

over estimated. Then the greatly increased acreage of Amber Cane will give us a greatly increased amount of syrup.

I am of the opinion that Amber syrup has created a market for itself to such an extent that this year twice the acreage of last could find a good home market, but when I hear that in some localities fifty times as much as last year will be grown, I become anxious lest next fall our syrup should go begging a market at twenty or twenty-five cents a gallon. If there was a possibility for turning the syrup into sugar the demand would be unlimited, but that fortunate era has not yet dawned. If the market is overstocked next fall this industry will receive a shock from which it will not recover in years.

#### SUGAR FROM AMBER CANE.

Chemistry shows that the amount of crystallizable sugar in Amber Cane is almost equal to that in the Ribbon Cane of the South, and enthusiasts have figured the number of pounds of sugar that an acre of ground will yield, and have given the large profits which would follow. These results look very well on paper, but unfortunately no one has yet made a fortune in producing sugar from Amber Cane. Our present methods are yet so imperfect that all effort thus far must be denominated experimental. Secret processes are offered to the credulous for sums varying from five dollars to five thousand, which will enable the person employing them to make sugar in unlimited quantities, and at rates which will pile up a fortune in a season.

Strangely, however, these venders prefer to peddle their methods about the country rather than use them to secure the fortune for themselves.

In 1879, a couple of car loads of good brown sugar was produced at Crystal Lake, Illinois. This seemed to indicate that the way was now open for the manufacture of sugar, but unfortunately we hear of none of those engaged in that undertaking having put sugar on the market this

year. I hear of amounts of a ton or two being produced in several places, but such results are experimental and not commercial. Yet we know that the sugar is in the cane, and can rest assured that the method of obtaining it will not much longer remain a mystery. Professor Scoville, of the Illinois Industrial University, conducted a series of experiments last season which are most interesting. I give here-with a short extract from his lecture before the Mississippi Valley Cane Growers' Association at its St. Louis meeting.

In a summary he gives the following general conclusions :

*“First.* From the results above given, it appears that crystallizable sugar can be obtained from the early Amber and Orange cane, of as good quality as that of the ordinary brown sugars found in the market. And from trials made, good white sugar can be made from the raw sugar by refining.

*“Second.* To insure the production of and best yield of cane sugar, the juice must be treated with lime. If, after skimming, the lime be neutralized with sulphurous acid, or sulphate of alumina, the syrups obtained will be of a light color, otherwise the excess of lime will cause the syrup to be dark.

*“Third.* From the proximate analysis of the canes, it appears that one acre of the Orange produces 2,559 pounds of cane sugar. Of this amount we obtained 710 pounds in the form of good brown sugar, and 265 pounds were left in the 727 pounds of molasses drained from the sugar. Hence 62 per cent. of the total amount of sugar was lost during the process of manufacture. This shows that the method of manufacture in general use is very imperfect.

*“Fourth.* The 710 pounds of sugar at 8c per pound, would be worth \$56. The molasses, at 25c per gallon, \$18.75, or the product of an acre would bring \$75.55, leaving out of the question of the value of the 30 bushels of seed, which some claim to be worth the cost of manufacture. The cost of manufacture would of course, vary with the amount manufactured and the distance of the cane from the mill, etc., so that no definite figures can be given. There is no question but with more perfect machinery, the above yield could be increased one-third.”

It is hoped that when proper means of defecation are discovered, the University will be in condition to give young men a course of training which will enable them to intelligently apply the directions and become experts in this work.

#### THE CENTRAL REFINERY SYSTEM.

It matters not how many discoveries may be made or what perfection may be reached, it will never be profitable, in my judgment, for the farmer to manufacture sugar in small quantities. Competition will force us to adopt the system now becoming common at the south. I can give nothing that is so clear on this point as Dr. Wilhelm's statements in his pamphlet on "Amber Cane and its Productions." In speaking of the attempt to make sugar in Minnesota, he says :

The planters of this State during the past year have raised about eight thousand acres of cane, all expecting to make sugar and refined syrup. Disappointment has met them all along the lines; nothing but crude syrup has been the result. Small crushing mills and open fire evaporators are very good as neighborhood fixtures for making crude syrup for domestic use, but for making sugar on a commercial scale we deem them a failure, and the sooner our planters find this out the better off they will be. The small amounts of sugar made by these operations was nothing more than what is generally denominated accidental. The only basis by which this business can be made successful is by the central system.

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The central refinery system is the only successful one to operate. The planter figures his cost and probable yield; he is certain of a cash market for all the goods he can produce at the central refinery; hence the business, to a certain extent, is co-operative — one dependent upon the other, but each conducting their separate parts of the business. As convincing proof of our plan of operations, we have now parties figuring on machinery to work up from 100 to 500 acres. We want to be carefully understood on this question, for there are people in all communities who are willing to be influenced by those knowing but little how this business should be conducted; hence they plunge into heavy expense and find out too late their egregious mistake. To all those we refer to our present words of warning. Even in Louisiana this central system is being adopted. A great many planters cannot afford large field machinery; then a large set of field works can either buy their cane or