the last of March or sometime during the forepart of April if possible. With the incubator there is no waiting for a hen to go broody and the time of hatching is easily controlled. Where early chicks are wanted in large numbers an incubator and brooder become a necessity.

On the whole, biddy was not very patriotic this past winter. She eagerly consumed high-priced wheat and corn, but refused to give any returns. She is backward in bringing up the egg yield this spring and seems determined not to do her part to raise early-hatched pullets to produce eggs next fall and winter. In all parts of the country there has been considerable complaint regarding the failure of farm flocks to lay. The percentage production was still low the middle of April, and broody hens were very scarce, consequently the majority of chicks hatched by the natural method will be late in coming out, which, according to theory and practice, will mean immature pullets when cold weather sets in, and few eggs next fall and early winter. It is unfortunate in one way for the small flock owner that a few of his hens do not go broody early in the season. In a couple of months' time the majority of birds in some flocks will have ceased laying and have gone broody. It is too late then to set hens to produce winter layers, and the broodiness should be broken up as soon as it is noticed, by placing the hens in a slat or wire-bottom box raised off the ground so as to permit of a circulation of air under them.

When the chicks are hatched, supposing it is well on in May, they should be carefully fed on a variety of feeds which will produce continuous growth. It is difficult to overcome a setback in the development of a bird, caused by lack of proper feed and attention. Give the young chicks a fresh grass run and feed bread crumbs, hard-boiled eggs, or oatmeal for a few days, then a mash and whole grain. They require shade during the heat of the day and plenty of clean water. The orchard, and later on the cornfield, make excellent runs for growing chicks. Do not neglect feeding them. Keeping a hopper of mash and grain within their reach at all times after they are a couple of months old will ensure a constant supply of feed. Many farmers find that poultry is a profitable branch of farming operations, while others claim that hens barely pay for their feed. Like every other class of live stock, poultry must be properly selected, housed and fed if eggs are to be gathered the year round. Some poultrymen are good feeders but the housing is the weak point. The pen may lack ventilation and be damp. Thinking to make money out of hens, others have built a substantial house, perfect in every detail, but yet the winter has passed with only a very few eggs having been gathered from a flock of seventy-five or one hundred birds. Every endeavor should be made to find the weak link in the business. If one flock will lay there is no reason why another of the same strain, hatched about the same time, should not be capable of doing likewise. Keeping poultry for profit is not such a "fool proof" business as some men would have us believe. This has been conclusively proven in the past. Pullets lay heavier than hens during the winter, therefore a sufficient number should be hatched as soon after the first of April as possible, to take the place of some of the old-timers in the flock. Too many neglect the pullets during their growing period and then expect them to lay when eggs are high in price. Others imagine that feeding consists in throwing a little grain before the birds a couple of times a day and supplying a dish of water. Eggs are not usually laid in sufficient numbers, under such conditions, to make the keeping of poultry a profitable undertaking. Spring is the time to commence preparing for eggs the following winter. Hatch the pullets early and then feed them properly during the summer.

HORTICULTURE.

Saving Time in the Garden.

EDITOR "THE FARMER'S ADVOCATE":

"Gardens galore!" is nailed to the mast head of every newspaper, and the bulletin maker is about the busiest man in the land. The gardening boom is giving a great spurt to seed selling. Nearly every shop on the street is resplendent with packages. For town people, it will beat golf and likely cost them less. Some patriotic enthusiasm may ooze out with the sweat under 90 degrees in the shade, and the wheel hoe may fall out of the race, but country folk who put their hands to the hoe will, like Mr. Britling, "See it through." Something will be added both in town and country to the food for a famishing world, though it may not reach the promised $50 to $100 worth of vegetables on half an acre. And it will teach one thing surely—that the best way to learn gardening is to garden.

Besides helping to feed the hungry, the farm table needs and deserves alliance with a good garden if we are to live instead of exist on a Prussianized diet. We need it this year for there is more and harder work to be done. To avoid failures, a few facts ought to be squarely faced as the work begins. The cry has always been: "Seeding is on, no time for the garden!" Time can be taken for what ought to be done. What hundreds of fore-handed farmers and their "better halves" have accomplished others can achieve, if they will to do so. In this, perhaps the busiest of all years, how can the time be saved? In a word, by doing certain things, that will stop the waste of time:

First, fence the garden, say with good woven wire that will keep out pigs and poultry. To expect the wife and daughters, as is sometimes done, to care for the plot and then permit them to wear out their lives chasing farm animals and weeping over costly havoc wrought, passes the limit of endurance and justifies a domestic strike.

Second, if not naturally free from excess of wet, open a furrow through the garden, providing at this date, putting down tile is impracticable. Earlier work, better work and easier work will result from drainage.

Third, keep the weeds out of sight and you will save both time and toil. These Huns of the garden once started, and you are in for a war that never ends; while the vegetables are starved, strangled and smothered to death. Stop the waste!

Fourth, lay out the garden in long, straight rows and discard "beds".

Fifth, have proper tools to work with, such as a flat-tined digging fork, a straight-tooth steel rake, a sharp hoe, hand cultivator (which can be used often, when a horse is not available), line and stakes, hand weeder, planting trowel and watering can.

Assuming that the land has been already manured and plowed, a light disc harrow, used repeatedly, is a fine implement for mellowing the surface in preparation for planting and I do not use a roller. A rich and mellow soil, moisture (but not too much), warmth and air are the conditions of getting seeds and plants to grow. The soil particles must come in close contact with the little seed. "I put in a lot of seeds last year and they never came up" is a complaint I heard the other day. Seed dealers are commonly blamed for what is not their fault. In a lengthy experience, using supplies from most of the leading seed houses in Canada as well as from several American firms, I can only recall a couple really poor lots. The chief cause of failure with smaller seeds

The Wrong Way and the Right Way to Plant Garden Seeds.

is probably planting too deeply. In some of the daily newspapers lately, would-be gardeners were advised to make "deep" trenches and plant seeds in a way that would, in many cases, simply mean burial beyond hope of successful resurrection. And we must remember that the soil is mostly full of weed seeds right to the surface ready to shoot up ahead of the lettuce, carrots, parsnips or what not. Early peas planted an inch and a half deep and later sowings, in prospect of dry weather, a little deeper have proved satisfactory. The depth of planting varies with different seeds and soils. In a sandy plot they will bear going a little deeper than in clay or clay loam, and some very fine seeds like celery (usually started in the hot-bed or cold frame) thyme or poppy require just to be scattered on the surface and pressed in or with a very light sprinkle of mold upon them. An Ohio vegetable grower of extended and successful experience suggests as a general rule about three or four times the depth of the diameter of the seed. Another frequent mistake is in worse than wasting seed by sowing too thickly in the bottom of a V-shaped groove. It pays well to scatter them more thinly on the bottom of a trench made say an inch wide. More and sturdier plants can be grown in that manner. The two ways of sowing seeds are indicated in the accompanying illustration. If the soil becomes sodden and begins to bake after rain go over the row lightly with the steel rake even before the sprouts begin to show, and on each side when they appear. Hoe often. Do the right thing at the right time and the garden is the most satisfying corner of the farm, but give weeds and water the right of way and your project is doomed to disaster like the adventure of Adam the original gardener.

Middlesex Co., Ont. MAN WITH THE HOE.

Western-Grown Potatoes as Seed.

For some reason the impression is abroad that potatoes grown in Western Canada are not suitable for seed in Ontario or the East. Apparently this belief is not based on facts, for in this regard W. T. Macoun, Dominion Horticulturist, writes:

"Our experience with the potato seed from the Prairie Provinces of Canada has been uniformly good. As a rule, seed potatoes from there yield much better than seed of the same varieties grown in the central parts of the Province of Ontario, although it is quite likely that seed from Northern Ontario would be just as good. I think the reason that the impression has got abroad that Western seed is not good is the fact that the quality of the potatoes grown on the Prairies is not, I think, as good as that of potatoes grown in the Province of Ontario, as the potatoes do not ripen up so well on the Prairies, but it is this immature seed which is of so much stronger vitality than the potatoes which ripen up very early in the season in Ontario.

"The following is a table showing the yield from seed from Indian Head and from Ottawa for the year 1910:

Name of Variety	Indian Head seed—Yield per acre		Ottawa seed—Yield per acre		Difference in favor of Indian Head seed	
	Bus.	Lbs.	Bus.	Lbs.	Bus.	Lbs.
Empire State	448	48	107	48	341	....
Ashleaf Kidney	443	18	41	48	401	30
Dalmeny Beauty	402	36	160	36	242	....
Late Puritan	402	36	39	36	363	....
Gold Coin	399	18	119	54	280	24
Reeves' Rose	374		118	48	255	12
Rochester Rose	363	....	136	24	226	36
Irish Cobbler	332	12	127	36	204	36
Money Maker	319	....	70	24	248	36
Carman No. 1	289	18	94	36	194	42
Morgan Seedling	279	24	46	12	233	12
Average	368	30	96	42	271	48

"I may say that we had just as striking results in 1916, except that they are not in a form that I could make desirable comparisons."

Further, in respect to the subject of seed potatoes, Geo. H. Clark, Dominion Seed Commissioner, says:

"The experience of some Ontario farmers, who are poor farmers in both senses of the term, with sowing Western seed oats of the feed grades which are frozen and will germinate only from 40 to 60 per cent., has created the general impression that seed oats from Western Canada do not do well in Ontario the first year, and this general impression has been enlarged to include other kinds of crops. I agree, of course, that seed oats, and for that matter all kinds of seed, if produced under soil and climatic conditions that will stimulate to the full development of vigor in the mother crop, should, theoretically at least, give better returns when planted under soil and climatic conditions not too dissimilar from that under which the seed was produced. Seed that is, however, produced on poor land or under climatic conditions that are unfavorable, or under conditions where the vigor has been impaired by plant diseases, is weakened in vital energy, and is less suitable for planting than imported seed of good vigor, with potatoes more than with any other crop. Farmers of Southern Ontario would be well advised to follow the general practice in the hot, dry climates farther south, of importing their supplies of seed potatoes every year from the cooler and more moist climates farther north. This practice was not necessary in Old Ontario when there were fewer potato diseases to combat, and when the farmers were planting potatoes on soils that were kept cool as well as fertile and moist by virgin humus. Because of the climatic conditions that prevailed last year throughout the greater part of Southern Ontario, the vigor of the potato crop was seriously impaired, and the potatoes that would be planted this year from home-grown stocks would probably yield on an average from 50 to 75 bushels per acre less than yields that may be obtained on good virgin soils by planting northern-grown seed potatoes of good quality."

FARM BULLETIN.

Ontario April Crop Bulletin.

The following information regarding agricultural conditions in this Province is contained in a bulletin prepared by the Ontario Department of Agriculture, based upon information furnished by a large staff of correspondents under date of April 12th:

The acreage of fall wheat is less than that of a year ago by about twenty per cent. The hot, dry summer and early fall rendered the ground too hard for a good seed-bed, and as a consequence much of the sowing was done late, while some land intended for the crop was reserved for barley or other spring grains. Most of the fields were able to show only a small top for their fall growth, but the steady covering of snow, extending from December until well into March, gave almost perfect protection to the young wheat, and the crop met the first of April in practically the same condition as it entered the winter. When correspondents repo ted—from April 9th to 12th—cold nights and sunny days were causing alternating freezing and thawing upon practically bare fields, and the crop was suffering somewhat from "heaving." The extent of injury from this so far is not serious, but the actual prospects of the crop cannot be fairly estimated until the young plants get their spring start. Some of the fields were said to be looking rather brown when correspondents wrote, yet life and vigor appeared to be left, which growing weather would carry along. The later-sown fields as a rule looked the more patchy, especially where there was little or no drainage.

Clover, like fall wheat, went through the winter well protected by snow, and came out in the spring in most promising condition. Since the snow disappeared, however, there has been some heaving experienced, but it is too early to judge of its effects. With a favorable spring start the crop ought to be well up to the standard in most localities.

There has been some injury to buds and new wood of peaches, but the effects of the freezing back may not be serious. Otherwise orchard trees are said to be in good condition generally, although some young fruit trees (more especially in the Lake Ontario and St. Lawrence and Ottawa counties) were more or less girdled by mice and rabbits, as is usually the case when the snow