

troyed by freezing when wet. For the 16 feet nearest the outlet, either glazed tile or a triangular or diamond-shaped box of wood should be used. In nearly every kiln there are a few tiles burned so badly as to be in part vitrified. Such tiles, if of good shape and full size, would answer for outlet tiles."

Various Items from Manitoba and the Northwest.

In view of the conflicting reports which are being spread abroad concerning Manitoba and the Northwest, we take every opportunity of interviewing parties who have had long experience in that country, and who are in a position to express independent opinions with reference to its agricultural resources, and the social condition of its inhabitants. The organs published in that country are bitterly political, and little reliance can be placed on their assertions. The farmers' organizations have been praised and blamed, some contending that they are subservient agitators and political machines, while others maintain that they have the best agricultural interests of the country at heart. The interest we take in the organization of farmers is well-known, but we have not yet upheld the actions of the Manitoba Farmers' Union, it being impossible for us to obtain independent and authenticated expressions of opinion. It is our earnest desire to state facts, leaving intending immigrants to form their own conclusions.

We have recently been favored by an interview with Mr. A. D. Kennelly, a representative of the McClary Manufacturing Co., of this city, who has spent four years in travelling throughout Manitoba and the Northwest, and is in possession of a good deal of valuable information with reference to the resources of the country and the condition of its inhabitants. We have taken the following jottings from his remarks:

There is considerable talk about the C. P. R. monopoly, but I think the fact of the company having control of the trade would be sufficient to raise an agitation against them even under favorable rates. The freight rates from London to Calgary (840 miles west of Winnipeg) are \$1.65 per cwt., while the rates from Winnipeg to the same point are \$1.75 per cwt., the latter figure being very high in comparison with western rates in general, but the company maintains that it cannot pay expenses if these rates were lowered. The elevator monopoly is another source of complaint, the business being controlled by two grain dealers and millers. The elevator rates are 3 cents per bushel, and the farmers wish to break the monopoly by erecting flat elevators of their own; but the C. P. R. Company will not recognize this project, contending that it is to the farmers' own interests that the wheat should be cleaned and graded at the elevators instead of being shipped elsewhere for the purpose. The company forcibly recognizes the necessity for maintaining the high standard of Manitoba wheat, which they think cannot be done on the flat-elevator plan proposed by the farmers. The farmers have put up elevators at Brandon and Manitou, but the wheat cannot be graded at these places. However, the C. P. R. Company has been obliging in other respects: they have made a reduction of about 20 per cent. in the export rates of frozen grain; they carry seed wheat of first-class quality into the country free of charge; and I have always found the officers very civil and obliging. The accommodation is good, and we have not been troubled by delays. The company have been severely criticised for locking up their lands near the railroad, and it has been said that by doing so they drove many

settlers and intending settlers across the border into the United States. But these lands are now open for settlement, and no further complaints can be made. The heavy duty on agricultural implements from the United States has been another source of grievance, as farmers have claimed that American implements are more suitable for prairie settlers than those manufactured in the Dominion.

With reference to the climate and the country itself, I can't see that the farmers have cause for complaint. I once met an Ontario farmer, residing west of Brandon, who raved furiously against the country, and could see nothing good in it. I asked him the extent of his business, and he said he had half a section (320 acres) of land, and started three years ago with a capital of \$1,200, and he could sell out to-day for \$4,000. I know another farmer who migrated from Lucknow, Ont., to Verden, a thriving town west of Brandon, about four years ago, and took up 1,200 acres of land, 400 of which are broken and under crop. Last year he harvested 3,000 bushels of No. 1 hard wheat, and sold several hundred bushels for seed at \$1 a bushel, and the balance was sold on the general market for 65c a bushel. He told me that he cleared more money the past year than he did during the last nine years which he had spent in Ontario. Such examples are not uncommon, and if a farmer does not succeed in Manitoba or the Northwest, he should blame himself and not the country.

That there have been many failures in the wheat crop by frosts cannot be denied, but many of these disasters should be laid more to the charge of the farmers, than to that of the climate; for Ontario farmers have been accustomed to do a large amount of plowing in the spring and sowing the wheat late. This practice should be abandoned in the Northwest, and I have observed that those farmers who plowed in the fall and sowed early in the spring were not troubled by the frosts. It has been urged that the land along the line of railway between Moose Jaw and Calgary was unproductive. For the purpose of testing this the C. P. R. have established experiment stations along the line, which I have visited several times, and I am now fully convinced that this region is exceedingly productive of grains and vegetables.

Alberta (a district extending from the Rockies to Medicine Hat, 250 miles, and from the southern boundary of Canada north almost to Battleford, about 350 miles) is the great stock raising region, and it is not so well adapted to agriculture as Assiniboia or Manitoba. Here corn grows luxuriantly and the land cannot be beaten for vegetables. Stock flourishes on the rolling prairies all the year round without shelter. About four-fifths of the land is tillable, and good water can be had by digging 12 to 30 feet deep; but timber is scarce, although there is an abundance of soft coal on the Saskatchewan and other parts, and anthracite coal is found in abundance near Calgary. Snow sometimes falls in Alberta, but never lies long enough to interfere with grazing, and I have seen dust flying in mid-winter. Assiniboia is a better agricultural district, but not so good for grazing. The land is heavier and deeper, and although there is no coal, there is more timber, and these districts are more subject to summer droughts than Manitoba, while Manitoba, lying lower, is more subject to frosts.

Prices are becoming more and more in sympathy with those of other countries. Dressed pine lumber, which sold four years ago for \$50 per M., now sells for \$30 and \$38, and plain pine lumber now sells at \$25 to \$30. Good board can be had in any town for \$3.50 to \$5 per week, but clothing, rent, and fuel are still higher than in Ontario, although the prices are rapidly declining. Common laborers get \$1.50 per day, and farm hands get \$30 to \$35 per month during the summer months, but in winter little work can be had. Farmers get 20c a lb. for butter, 75c a bushel for potatoes and 20c to 22c per dozen for eggs. Oats bring 25c to 35c, and the average production is 40 to 45 bushels per acre, and wheat averages 35 bushels per acre and the average price is about 60c. The land is easily tilled. Transportation

facilities are becoming greater, freight now going through from London to Winnipeg in eight days, while it used to take two or three weeks by the old route through the United States.

Notes on Insects Injurious to Farm and Garden.

The following notes have been issued from the Mass. Agr. Experiment Station, by Mr. S. T. Maynard, botanist of that institution.

CABBAGE FLEA.—The first insect of importance that appears is the small black flea or jumping beetle that attacks the cabbage, radish, turnip, etc. Dusting with Paris green mixed with one hundred times its weight of plaster has proved an effectual remedy. This must be done when the plants are wet and after every rain.

CUT WORM.—The cut worm, of which there are several species, including the army worm, work only during the night, and may be destroyed by the same remedy as the above. We would advise a trial of pyrethrum powder mixed with five times its bulk of plaster, as being more safe, although we have no positive proof that it will be effectual.

STRIPED SQUASH BUG.—The striped squash bug which has been so abundant for the past two seasons, is best kept in check by the use of plaster and Paris green. For the family garden the safest and most satisfactory way to overcome them is to make a bottomless box twelve inches square, and six or eight inches deep, and cover it with mosquito netting. One of these boxes placed over each hill until the plants have become tough and hard, is a sure protection.

THE POTATO BEETLE.—The potato beetle has evidently become a permanent resident among us. Paris green extended with plaster, flour or water, is the only cheap and easily applied remedy known at present, but great care must be exercised in its use and especially in the place where the package is kept, that it may not get upon the food of animals.

CABBAGE WORM.—The cabbage worm, the larva of the common white butterfly, may be easily destroyed in several ways. That of hand picking, if begun before the first brood has passed into its perfect state, is effectual. We have also found that pyrethrum powder mixed with five times its bulk of plaster and dusted into the centre of the leaves with sulphur bellows, is certain destruction to every one of them. The application of insecticides in liquids to the cabbage has not been satisfactory on account of the peculiar structure of the leaf surface, which allows the water to fall off in drops and not adhere to any part of it. Paris green is unsafe to use after the leaves have become over four inches in diameter.

CURRENT WORM.—The currant worm should be destroyed while small, with dust of hellebore or pyrethrum. The latter being perfectly harmless, is to be more highly recommended.

PLUM WEEVIL.—There are two certain methods of capturing the plum weevil, the first by jarring the tree early in the morning and catching them upon sheets stretched below upon a frame or upon the ground, and the second by placing chicken coops under the trees. The former method must be attended to regularly every morning for three weeks after the plums have set, and in the latter case, if the number of trees is large, a large flock of chickens will be required to make that remedy effectual.

CODLING MOTH.—No positive remedy against the ravages of this insect has as yet been found. It is claimed that Paris green sprayed over the tree in water is effectual, but should it prove so, it is far too dangerous a remedy to apply where grass or other crops are growing under them.

APPLE AND PEACH BORER.—For the destruction of these two insects no sure remedy has been found except the knife. It is probable that covering the trunk of the tree near the ground with the ink or tar used to catch the moths of the canker worm, or wrapping around the trunk bands of tarred paper, would assist in keeping them away.

ROSE SLUGS.—This insect is easily destroyed by spraying with water and pyrethrum at the rate of one tablespoonful of the latter to a pailful of the former.