

able than they are in the East, and this year promises to see a new record in the number entering Canada. The movement from the States is quite large, and our cousins make the very best Canadians, even better than many of our born Britishers. But it seems a pity that so much of our land has been set aside as railway bonuses. Practically half of the surveyed area of Saskatchewan and Alberta is at present in the hands of railway corporations, or has gone through their hands. And a half of either of these Provinces amounts up into millions of acres. This did not appear to be so much until just recently, since nearly all the surveyed Government lands have been claimed, and the incoming settler has had to buy his farm. It is safe to say if Canada had another Northwest to open, she would proceed differently, but we have the consolation of always being equal to the emergencies of the hour.

CHINOOK.

BELGIAN CATTLE.

Belgium is noted for four of its breeds of cattle—the Blue breed, the Flemish, the Ardenne, and the Condroz. The Blue cattle thrive best in the warmer climates or hilly countries, where the cold is not excessive. The cow gives 3,600 to 4,000 litres (1 litre, 1.0567 quarts) of milk per annum, and 25 to 30 litres yield 1 kilo (2.2 pounds) of butter. The characteristics of the Flemish cattle are the same as those of the Blue, save that the oxen are very strong, and highly prized for field labor. The Ardenne cattle are raised in the mountainous parts of Belgium. The cow gives 1,600 to 2,500 litres of milk per annum, and 26 to 29 litres of milk yield 1 kilo of butter. The Condroz cattle combine the characteristics of the Blue and Ardenne breeds. The cow gives 2,500 litres of milk per annum, of which 25 to 30 litres yield 1 kilo of butter.—[The Live-stock Journal (English).]

The Health of Animals Branch of the Dominion Department of Agriculture is planning an extensive campaign for the eradication of mange in those districts of Alberta and Saskatchewan in which the disease exists. One phase of the work is educational; the other consists in superintending the dipping of infected herds.

THE FARM.

TURNIP CULTURE.

Since the growing of corn for storage in the form of ensilage, as a succulent food for winter feeding of stock, has been so generally adopted in sections of the country where it can be grown nearly to maturity, the cultivation of turnips has been largely abandoned. Whether this is wise is very doubtful, for, while ensilage is a very desirable provision, it does not fully take the place of roots; and as many farmers do not see their way to going to the expense of building a silo, and many others are located where corn does not mature sufficiently to make good ensilage, turnips have yet an important place in stock-feeding, and should be grown even where ensilage is provided, as the best results in feeding are obtained by the use of both. Mangels may be preferable for feeding to milking cows, owing to their being less liable to affect the flavor of the milk, but they require more hand labor in thinning and harvesting, and are a less sure crop than turnips, while, by care in feeding them to cows in moderation, and after milking, there is but little danger of tainting the milk, especially when stables are properly ventilated. Ensilage is, we believe, barred by milk-condensing factories for the same reason, and with little necessity, were more attention paid to ventilation and the times of feeding. For the feeding of sheep and young or fattening cattle, Swede turnips are generally admitted to be more wholesome and suitable than either mangels or ensilage, though, where the latter can be grown to advantage, the combination, ensilage and roots, in connection with clover or alfalfa hay, makes an ideal feeding provision.

The best preparation of the soil for turnip-growing is doubtless secured by manuring and plowing in the previous fall, and shallow surface cultivation in the spring, to conserve moisture and cause the germination of weed seeds, to be destroyed before the turnips are sown, the best time for which, in most places, is about the middle of June. Where manure is not available in the fall, it may be hauled from the stables in winter and spread on the surface of the land, or may be taken from the barnyard fresh, spread and worked into the soil by plowing and disking, or other cultivation. The best results in the application of manure in this case are obtained by the use of the manure spreader, which distributes it so uniformly that its incorporation with the soil is most complete and readily effected. It is important that the land be reduced to a very fine tilth by the use of roller, harrows and cultivator, in order that the seed may germinate quickly and that growth may be rapid, in order that the plants may grow vigorously from the first. The land should be ridged, preferably by the use of a

double-mouldboard plow, to facilitate after-cultivation. The ridging may be done by a single plow, but it takes twice as much time. The ridges should be not less than 26 inches apart, and need not be high, though they should be pointed at the top, in order to sowing the seed at a uniform depth, by the use of a drill with concave rollers fitting the ridges. The ridges may be flattened by use of a heavier roller after the seed is sown, and will be in better shape for retaining moisture. Two pounds of seed per acre is ample seeding, and, of course, much more than enough if nearly all germinates. We prefer to sow as soon after a rain as the land is dry enough to work well, rather than after rain, as there is less danger of the surface becoming crusted, and the plants come up more quickly and uniformly, and grow more steadily.

Cultivation, by means of the horse hoe, for the destruction of weeds while small, should commence as soon as the plants can be plainly seen in the row, and repeated frequently, especially after each rain, to retain the moisture in the land. As soon as the plants are in the second, or rough, leaf, thinning should be done by the use of a broad-bladed hand hoe, about nine inches wide and three inches deep, cutting out the width of



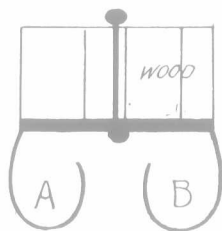
The Boy Behind the Hoe.

the hoe, and, by a pulling and pushing action, singling the plants to about ten to twelve inches apart, leaving strong plants, when available, at nearly the regular distance, and breaking the crust of the soil on both sides of the row to destroy weeds and admit air. An experienced operator can, by a dexterous use of the hoe, rapidly do this thinning without touching the plants with the hand in a whole day's work. A second hoeing by hand later on, to remove one of any twins that may have been left, and any weeds present, will usually pay well for the time in improvement of the crop.

IMPROVED HAY-CAR TRACK.

Editor "The Farmer's Advocate":

Seeing remarks in your paper about hay tracks and slings, perhaps my experience of same may be useful to some. Have worked slings for several years in Wisconsin, Illinois, and lately a new kind of track has been put in on this New York farm. We used two slings to a load of hay, and have unloaded over a ton on one sling; same happened when first (top) sling happened to draw out, not fastened in center. It used to take 8 minutes to unload over a ton of hay with two



slings in Illinois, time counting from when team entered barn with load until empty wagon had gone out again. Sling dumps in center. Illinois farm was 1,000 acres. We had so-called steel and wooden tracks in barns. The great trouble with the steel tracks is to keep the nuts tight on the track. We never could do so. We unloaded all our loose bedding in two barns for over 100 head of cattle by slings, hence our tracks were used nearly all the year. Here we are using an iron track, the wheels of car run in grooves of same, A and B. This track would carry tons of anything. Track is fastened to 4 planks 2 x 8,

and can round curves, etc. Same track will be liable to too much friction.

This was put up by a man who does nothing much else for the firm he works for. They put up either above, or ordinary steel or wooden. He told me, in his opinion, no track was as good for hay as a wooden one, 2-inch maple on top, and any other 2-inch wood underneath; of course, breaking the joints.

My experience has been that I would use smooth, hard-maple track on top; there is more elasticity to same, no bother about bolts coming loose, etc.

When one has gambrel-roof barn, and gets loose bolts in track, which is 26 to 30 feet above floor, it is no small job to get up to put same tight, and, if allowed to run with bolt out, track soon comes down.

Lately, have been unloading eight to ten bales of straw—weight of same, 100 to 145 pounds in each bale—in slings at one trip. To work slings to advantage, you must have plenty of room, and car that is made to carry a heavy load. Car also wants to be long, so that weight is spread out on track when lift is being made.

Geneva, N. Y.

F. JOHNSTON.

THE ANNUAL WEED PROBLEM.

During the long months of winter the world of vegetation slumbered. The pent-up forces in tree and herb have now, for a few weeks, been released, and their mighty power has, in that short time, changed the brown, sleeping earth into a field of quivering, living green. But while we rejoice in the return of growth, it is with some measure of misgiving, for while the wheat appears the tares appear also. Pernicious weeds are springing on every hand, and their vitality seems greater than that of useful plants. Many farmers become discouraged in the struggle against these pests, and, while continuing to hack feebly at them, practically admit themselves beaten. It is no use, they say; or as much as say, they are too much for us. Such an attitude toward difficulties, while it might be expected in a tropical savage, or in the idle, overfed heir of the very rich, ill-becomes the children of the pioneers who changed the forest wilderness into fruitful fields, and who felt that when the last stump was gone life's troubles were nearly over, and the battle was won. And yet we feel like whining because weeds grow, though we don't want them to. Weeds can be killed—rooted completely. The worst weed that ever reared its head over a crop it had robbed and starved is no match for a determined man.

One of the first weeds to proclaim its presence to the passer-by is the wild mustard. Very soon many fields—whole areas of country, even—will be golden with its bloom. It is probably no exaggeration to say that fifteen minutes a year spent in pulling stray plants that may have found entrance to the farm, in addition to care in selecting and cleaning seed and diligence in cultivating hoed crops, is sufficient to keep almost any place clear of this pest, except those which are annually infested with seeds carried by streams from dirty farms above. To those who, through inheritance, accident or neglect, have so much of it that it would take ten years to pull what grows in one, there is much encouragement in the results of spraying experiments. Extensive experiments in Europe and America, among them a series conducted under the auspices of the Ontario Department of Agriculture, indicate that spraying with a three-per-cent. solution of copper sulphate or bluestone (15 pounds to 50 gallons of water), when the plants have developed a considerable leaf surface, will kill the mustard, without materially injuring the smooth, grass-like verdure of the grain crop amid which it grows. More recently, certain American experiment stations have been advocating a solution of iron sulphate (copperas), which is cheaper per pound and safer to use, being non-poisonous, but which former experiments have led us to believe was less effective than the copper sulphate or bluestone. It is possible that, in these trials referred to, the iron-sulphate solution may not have been used in sufficient strength, and that we may be called upon to revise our opinion of its serviceability. However, directions sent out by the Maine Agricultural Experiment Station call for such a strong solution of iron sulphate (20 per cent.) that the cost of spraying an acre would be rather more than where bluestone were used, while it is very doubtful whether the results would be as good.

Ox-eye daisy is, in some sections, it is to be feared, increasing rapidly. It thrives best when left undisturbed, as in grass lands, where it seems to be able to take complete possession. If pains were but taken to pull the plants the first year they bloom, before they have formed a sod, there would be no further trouble. After it has become established, it is very difficult indeed to eradicate from grass. Under reasonably frequent and thorough cultivation, it is not likely to become troublesome.

On the other hand, wild oats thrive best under yearly plowings, but perish in grass. The slip-