

Experimental Farms.

Plot 1. One acre Mammoth Russian Sunflowers, black seed. Sown 9th May, 4 lbs. per acre, came up 15th May and the heads were cut for the silo on 18th September. Weight of heads per acre, 8 tons 645 lbs.

Plot 2. Half acre Mammoth Russian Sunflowers, light coloured seed. Sown 9th May, came up 15th May and the heads were cut for the silo 23rd September. Weight of heads per acre 7 tons 1,000 lbs.

EXPERIMENTS WITH BUCKWHEAT.

Two plots of buckwheat were sown covering in all $2\frac{3}{4}$ acres. The variety used was the Silver Hull, and the soil on which it was sown was a sandy loam which received an application of unleached wood ashes about 150 bushels per acre during the winter of 1895-96. This land had been used as a nursery for young forest trees and had received no other fertilizer for ten years past. The land was ploughed in the autumn of 1895 about 8 inches deep and was ploughed again in the spring about 6 inches deep before the buckwheat was sown.

Plot No 1. One acre sown 20th June, 3 pecks of seed per acre, came up 27th June and was ripe 25th September. Yield per acre, 29 bushels 26 lbs.

Plot No 2. One and three-quarter acres. This was sown later, the same variety of seed being used. The land was adjoining plot 1, the soil partly sandy loam and part clay loam and the treatment and the preparation was the same. Sown 29th June, came up 5th July and was ripe 25th September. Yield per acre, 23 bushels 32 lbs.

TESTS OF THE ACTION OF FERTILIZERS ON SOME CROPS.

In the Annual Report of the Experimental Farm for 1893, details were given on pages 8 to 24 of the results of a series of tests which were carried on during the previous five or six years with the object of gaining information regarding the effects which follow the application of certain fertilizers and combinations of fertilizers on the more important crops. The particulars there given covered the results of six years' experience with crops of wheat and Indian corn, and five years' experience with crops of oats, barley, turnips and mangels. The results of similar tests conducted for three years with carrots and one year with sugar beets were also given.

These experiments have been continued; and as explanatory regarding the preparations made and the general plan, together with the way in which they have been carried on, the following paragraphs are quoted from the report of 1893:

“A piece of sandy loam, more or less mixed with clay, which was originally covered with heavy timber, chiefly white pine, was chosen for these tests. The timber was cut many years ago, and among the stumps still remaining when the land was purchased, there had sprung up a thick second growth of trees, chiefly poplar, birch and maple, few of which exceeded six inches in diameter at the base. Early in 1887, this land was cleared by rooting up the young trees and stumps and burning them in piles on the ground from which they were taken, the ashes being afterwards distributed over the soil as evenly as possible, and the land ploughed and thoroughly harrowed. Later in the season it was again ploughed and harrowed, and most of it got into fair condition for cropping.”

“The plots laid out for the experimental work with fertilizers were one tenth of an acre each, 21 of which were devoted to experiments with wheat, 21 to barley, 21 to oats, 21 to Indian corn or maize, and 21 to experiments with turnips and mangels. Owing to the difficulty and unavoidable delay attending the draining of some wet places, it was not practicable to undertake work on all the plots the first season. The tests were begun in 1888 with 20 plots of wheat and 16 of Indian corn; and in 1889 all the series were completed excepting six plots of roots, Nos. 16 to 21 inclusive, which were available for the work in 1890.” In all cases the plots in each series have been sown on the same day.