

AGRICULTURE.

THE CHINESE SUGAR CANE.

We continue from our last No. (page 18) the article on the Chinese sugar cane from the pen of Charles Robb, Esq, C. E.

CRUSHING THE CANES.

The next important step in the process is the extraction of the juice, and as, at this early stage in the history of this interesting branch of manufacturing industry, it is impossible, or at least does not form part of my present plan, to speculate upon the most economical method of disposing of the crop, I shall take it for granted that the farmer will undertake to make his own supply of sugar or syrup. It should here be remarked, however, that the results of operations on such a limited scale, and with such rude apparatus as individual farmers will probably be able to command, can scarcely be taken as a fair criterion of what might be done with perfect machinery, such as would be applied in the event of the manufacture being carried on upon a large scale.

For present purposes, then, I shall suppose a portable sugar mill which would cost probably from 100 to \$150 will be procured, either by the farmers in any particular locality clubbing together to defray the cost conjointly or otherwise, as may be found most convenient. Let no one who has taken the trouble to cultivate even a small crop of the Sorgho entertain the idea of making shift with wooden rollers, or any but a tolerable efficient crushing apparatus. For small operations, such as a breadth of half an acre or less, a hand-mill with iron rollers might suffice. Where steam or water power is not at command, a vertical Three Roller Sugar Mill with iron rollers and framing, and worked by two horses, and with a simple apparatus to guide the canes horizontally in passing between the rollers will, in my opinion, prove the simplest and most efficient form for this mode of working. Such a mill could be set up in working order by two men in a day. The rollers should be arranged so as, for the first squeeze, to be one-eighth of an inch apart, and for the second to touch each other; and thus very little of the juice will remain in the cane after leaving the mill. If time will admit, however, it will be prudent to pass through the mill twice. The juice is received into a large vessel set immediately underneath the rollers, and should be subjected to the further treatment without an hour's delay.

The remaining steps, as well as the rationale of the process, are so fully, clearly and concisely described by Mr. Lovering, one of the most successful and intelligent operators hitherto, that I cannot do better than quote it entire, and recommend it to the careful attention of all who are interested in the subject:—

GENERAL PRINCIPLES.

The juice of the ripe Sorgho is composed of

1. Crystallizable sugar, about seven and a quarter per cent.
2. Un