

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

work it on shares. By so doing all find it profitable. The refiner prepares for his part of the work; the field operator and planter for theirs; so that all work in unison, thereby a grand result is the ultimatum and both parties handsomely rewarded. Another object attained by steam trains is the economy of fuel. Where fuel is scarce on the prairies the furnaces can be so constructed as to burn all the bagasse (or cane stalks), thereby working on quite an economical basis.

PROFITS OF CANE-GROWING.

To those in doubt as to whether it is pays to grow cane, I would refer the following letter sent me by one of our careful farmers. It is the most complete statement I have yet seen and deserves careful attention:

KENOSHA, WIS., Feb. 26, 1881.

PROFESSOR W. A. HENRY, Madison, Wis.

Dear Sir:—I herewith give you the result of growing one acre of amber sugar cane in 1880. The plot of ground is composed of black muck, verging into a sand loam, two-thirds of the plot being the former and one-third the latter. There were about four rods of very low ground on which the cane grew very rank and lodged. There was no waste ground. In 1879 it was heavily manured and a *very heavy* growth of drilled fodder corn raised, and plowed that fall. The ground was dragged and marked in rows one way, three feet and a half apart, extending north and south, on May 20th, and on May 21st it was planted by hand, dropping the seed in the marks made by the marker and covering with the foot. Two pounds of seed were used. One half of it was planted from twelve to eighteen inches apart and the other from twelve to twenty-five inches. I think it would average seven or eight seed to a hill. It was then rolled, and cultivated twice with a two-horse cultivator. One man spent one day on the piece with the hoe cutting out grass between the hills. This would not have been necessary had the seed come up evenly. One third of the piece was dry and the seed not being covered any deeper, did not come up for two weeks, hence could not cultivate it evenly. It was stripped by hand at intervals from September 14th to September 27th, cut and bound September 28th, drawn to mill on the 29th and 30th, carefully weighed and piled. Total weight $13\frac{1235}{2000}$ tons.

The first half, or that planted the thickest, weighed about eight tons and the other half $5\frac{1235}{2000}$ tons. The cane was made up October 7th, and yielded one hundred and seven-