## FRUIT CULTURE IN CEYLON.

Oct. 13.

DEAR SIR,—It is interesting to read Planter's letter (on page 348) wherein he states that two mandarin orange trees gave in 1891 25,000 oranges. That this is within the limit is supported by Bentley in his Manual of Botany where he says:—

"The orange tree is remarkable for the enormous number of fruits, it is capable of yielding: thus, one tree will sometimes produce as many as 20,000 good oranges."

In your article drawing attention to Planter's letter you rightly recommend the value of oranges and also mention figs.

I do not know many fruits that are more enjoyable than green figs. But they are hardly ever seen in Ceylon! Why?—Yours truly, DIMBULA.

## HORSES AND BAD GRASS.

DEAR SIR,—Owners of horses in Ceylon must be thankful that there is such a plentiful supply of water grass (*Panicum mole*) to be had at a very small cost, so that they have no necessity to ask Government for grass farms, as their brethren in Bengal and Bangalore have to do. The majority of the Ceylon horses are fed on water grass but there are some who prefer to feed their animals on *Katu-pillu* or jungle grass, which is supplied by Tamil women—but this is not unattended by a certain amount of risk, for during long periods of drought as the present season, the jungle grass is quite parched and dry and there is not a single blade to be seen—the grass women then resort to the subterfuge of mixing Etora (*Panicum repens*) with the dry shoots of the jungle grass. *Etora* although suitable pasture for bullocks is unwholesome for horses and in more cases than are suspected, have horses died of gripe, due solely to this cause.

Mauritius or Guinea grass (*Panicum maximum*) suits horses very well, but it is not easily procurable in Colombo, as it is seldom grown by natives, and land owners do not care to plant it because it impoverishes their soil.

It is wonderful to observe how well native cattle thrive on the dry parched plains of Hambantota where there is not a single green blade to be seen. Whilst on a shooting expedition in that district I was struck with this and it excited my curiosity so much that I made it a point to observe closely, the cattle actually dig for fodder; within half an inch of the surface of the ground there are rich succulent roots of grass (not unlike asparagus!) very sweet and nutritious, on this these poor animals live and thrive and yield excellent milk. C. A. C.

## BIG WATER WHEELS.

DEAR SIR,—The following on the water wheel of "The Clyde Sugar Refining Co.," Greenock, which runs the Laxey wheel very close, may interest you. I went to see it last year when visiting the Clyde, and the Manager very kindly got the enclosed particulars copied out for me. You will observe, though the diameter of Laxey wheel is 2′ 4″ greater than the one at Greenock, it only represents 150 H.P. against 230.—Yours truly,

PLANTER.

### DESCRIPTION OF WATER WHEEL.

The wheel was constructed by Mr. Smith of Deanston in 1841. The arches and foundations consist of 5,000 tons of dressed masonry, the stones forming it being from 1 to 10 tons in weight. The wheel is 70 feet 2 in. in diameter, or 220ft. 6 in. in circumference and 12ft. wide. The shrouding is 17 ins. deep of cast iron in 104 pieces, and is formed into 160 buckets each containing 100 gallons or 1,000 lb. of water. The wheel is constructed on the tension principle, having 32 arms 2¾ in. diameter and an equal number of diagonal braces of similar diameter. The axle is 11 tons in weight, fitted with 2 centres 10 ft. in diameter, each weighing 8½ tons. The toothed segments are 32 in number, containng in all 704 teeth. The pinion gearing into same is 18 ft. 3 in. diameter, weighs 23 tons. The pitch velocity of this pinion is 600 feet per minute. The pinion and main shaft into mill weighs 13 tons. The main bearings of wheel are 24 in. long by 18 in. diameter. The wheel weighs 117 tons, makes one turn a minute and indicated 230 horse power. The iron plates forming sole of wheel are fixed by 20,000 rivets. The water is from the Shaws Water Works at Loch Thom, the supply being 1,200 cubic feet per minute for twelve hours per day during 310 days per year.

## TAX ON PLANTING EXTENSIONS.

DEAR SIR,—"An Old Coffee Stump" is quite right to object to any new tax. I don't suppose that a tax on Extensions is possible unless it is included in one on tea "area" as distinguished from tea in its commercial form. The Indian Associations pay a fixed sum *per acre*, as well as per pound, so that new extensions *are* taxed. The amount (about 6 pies per acre) is not large, but it falls only on those who belong to the Association. In Ceylon you tax all, and so a tax per *acre* would really be fair all round. At present you tax your tea for the purpose of making new markets for new extensions, which are exempt from taxation for that purpose; and in my letter of the 18th ultimo my words were "the amount should be sufficient to defray all campaign expenses." Theoretically the idea is just; those who now join in and reap the advantage of the work done by their predecessors *should* be made to pay for their advantages. In fact up to now tea proprietors may be called the Pioneers of tea, and they have to make room for those who wait to profit until there is little risk in their venture. I rather dispute the idea that putting a check on Ceylon Extension; will give a premium to other producers, because outside extension will be limited by no other factors than "outlet" and "labour" the first will put a check on profits and the second on the *possibility* of extending. Outsiders might make more, but Ceylon would make no less, if Tea Extension was prohibited, and I take the word "premium" to mean advantage gained at the expense of Ceylon. As a prohibitive tax is not possible, it is not worth discussing, but the plan of taxing extensions to the same extent as yielding tea area, and by this means *forcing them to join the Association* might be worth considering, and seems equitable. It would no doubt be advantageous to India to find means of *forcing* all estates to join the Associations for any purpose particularly that of subscribing to new market funds. In Ceylon you have done so, only leaving out extensions. In India there is a severe tax on extensions which is levied by almost weighing the timber on the grants, and charging full rates for it. There might be many other means of checking extension *until new markets have been opened out*, and then the bonds could be relaxed by the powers that imposed them. And it must not be forgotten that extensions work prejudicially in both directions, by lessening prices, and also by enhancing the rates for labour. The big capitalist can extend even now with equanimity, because he can afford to wait till we are ousted, he can pay more for the already limited labour supply, and he can command the markets with large quantities of tea.

A. V. S. P.

SISAL FIBRE.—It is pointed out by an English paper that rather too much has been said on behalf of Sir Ambrose Shea, and not sufficient credit given to Sir Henry Blake for the efforts made by them in the development of the Sisal industry of the Bahamas. Each of these should be credited with a share of the merit attaching to the good work.—*Jamaica Post*, Sept. 1.