolies for pulling varies from one to four depending on the size of the bucket used.

Another kind of picotah in use in the locality has a split palmyra, slightly curved as its lever having at one end a weight (chiefly composed of mud and stones) and it is worked by a single man. The buckets used are mostly earthen pots of different sizes.

As one reaches Anakapalli, the picotah (*yetam*) assumes huge dimensions having an entire palmyra tree hollowed out as its lever and a big palmyra stump, scooped out, to form the bucket with a stout bamboo to suspend it and the number of coolies engaged varying with the size of the bucket and the depth of the well. One will also notice that the wells are nothing but simple and irregular earthen pits with crumbling sides.

The aspect changes beyond Vizianagaram where a thin jungle wood pole forms the lever and a small earthen pot or a kerosine tin forming the bucket attached to a thin bamboo or an ordinary

gogu fibre rope. Here again, the lever is weighted at one end and worked usually by a single cooly. Here and there one may occasionally find iron buckets also just coming into use.

North of Vizianagaram the most noticeable feature is irrigation by splashing water with an irrigation spoon (*siri gooda* or *cheti guda* in Telugu and *seedo* in Uriya). This is a small bamboo basket attached to a hand stick and worked by drawing a rope for scattering water on to the fields. For growing garden crops trenches are formed 10 to 12 feet apart and water led into them from wells or tanks. A cooly, walking in the trench with a spoon in his hand splashes water over the beds to economise irrigation water. This is something like the hand watering of plants with a rose-can.

Near Chicacole a double picotah is a novelty. It has buckets at both ends of the lever. The downward pull at one end combined with the simultaneous upward push at the other by the coolies working at either end enables bigger buckets being used than otherwise. Such *yetams* are used along the margins of the Langulya.

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### Notes.

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The Ongole cattle show was held this year on 16th, 17th and 18th March. The Committee are to be congratulated on the success of it. When the show is held after harvesting is finished more entries are usually obtained and this year there were about 800, which is well up to the average. In addition the quality of the exhibits was on the whole good, and better than last year. In the classes for 4 teeth, 2 teeth and milk teeth bulls, and in all the female classes there was an average of well over 50 exhibits, of a very level type. His Excellency the Governor visited the