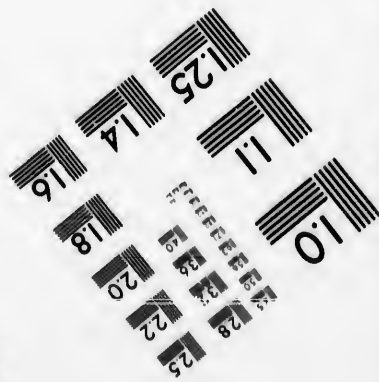
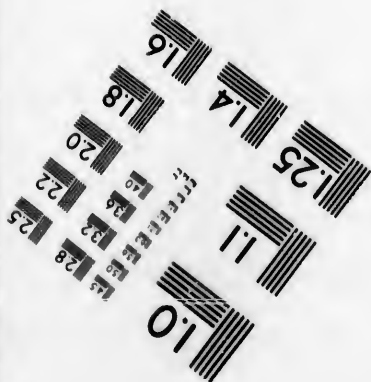
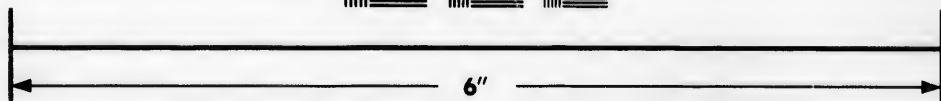
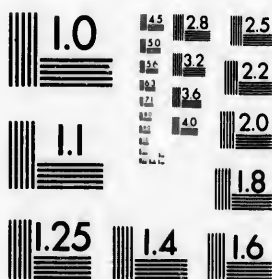


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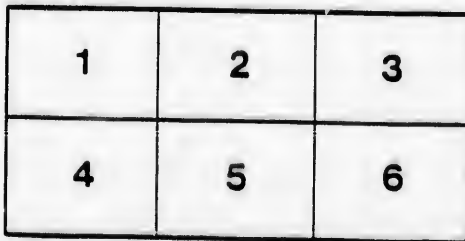
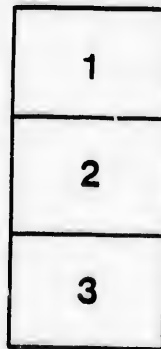
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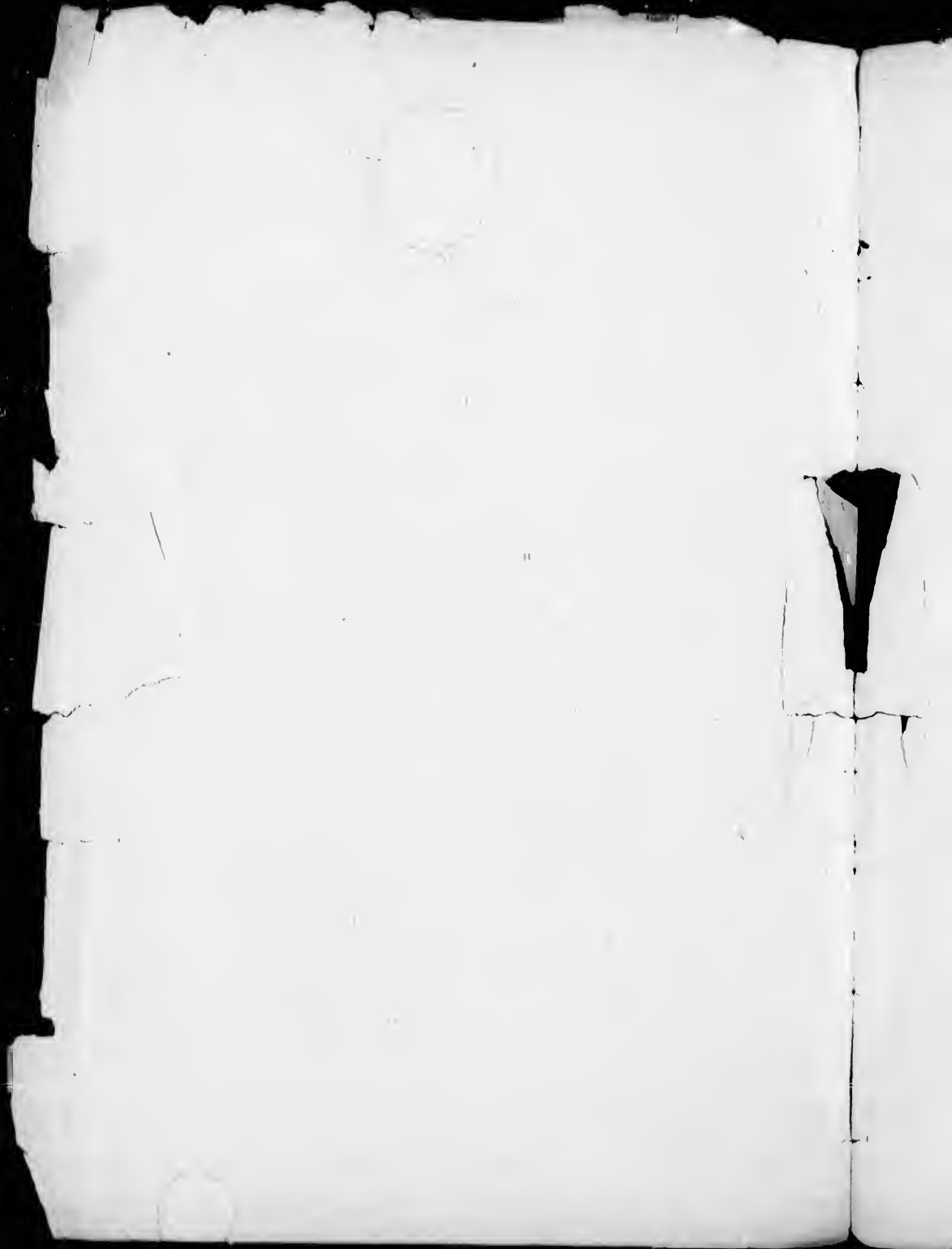
REPORT

ON

CANADIAN FLAX INDUSTRIES

JOHN LOWE,
Deputy Minister of Agriculture.

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REPORT ON CANADIAN FLAX INDUSTRIES.

(JOHN LOWE, DEPUTY MINISTER OF AGRICULTURE.)

OTTAWA, November, 1894.

SIR,—I have the honour to state that during a visit paid by me to western Ontario this autumn, I availed myself of the opportunity to visit the flax mills at Baden, in the county of Waterloo, so as to gain by observation and inquiry facts pertaining to the flax industries. Mr. Erbach, the manager of these mills, personally accompanied me, at the suggestion of Mr. Livingston, M.P., and afforded me the information I embody in this report.

On entering the mills, the first thing shown me was the flax seed cake for feeding, of which Mr. Erbach said the mill exported 100 tons per week to the United Kingdom. He said very little of this flax seed cake was consumed in Canada, although they send an occasional carload to Quebec at the price of \$25 per ton, or about $1\frac{1}{2}$ cents per pound for feeding. I asked Mr. Erbach how many pounds of cake a bushel of flax seed would give. He told me about 40. The remainder of the bushel (50 lbs. statute weight) would, therefore, be pure oil. The waste I think would be very trifling.

Proceeding to see the process, we found the flax seed was ground in an upper story and shot down by a hopper into a heating receptacle, the heat being applied by steam. The ground seed by a simple and ingenious process is taken from this heating receptacle and fitted in square boxes with strong lining of cloth open at the sides, the boxes or matrices being of the exact size of the flax seed cake. The ground seed in this form is put into a hydraulic press to which Mr. Erbach said a pressure of 300 tons per square inch was applied. The oil thus expressed from the ground and warmed seed flows out freely and by gravitation descends into a reservoir from which it is pumped into barrels, this being the whole of the simple and effective process. The cakes taken out of the press are put in bags tied up at the ends and are thus ready for export. Handling the cakes as they came from the press they were found to be quite dry. I asked Mr. Erbach how long in the season they continued to export 100 tons of flax cake a week. He said *all the year* if they could get seed. Asked how they procured seed he said that in that vicinity they generally made arrangements with the farmers to hire or rent from them prepared land, that is land prepared for seeding by ploughing and harrowing early in the season, in the month of May. At this point the Mill Co. takes possession of the land, sows it and reaps the flax. Young Mr. Livingston informed me that the price paid—\$11 per acre—was about an equal division of costs as between preparing the land and taking off the crop. I did not ask him what allowance was made for ground value.

Mr. Erbach told me that they had this year obtained 150,000 bushels of flax seed from the Mennonites of Manitoba, they having put this in as a catch crop after they could no longer sow wheat in the month of May. He said they also sowed flax on the new breakings by the process of simple harrowing and got fairly good crops. Mr. Erbach said he had this year given the Pembina Mennonite settlers \$150,000, for their flax seed.

Mr. Erbach further informed me that the flax in Manitoba was grown wholly for seed and that owing to the richness of the soil they got almost double the quantity of seed obtained in Ontario; but he said the fibre in Manitoba was of no use, that he could take a bunch of it in his hand and break it off with his own strength. He

said the same thing was true in many of the western United States where many hundreds of thousands of bushels of flax seed were grown for the seed alone, the fibre being found to be useless.

Mr. Livingston, M.P., told me that in Manitoba not more than one half bushel of flax seed was sown to the acre, that it was necessary to sow it thin in order to cause the plant to bush out so as to obtain the largest possible amount of seed. The flax seed also being small in size a half bushel to the acre would give a larger number of grains to the acre than a bushel and a half of wheat, or possibly more than two bushels of wheat or even more than that.

Young Mr. Livingston informed me that the soil for growing flax had to be specially prepared, that it should not be too rich where the object was to obtain fibre; that it should never be grown on the application of fresh manure.

The value of the fibre in Ontario, I gathered from information afforded me at the mills, added to the seed, would make the crop quite as valuable or more so than the crop of Manitoba for seed alone, which gives 20 or 22 bushels to the acre, or very nearly double that of Ontario.

Mr. Erbach said that some of the Mennonites cut the flax with their binders and bound it in sheaves in the same way as the wheat; but he thought that unnecessary, and that the flax cut by a reaper and handled in the bulk would be better. Of course this latter process would be cheaper.

He also told me that the Mennonites from whom he had purchased the \$150,000 worth of flax seed in the fall, grew quite as much wheat as their neighbours, for the reason as above stated that the seed was only put in after wheat sowing was done, or on new breakings on which wheat could not be sown.

Mr. Livingston and Mr. Erbach both expressed to me the opinion, based on large experience, that flax could not be considered an exhaustive crop as respects the soil as popularly considered, but Mr. Livingston said that he considered rotation or fallowing necessary to keep the land clean, the land requiring to be perfectly clean for flax. Keeping the land clean was the test insisted on rather than richness of soil, which was not favourable to the growth of fibre although conducive to large yields of seed. These are conditions which would seem to make the crop specially valuable on the rich prairies of Manitoba and the North-west.

Mr. Erbach told me that owing to the drought of last summer in Manitoba the flax sown in May by the Mennonites did not come up until the rain fell in June, but after that its growth was very rapid and the seed ripened. This rapidity of growth should make it a valuable crop for the short seasons of the Canadian North-west, and if the seed grown there should have the properties of the Baltic seed grown in similar conditions as respects land and climate, it may have a very considerable value for export to meet the growing demand for the manufacture of linoleum.

Mr. Erbach added that the company at Baden had supplied Baltic seed to the Manitoba Mennonites.

I have the honour to be sir,
Your obedient servant,

JOHN LOWE,
Deputy Minister of Agriculture.

The Honourable
The Minister of Agriculture,
Ottawa.

