

company for carrying on the business in that place. They also present the following statement of the costs, profits, &c., of a manufactory with sufficient capacity for extracting the sugar from 25 tons of beets per day :

COST OF BUILDING AND APPARATUS.

Two steam boilers.....	\$2 400
Smoke stack.....	100
Steam engine, 16 horse power.....	1 500
Steam engine for running centrifugals.....	1 500
Air pump, 12 inches diameter.....	150
Feed pump.....	30
Retort.....	60
Water pump, 6 inch diameter.....	50
Grating machine and appurtenances.....	600
Four centrifugals.....	2 800
Three separating pans.....	1 000
One montegus.....	90
Gas retort.....	250
Two filter presses.....	600
Two filters.....	300
Evaporator, condenser and pipes.....	1 400
Sugar centrifugal.....	600
Fifty V boxes.....	200
Six crystallizing boxes.....	200
Eight stone syrup reservoirs.....	300
Acidulating boxes with coolers.....	200
Charcoal washing machine.....	150
Twenty animal charcoal steamers.....	50
Pipes, faucets, welds, etc.....	1 500
Shafts and pulleys.....	500
Belting.....	300
Screws, tools, etc.....	600
Buildings.....	3 000
Setting up machinery.....	1 000
Carpenter work.....	250
Mason work.....	150
Nails, rings, etc.....	600
Animal charcoal.....	2 500
Filter cloth.....	500
Cultivating 400 acres beets at \$35 an acre.....	14 000
Cash capital and running expenses.....	10 000

Total.....\$49,930

This includes everything for the factory for the first year of running. The committee think it probable, that with proper economy, the machinery could be set up from \$6,000 to \$8,000 less than these figures indicate.

When the season is favourable, the expenses and profits of such a mill are estimated by the committee as follows :

EXPENSES.

Cultivating 400 acres beets.....	\$14 000
Wages, 160 days, \$8.60 per day.....	9 600
Fuel.....	5 000
Sundry expenses, light, oil, &c.....	10 000
Loss on animal charcoal.....	400
Interest on capital.....	4 200
Salary book-keeper, overseer, manager.....	2 000
Machinist.....	2 500
Overseer of beet cultivation.....	1 000

Total.....\$48 700

RETURNS.

400 tons beets, first product, 5 per cent, 400,000 pounds at 5 cents.....	\$60 000
Second product, 2½ per cent, 200,000 pounds, at 14c.....	28 000
2½ per cent of syrup.....	4 000
Pulp, for feed.....	3 000

Total.....\$95 000
Net profit.....46 300

The expenses and profits under unfavorable circumstances, are as follows :

EXPENSES.

Cultivating 400 acres beets.....	\$14 000
Wages, 125 days.....	7 500
Fuel.....	3 360
Interest on capital.....	4 200
Running expenses.....	7 000
Loss on animal charcoal.....	300
Salaries.....	3 000

Total.....\$40 360

RETURNS.

2,800 tons beets, first products 3½ per cent, only at 14c.....	\$27 440
Second product 2½ per cent.....	18 200
3½ per cent of syrup.....	3 860
Pulp, for feed.....	2 100

Total.....\$51 100
Net profit.....10 740

In the tables given above, the estimate of the yield of beets per acre, is made from the result of the past season's crop, and the yield of sugar is at the rate that the firm in Fond du Lac are now producing it from that crop. These figures are worth the study of farmers, and capitalists elsewhere as well as in Wisconsin.

AGRICULTURAL EDUCATION.

UNDER this head the *Hearth and Home* copies the following remarks from *The Boston Journal of Chemistry*, which go to the very life of the question, How a farmer's son should, in the shortest time, acquire a good, scientific knowledge, of the importance of his own calling? Dr. Nickoll truly says: "In our view, a good and sufficient agricultural education may be acquired without a college course of study, without the aid of extensive laboratories, museums, herbariums, or mineralogical cabinets. We believe what is needed for the interest of agriculture is not so much 'agricultural colleges,' where young men are to have prolonged training in such branches of study as are taught in our ordinary educational institutions; but schools to which active farmers and their boys may resort in winter months, and learn by observation and experiment how, practically, to conduct farming operations to the best possible advantage." In such a school, conducted by a competent teacher, the theory of agricultural chemistry could be soon learned, with as much of the technicology in relation to the chemistry of agriculture, as would be necessary to make the student a scientific as well as a practical farmer. He would there learn the true value of all the elements of manure, their affinity for each other, and the great results arising from their combinations. With such knowledge, what before was a hidden mystery now becomes an acquired intelligence, which enables him to make, save, and apply his manure to the best advantage, and his labors will be lightened by the aid of his brains; and all the mistakes he may make thereafter will not be through ignorance, but only from neglect.

EDITOR'S BOOK TABLE.

THE HANDY BOOK OF HUSBANDRY.—We have received from the publishers advance sheets of a new agricultural work with the above title, by George E. Waring, jr., of Ogden Farm, author of "Elements of Agriculture;" "Draining for Profit and for Health;" "Earth Closets and Earth Sewage;" and formerly Agricultural Engineer of New York Central Park. The specimen pages we have received give a very favourable idea of the contents, type, engravings, paper, and general get-up of the