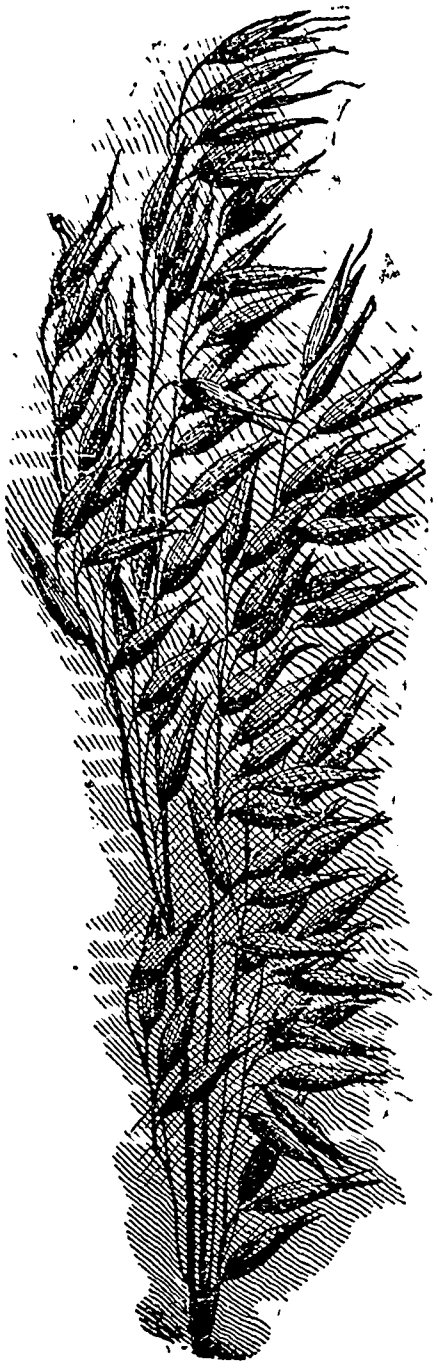
ing-barley lands—I have seen thousands of acres, about the end of July, looking as if they had been rolled, and yet the sample of grain was surprisingly fine! There are certain soils in England the utmost crop of wheat producible from which never exceeds 32 bushels an acre. Add manure as you will, more straw perhaps may come, but not a bushel more grain.



TARTARIAN OAT.

Other soils, of much inferior apparent quality originally, can be forced up to yielding 40 bushels. The plastic clay in Kent will not grow malting barley; the plastic clay in Essex—the Thames divides the two counties—grows the finest Chevalier barley in the world with just the same treatment. If malted, by way of experiment, 100 bushels of Kent barley will yield 104 bushels of malt; 100 bushels of Essex barley will yield from 108 to 112!

Mr. Dawes' man promises to sow deeper and to add weight to his roller this spring, so we shall see what effect the different treatment will have. The Berkshire pigs, here, are worth seeing. Their house is very nicely fitted up, with a boiler and steamer for cooking the small potatoes, of which I highly approve, and the mangels, of the cooking of which I do not approve at all. There is no fear of the Dawes' breed of Berkshire running out from breeding too closely. They buy young boars to put their sows to, and young sows to put to their own boars! In fact their rule throughout is, never to breed from near relatives in any kind of stock. This, however, may be carried too far.

Mr. Tuck, I am happy to say, agrees with me in two important points: that the most profitable dairy cow, for well managed farms, is the shorthorn and that clover hay should be always put into stack. We had a good laugh together over the Frelighsburg idea that imperfectly made hay would stand less chance of firing in a close barn than in a stack. Mr. Tuck has had great experience in making hay for the London market. (See Journal for February, 1881.)

A curious fact in connection with the sex of calves: two seasons ago the cows on these farms dropped almost all bull calves, and this season, almost all have produced heifers.

ARTHUR R. JENNER FUST.

Report of the Minnesota Experiment Station, Jan. 1888.—The establishment of this station seems to have been attended with considerable difficulty. The former piece of land selected for the farm, after having been bought, fenced, and ditched, turned out to be utterly unsuited to the purpose. It was, therefore, sold, and the proceeds devoted to the purchase of another farm, which, together with the appropriation made by Congress in accordance with the provisions of the *Hatch Bill*, may be supposed to have set the University of Minnesota at ease, at least as far as its agricultural department is concerned.

Experiments on the growth of Russian apples have been extensively carried on at this station, though not with great success. The orchard was planted in the spring of 1885 in the most exposed situation the farm afforded.

"It may be claimed that such a situation does not give the trees a fair chance, since any intelligent farmer would choose a protected location for an orchard, but the Russian apples were heralded as being absolute ironclads, and if there was a possibility of their growing on the open prairies of Western Minnesota, then surely they should withstand the greatest exposure that could be given them in this timbered region.

"The result of the winter of 1885 6 on the Russians, as heretofore reported, was the death of thirty-two and one-half per cent of the number planted. In the place of the thirty-seven trees thus winter-killed, others were set, of varieties not before standing in the orchard."

Besides those that were absolutely destroyed by the weather, the previous year's shoots of a great number of trees were killed back completely.

Of fifty-two Duchess trees planted in the spring of 1885, at the same time and in the same orchard with the Russians, half are dead, and of the remainder the new growth was killed back as badly as Antinovka, of which tree the new growth was entirely destroyed and part of the two-year-old wood on two trees.

"Of the sixty-five varieties noted, *not one* started growth from terminal buds in the spring of 1887. Those which killed back one inch or less, and which, in such situation as are or-