

and its product the foundation of all wealth. Our success depends upon our knowledge of the natural laws of nature and proper application of their principles. These meetings, I hope, will make us better fitted for the struggles in life, for by mingling and co-mingling with each other in our institute meetings we come to study and know our wants; knowing them, we should direct our energies to obtain them. New ideas are the material with which progress is made. If you will only consider the amount of material, talent may be used in the farmer's cause. If every one would contribute his share according to his ability, and by coming often to these meetings, it would have a tendency to wear off the angles and peculiarities which have become formed in us by our isolated condition. The first organization of any kind for the farmer's benefit was started in Germany by a few farmers about thirty years ago. The government saw the benefit and they started several experimental stations in the empire. I saw an account of them at the time. I wrote to the Toronto papers at the time about starting farmers' clubs. I spoke to a few neighbors about organizing, which we did about twenty-nine years ago in the county of Brant. So I claim to be the father of them in Ontario at least, and I hope they will keep growing until they make themselves felt as a body politic, which will redound to their own and the nation's prosperity.

Crates for Potatoes.

In this section, where we average from 300 to 3,000 bushels of potatoes each, no one thinks of being without crates, but I find many places where their use is unknown. I have kept a record and find that we brought home little pigs, took live poultry to market, set hens, used them for chicken coops and for a bushel measure.

One can sort over and fill crates with potatoes stormy days, and have them ready to draw to market when the weather is pleasant. At planting time, they can be placed in a field, so droppers will not have to walk back to the end of a row to get supplies. By a careful study we placed crates in a field so as to save travel and laborious digging, and a fourteen-year-old boy sorted and picked up 150 bushels of potatoes in nine hours, which is equal to two men's work. By the use of crates we have loaded a car with 600 bushels of potatoes in eight hours, which would be impossible by any other method. They should be made light and strong, housed when not in use and marked with your name, as they are always wanted by borrowing neighbors, and are left at stores, and I never knew of one being returned till called for. A supply of crates need not cost much. In this section they are made and kept for sale at eighteen cents each by manufacturers, who use the short pieces from other work. The best size is seventeen inches long, thirteen and a-half wide, and twelve and a-half deep, outside measure. Three can be fitted into each other and occupy the space of two. Half-inch basswood slit into slats two and a-quarter and three inches wide, and hardwood two inches square, slit diagonally, making three-sided pieces, are used for corner posts, with hardwood sills one inch square, half mortised into bottom of posts across each end to nail bottom to.

Put five two-and-one-fourth slats on bottom, and one wide and three narrow ones on each side and end. Use wire nails, and I put a screw in each slat, as they hold better and only cost fifteen cents per gross. Some blocks fastened to a bench to hold the posts at the right distance while nailing on slats will be found convenient. To keep crates from slipping when tiered up, nail a short piece on the bottom across each end, so as to fit inside the posts of the crate on which it is placed. It also helps to support the bottom slats. A simple crate is made by nailing slats on sides and bottom of three-fourths inch hardwood boards for ends, with holes cut for handles. If properly constructed they will weigh six pounds, hold a bushel, and be strong enough to stand "grief".

The Farmer's Garden.

BY ROBT. BARCLAY, BALMORAL, MAN.

I read with pleasure and interest your correspondent's treatise upon this subject in your August issue, and now take the liberty of giving you my experience upon the matter. Every reasonable and right thinking person will agree, without hesitation, that adjoining the farm house is the place one would naturally expect to find a garden, more especially where there is a family. Why, I consider it part and parcel of the farmer's business, as well as a nice pastime for him and his family perhaps. If he is some distance from a market it may not bring him in the hard cash, but it does equally well in saving many a dollar of his hard earned money, by not only providing food and luxuries, but also in preventing many ailments. Fruit is a natural and whole article of diet, and should be freely used. Not only is the farmer and his family benefitted by the garden products, but his pork is greatly enhanced and ready much earlier for the market when pigs are fed upon what is termed the "broke" of the garden. Of course there are some places much better adapted than others. I admit that away out on the exposed prairie there is considerable difficulty in raising many kinds of fruit and vegetables for want of shelter, but that can be overcome by planting hedges of Russian willows, which succeed well in this country, and can be had from nurserymen at two and a-half dollars a thousand slips, or, if this is deemed too expensive, a protection can be got very easily by sowing sunflower seed all round the plot, and if this is used the withered canes should be allowed to remain in the ground until the following spring so as to cause the snow to lie in a drift over the garden, which gives the best winter protection for all kinds of small fruit. I say small fruit, for there is no use of trying large fruit upon the open prairie. If we are to have apples and plums in Manitoba these can only be got by planting in sheltered places or in bluffs, and I do not think we need ever look for pears or cherries. That is the conclusion I have come to after many years' study practically of the matter. However, if you wish it I may write you fully upon that subject later on. What I wish at present is to impress upon the farmers the great advantages of a vegetable and small fruit garden, and I would ask those who have not yet the pleasure of having one just to start this fall and prepare a small piece of land convenient to their house, and as far away from the poultry yard as possible. If available take new land, that is, what has been cropped one year or at most two, top dress it with good, rich, short manure, plough it regularly, closely and deeply so as to admit of carrots, parsnips and such like growing to a good depth. I would recommend beginners to try only a few of the staples in fruits and vegetables which have done well in this country in many gardens in different sections, and which have succeeded well with myself. Following is a list:—

Beans—English Broad Windsor, Wax Bird Egg.
Beet—Imp. Blood Turnip.
Cabbage—Early Jersey, Henderson's Summer and Wakefield.
Cauliflower—Henderson's Snowball (beats every other).
Carrots—Early Shorthorn and Imperial.
Sweet Corn—Mitchell's Early.
Cucumber—Boston Pickling.
Lettuce—Black Seeded Simpson and many others.
Onion—Early Flat Red (undoubtedly safest and surest).
Parsnip—Student.
Parsley—Covent Garden.
Peas—Bliss' American Wonder (nothing like it).
Radish—French Breakfast and China Rose Winke.
Salsify or Vegetable Oyster.
Scotch Kale—One of the most useful vegetables we have.

Tomato—Acme, Ruby and Livingstone's Favorite.

Raspberries—Red Cuthbert, Black Gregg (not too hardy), Early Ohio (very hardy and prolific). Currants—White Grape, Red Cherry and Fay's Prolific; Black, Lee's Prolific. Black Naples no good.

Gooseberries—Downing and Houghton.

Rhubarb—Myatt's Sumarus and Strawberry. You will notice I make no mention of pumpkin, citron, strawberries, etc., as if once successful with the common varieties you may depend upon it the people will soon go on to what may be termed the higher standards in gardening.

Poultry on the Farm.

BY IDA E. TILSON, WEST SALEM, WIS.

Occasionally fowls should be caught and duly pass their examinations. Where vermin are found, dust pyrethrum through the plumage with a twenty-five cent bellows, or even by hand. Kerosene, with cloth or hand, can be rubbed on everywhere except top of head, for hens really have brains which may spoil. A little coal oil proved so good I thought more might be better, and once tried pouring it on, thus saturating my hens. Such a course is warranted to raise an eruption, and to furnish a good subject for "Hood's Sarsaparilla." Feathers showing little clusters of eggs on them should be plucked from the fowl. Roosts and perches can be cleared by spraying kerosene from a fine watering-pot, or by pouring it from such a nosed can as permits a small, manageable stream. A large nozzle may be made smaller by inserting a stick, flat on one side, and on its other rounded to the tin. Air-slaked lime thrown around profusely every day or so is calculated to disturb the festive mite's breathing apparatus, and is, moreover, an excellent disinfectant and deodorizer. An early bird is fortunate if he does not catch cold too, but he indeed catches the worm, and insecticides themselves are most profitably used in the early morning, before parasites hide away to sleep off the effects of their night's feasting. Pounding or shaking their retreats will often cause the midgets to scurry out, when casual glances could have discovered no traces. Since vermin breed and delight in filth, a frequent and thorough cleaning of the hen house evidently surpasses medicine. A new run, not thickly sown with an assortment of germs, will often cure gaps and cholera, as would also a purer, fresher water supply. That familiar line, "Absence makes the heart grow fonder," can have a new interpretation. Hens freed from their insect tormentors, and with causes of disease absent, grow quiet, tame, fond and profitable. A young man, being asked why he worked for a living, explained it was because a living would not work for him. Nor will our hens work for us, till we first work over them. They respond in kind, giving us about as much attention as they have received in turn. "Keep a moving, keep a moving," is the refrain of a negro melody, which is practical for anybody who wishes to reach anywhere or to accomplish anything.

It is said cholera proper is never known in our latitude, but summer complaint, though non-contagious and lingering, annually destroys many fowls. Its causes are somewhat obscure and complicated. In any malarial disease, whether of mankind or of animals, the actual cases, though many, are yet but a small percentage of all those individuals exposed. Scientists tell us the very air we breathe, the viands we enjoy, are swarming with bacteria. We might have perished many times, had there not been powers of resistance within us. Those who succumb do so from weakness or derangement of the system, rather than from the necessities of a malaria, always more or less present. Moulting birds, worn-out sitters, vermin-infested, under-fed or over-fat hens, are ready subjects for bowel complaint, and no immediate cause is surer to bring it on than a draught and sudden chill, driving yet more blood away from the surface and upon those already degenerate