

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-

ty gallons of syrup, weighing eleven and a half pounds to the gallon. The juice tested $7\frac{3}{4}$ by the saccharometer and was boiled down to forty. There was one load of leaves saved for fodder and three double boxes of seed which was fed to the pigs. I estimate the value of the crop as follows:

DR.	CR.		
To interest on land.....	\$2 00	By fodder.....	\$10 00
half days' work plowing..	1 50	170 gallons syrup at 50c...	85 00
dragging and marking...	50		
two pounds seed.....	70		\$95 00
planting.....	1 00		
hoeing.....	1 00		
cultivating.....	1 00		
stripping.....	6 00		
cutting and binding.....	3 00		
topping and hauling.....	10 30		
hauling fodder and feed..	1 00		
4 barrels at 75c.....	3 00		
making 170 gal'ons at 20c	34 00		
	\$65 00		
Balance	30 00		
	\$95 00		

M. O. MYRICK.

SEED.

Too much attention cannot be paid to the initial step in securing a good yield of syrup. Testimony upon this subject is very variable, and it seems that there have been no rigid tests made to discover whether seed from points to the north or south of us produce the best cane. At the Minnesota convention, held at Minneapolis, January 22d, 1880, the following resolution was passed:

Resolved, That early amber seed grown in the latitude of St. Louis, is the best for Minnesota for two years.

I find nothing in reports of conventions of 1881 which shows that opinion is at all settled upon this question.

It is urged upon persons having seed of any particular merit to forward a few hundred grains at once in a letter to this department, stating in what particular it is supposed to be valuable. A careful test will be made of such, the account published in our report and due credit given to the sender. I am desirous of obtaining seed of varieties which do best at points south of Wisconsin for experiments in cross-fertilization and acclimatization. Persons wishing

to obtain seed will be given the address of parties having it for sale upon application to this department. Those having seed for disposal are urged to send at once the name of the variety, the price they ask for it, and the quantity for sale. The department has no seed for distribution this year.

PLANTING AND CULTIVATION.

The following directions upon this subject are kindly furnished me by Mr. Charles Eustis, of Fort Atkinson, who, as mentioned on a preceding page, grew forty acres of cane last year.

"Have the ground well manured and plow deep; do not 'cut and cover.'" Pulverize the soil by harrowing until it is as mellow as a garden. Mark the ground as for corn, only having the rows but three feet apart each way. If you prefer drilling have the rows run north and south. Drop the seed in the check with ten or twelve seeds in each hill. Cover with moist earth one inch deep. If a horse planter is used the seed will come up evener and quicker. Just as soon as you can see the rows two rods ahead start in with the cultivator. A two horse sulky cultivator made narrow is the best, having the shield set so as to throw the earth away from the hills. Do not wait until the cane is three or four inches high before you commence cultivation, for by that time the weeds and grass will be higher than the cane. Keep the cultivators going until the cane is about six inches high, working as near the hills as is possible. Now go through and remove with the hoe all weeds that the cultivator left. Thin to six or eight stalks or if the ground is *very* rich allow ten or twelve to remain. Remember that you cannot cultivate too much. Keep the cultivator in the field as long as you can drive a horse through the cane. When you are forced to stop work the leaves will so shade the ground that it will keep moist and no weeds can grow. If you follow these directions carefully you will be almost certain to raise a large crop of cane."

MACHINERY.

Fortunately for the farmer, competition is so sharp among manufacturers that poor machinery is rapidly being driven from the market. This department has not the facilities nor have we the time to conduct a series of experiments with the different mills and evaporators to determine the relative merits, but it is urged upon those in charge of our annual fairs to put all machinery on exhibition to the test.