FARMING

In this department each week will be given general information to farmers and stockmen. No attempt will be made to criticize the work already being done by Canadian farmers; but an effort will be made to present to the farmers of the country summarized information contained in government reports, and the actual experiences of men and women who have achieved success in farming by following modern methods. Farmers who have found new "wrinkles" or have made a success in any special line of agriculture are invited to send short letters to this paper giving their experiences, or criticizing any of the information contained in these columns.

Vegetable Growing

Tomatoes.

Tomatoes are one of the most popular vegetables to be had at the present time. They are grown extensively on large acreages for sale on local or distant markets, and they are also grown in larger quantities for canning purposes. Some localities in the Province make a specialty of the early trade. Almost every farm and kitchen garden has its few plants of tomatoes for the home use. This crop has many medicinal properties, and for this reason, if for none other, it should be grown more and more extensively than it is at the present time. The average kitchen garden tomato plants are of an inferior order, because in many cases the householder does not know a first-class tomato plant when he sees one, and for this reason he buys a small, spindly plant which does not do well, and which gives a very poor yield late in the season. Early tomatoes are uncommon in a great majority of the kitchen gardens of this Province. This should not be, and the following notes will help to solve the problem of fairly early fruit, if carefully followed:

Starting Seed.

The seed for an early crop of tomatoes should be sown in the hotbed or greenhouse not later than March 1st. Some growers plant a few days earlier in order to be sure of a good thrifty plant. The seed should be sown in very fine garden soil in plant boxes or flats and a pane of glass placed over to induce quick germination. In four weeks' time these young plants should be ready to prick out. They should be set two by two inches if sufficient room can be secured, or in any case, and and a half by one and a half inches apart. Three to four weeks later they should again be transplanted, giving them more room. They can be transplanted into three-inch pots, either paper or clay, as desired. In another two to three weeks' time they should be transplanted again into six-inch paper or clay pots, or into quart berry boxes, one plant to a box or pot. Some growers think it advisable to transplant at least four times in order to secure strong, sturdy plants with thick stem and healthy colored foliage. Certainly this helps, and anyone desiring extra early fruit should follow this practice. The larger the root system and the sturdier the growth of the plant, the surer the grower is of an early crop.

For the main crop the seed should be planted a month later, and the plants handled in much the same manner. It does not seem to be the general practice among growers of the late crop to be sure of large plants. Probably this is a mistaken idea, and accounts for so many tomatoes being frozen in the fall when a fairly early frost catches them. Just a little more care in the handling of the young plants will be likely to offset this loss. Men growing for the canning factory trade should not buy the cheapest grade of plants they can, for the plants that are large, fewer in the flat, are those that have been given the most care, and returns from the better class of tomato plant are greatly superior in proportion to the price paid for cheaper ones.

Soil.

Sandy loam, well-drained and well-manured, makes the best soil for any crop of tomatoes. For the extra early crop they should be planted in a sunny, warm location, facing the south and protected from severe winds. A clover sod makes the best land on which to grow the main crop of tomatoes. Land which will produce a good crop of corn will almost invariably give a good yield of tomatoes.

Manuring.

Li beral applications of manure should be given the land for tomato growing. Many intensive growers use twenty-five two-horse loads per acre. This should be applied preferably in the fall and winter. Fresh manure should not be used immediately before planting as a general rule, although many growers have immense yields from this method. Some soils respond readily to fresh manure and give heavy yields of fruit, while others give a heavy vine and a small yield of fruit from the same treatment. The manure in any case should be thoroughly incorporated in the soil, and when a sufficient supply is available it should be broadcasted, and when the supply is limited, well-rotted manure should be placed in the furrows where the plants are to be set.

Planting.

For the main crop of tomatoes in the majority of sections the plants should be set four by four feet. For the early crop they can be set somewhat closer, in many cases three by three feet, or three and a half by three and a half feet.

To produce extra early fruit of a good quality the tomatoes are sometimes trained to one stem and supported by stakes or wires. Following this method they can be planted 12 to 16 inches apart in the rows and 3 feet between the rows, or 18 by 18 inches with 18 inches to 2 feet between the rows. This method will be further described in a following section.

The usual method for planting tomatoes is to run out a furrow five inches deep and mark off with a wooden marker the places where the plants are to be set. The planting should be done in late afternoon, if possible, on a cool day. The time of month for planting the extra early crop depends on the season, but the sooner they are out in the field the sooner the crop is ready, depending, of course, on frost conditions. This time varies from May 20th to June 5th, according to district and weather conditions. s much as possible of the soil around the roots in the box or pot should be planted. This can be done by thoroughly soaking the soil while in the boxes. The box or paper pot can then be easily removed, leaving the earth intact around the roots. This should be set in the furrow and a couple of inches of soil drawn in around the plant. It is a good plan to draw the soil fairly well up around the stem to give plenty of support in case of wind. By using this furrow method there will be a large part of the furrow left open after planting. This can easily be filled with an ordinary garden rake, or with a scuffler, working the field crossways. An ideal tomato plant should be six to eight inches in length from top of roots to top of stem, should be one-half inch through the stem at the base, and the leaves should be a dark green color. It is advantageous to have the plant in flower, if not already having some small fruits formed on it, before it is set out in the field. The roots should fill a one quart berry box or a six-inch pot. A plant with the foregoing qualifications can be depended upon to give a heavy yield in good soil.

On large acreages, tomatoes can be planted successfully with a horse transplanter. Of course the handling is considerably rougher, and the plants cannot be expected to give as good results. The transplanter opens up the furrow and draws the soil in around the plant which has been set by hand.

Staking, Pruning, Etc.

While the training of tomatoes to one stem and tying this to a stake for support has been carried on for a number of years, it is but recently that vegetable growers have paid any attention to this method of raising tomatoes. In many cases the more progressive vegetable growers are trying this method out with more or less success. It is a method which will most surely be adopted by those desiring clean, early fruit, for the fruit will ripen from a week to ten days earlier than by the ordinary flat method. The fruit will not require cleaning, as it does not come in contact with the ground, and the loss through fungus diseases and insects will be minimized for the same reasons. The cost of production is somewhat higher, due to increased attention, but the yield is larger, as the plants are set much closer.

Planting.

For the individual stake method set the plants 12 to 16 inches apart in rows three feet apart. Stakes, five to six feet long, two and a half inches square, are driven into the soil three inches from the plant. Another method is to build what might be termed a temportary wire fence. Place posts 25 to 30 feet apart, and attach wires lengthwise to these every 12 to 15 inches. Stretch the wires tight and staple them securely. These fences should be three feet apart. The plants can be set as close as 12 inches but 15 inches usually gives better results.

Another method is to plant the tomatoes 18 by 18 inches in the form of a square. Four stakes are then driven in, one to each plant and the tops drawn together and tied with string or wire.

Training and Pruning.

As soon as the plants grow sufficiently they should be tied to the stakes or wires by means of raffia, or string, or pieces of cotton. The tie should be made under a leaf stem to give as much support as possible to the plant. As the plants are being grown very close together and early fruit it being sought for, the plants must be pruned so as to give every chance to the fruit on the main stem. For this reason all side shoots which commence to grow in the axles of leaves should be pressed off with the thumb. This part of the prudicing end should be carefully looked after. Three to four ties will be found sufficient to hold up the plant, and the estimated cost of staking, pruning and tieing per plant per season is between five and ten cents per plant.

This method should be at least tried out by all progressive vegetable growers on a small scale to decide its merits, and all kitchen garden tomatoes grown on a small scale on a small piece of land should be grown in this manner.

Cultivation.

Tomatoes in the field should be cultivated thoroughly with horse cultivator both ways of the fields. This should be done after every rain and at least once a week until the growth of vines prohibits.

Harvesting and Marketing.

Tomatoes are usually sold in local markets in boxes or baskets. Shipping is almost entirely done in 11-quart baskets with a netting cover. When the tomatoes are to be shipped, they should be picked when they show a yellowish color. For immediate sale should be fairly ripe. A great deal could be done toward improving the quality of tomatoes both shipped and sold locally. A basket or box of clean uniform fruit will always set better than unclean cracked fruit simply thrown into the carrier. The tomato grower who wishes to establish a reputation for himself should grade his fruit carefully. Competent men should do this grading in the packing-house. Grading cannot be successfully carried on in the field. Only first-class samples should go into a first-class basket. Seconds and culls should have carriers for themselves separately.

The sooner the fruit can be put on the market after picking the better.

LIGHTNING RODS SHOULD BE SAFE

Careful Installation and Inspection Necessary to Guard Against Fire.

Electricity is not a thing to be played with. Lightning constitutes one of the dangers to which farm buildings are exposed but against which some protection can be provided. In the matter of protection against damage from lightning only well tested methods can be employed with any saisfaction.

The laws of nature are inexorable and a lightning rod erected improperly may be a great danger instead of a real safeguard to property.

Let there be no guesswork in the matter of lightning conductors. Why should a valid guarantee not go with every lightning rod installed? Indeed there is an agitation under way having for its object the securing of legislation to deal effectively with this matter in the interest of the farmer who has had so many "raw deals" in this regard.

Perhaps improper connections provide the most frequent source of danger to buildings supposed to be protected. A weak point here renders the entire equipment worse than useless. Carelessly made joints are commonly discovered in the course of investigations after barn fires, and splicings are always necessary where the branches join the main cables. Regular and competent inspection would obviate many disasters due to this preventable cause.

Not only should the forks of the lightning rod be properly joined to the main cable and the latter perfectly grounded but authorities all agree that all metal parts of farm buildings should be connected with the "ground" wire. In other words, the metal hay fork track, the litter carrier track, eave troughs and water pipes should all be solidly connected up to the ground cable.

In some cases the cables have not been grounded deep enough or the earth in which it is embedded is too dry. Again accidents of various kinds are liable to occur and cause damage to the installation. A horse or cow may rub against the cable; a wagon wheel may give it a jolt; a loose board may be thrown against it by the wind loosening the rod from some fixture and allowing the metal to rest against a wooden part with the result that in a fierce electric storm fire may easily ensue. The protection is nil. Neglect to make immediate repairs may render useless an installation that was, originally, perfectly effective.

The protection of windmills is a matter that frequently suffers from neglect or improper workmanship. A slight oversight here may have the most serious consequences. The rusting of iron rods, when such are used, constitutes a danger that may easily be overlooked. Copper, of course, is infinitely better as well as initially much dearer. But effectiveness and safety are the highest considerations in any installation. While something must be said for the value of a system it must be said that, given any proper system the details of installation call for the closest attention.

In the case of a very severe electric storm it is pretty generally agreed that all metal parts of a building may become highly charged with the fluid if not protected. The result would be the breaking out of fire, apparently in all parts of the structure at the same time. Government statistics show that a very small number of protected buildings are struck and that defects in installation were to blame for these.

A PERMANENT WHITEWASH.

Mix six pounds of whiting with cold water, taking care to leave no lumps. It should be about the consistency of thick cream. In an old jar steep three ounces of size in cold water for twelve hours. Then make it very hot, but be careful not to let it boil. Pour it while hot into the whitewash.

It is most essential that the size be fresh or the smell of it will be quite intolerable. Any coloring—green, pink, blue, or fawn—may be added.

Oil Lost by Fire.

It is estimated that the oil lost annually by the burning of oil wells is equal to nearly 2,000,000 barrels.

What did you promise yourself for next winter?

What did you promise your wife and family?

What did you promise your cattle?

Was your promise sincere?

What have you done toward fulfilling that promise?

Now—right now—is the time to get busy. Then you will not go into the winter with your promise unfulfilled.

Don't let next winter bring you any regrets.

TREATMENT OF BROODY HENS

There often is a large and altogether unnecessary loss in the summer production of the farm flock, due to the idleness of numbers of broody hens which are permitted to remain on the nests indefinitely and so are unproductive for many weeks. If such hens are removed from the nest as soon as broodiness develops, are placed in a comfortable coop, and well fed and watered, they usually can be broken up promptly.

Any sort of pen that will prevent or discourage sitting will answer the purpose, but it is true economy to provide well-constructed coops capable of accommodating three or four hens or more, supplying enough of these so that all "broodies" can be taken care of without delay.

As good a plan as any is to make coops with slatted fronts and bottoms and with water-tight tops, placing them on legs or trestles two or three feet off the ground and locating them in the shade of a tree. The slatted floors compel the hens to stand, which helps greatly in discouraging broodiness. These coops, if constructed as here described, will serve a double purpose, as they can be used to good advantage later in special-fattening fowls for table use.

Do not mistreat broody hens by the abusive methods so often recommended, but make them comfortable, feed them well, and keep them supplied with water. If so treated they will begin laying within a very short time after they get over being broody, whereas, if they are starved and mistreated, it may be weeks before they will become productive again.

CARE OF CALVES IN SUMMER

If the young calf is turned out to pasture he should be furnished shelter from the hot sun. Calves that have had indoor care, when turned out without shelter, develop blisters on their backs and are easy prey for winged pests. A cheap shed of some sort furnishes excellent refuge for the young calf during the day.

If a number of calves are placed in the same pasture and are of such age that milk must be fed, it is necessary that a row of stanchions be provided in which to tie them while being fed and for a few minutes afterwards. Each calf should be fed separately. Too often a number of calves are fed from a trough. The result is that the large calves gorge themselves while the weaker ones do not receive enough milk. "Bulk" feeding is a very poor practice. Calves do very well on pasture and can be cared for in this manner more economically than in any other way. Care must be taken, however, to see that they receive what additional care is necessary.

THE PRESERVATION OF MILK.

One safe method of keeping milk sweet in hot, thundery weather is to put it into a bottle, leave it uncorked, and set it in a pail of cold water. Boil the water for a quarter of an hour, then seal the bottle with an air-tight cork. Milk treated in this way has been kept for a year without turning sour. A tablespoonful of scraped horseradish, put into a pan of milk will keep it sweet for longer than might be expected, even in the hottest weather, always supposing that the pan is kept in a cool place. The milk intended for children should be absolutely free from any of the preservatives commonly used for that purpose. The bottled milk may be found useful when mothers are taking their children a distance by rail.

MILK AND CREAM WEIGHTS.

Skimmed milk weighs 8.63 pounds per gallon.

The foregoing figures were based on milk with a fat content of 2½ per cent. at 68 degrees temperature. Similar milk testing 3 per cent. weighs 8.6 pounds.

Mixed milk and cream of 10 per cent. butterfat content weighs 8.53 pounds.

The general rule is to estimate milk testing from 3 to 5 per cent. as weighing 8.6 pounds per gallon.

FERTILIZERS ARE VERY NECESSARY

Feeding of Growing Vegetables Essential in Attaining Success.

Commercial vegetable growers appreciate the value of fertilizers more, perhaps, than any other class of crop producers, because they have a fertility problem that is distinct in itself. Vegetables as a class require much richer soil than fruit or farm crops. The best general farming land needs much building up before it will grow vegetables successfully. In addition to quantity and proper maturity, the only objects involved in growing farm crops are such factors in vegetable culture as earliness, quality and appearance of the products. A few days' gain in early cabbage or spinach, for instance, may mean an increase of 50 to 100 per cent. in the profit. Relatively small differences in the quality, or flavor, of such crops as melons, lettuce and celery, often cause wide difference in returns. The size and appearance of "Finish," of nearly all vegetables play a large part in the prices received. These factors are influenced by the judicious use of fertilizers.

Loss of Nitrogen.

On high-priced land near large cities, tilled vegetable crops are grown practically all the time during the growing season. There is no "seeding down" as in general farming. This condition permits a large loss of nitrogen and organic matter by oxidation. It also robs the soil constantly of large quantities of phosphoric acid and potash. It results eventually in decidedly decreased yields, unless these plant foods are returned to the soil by repeated applications of fertilizers in some form.

Most gardeners do not hesitate to fertilize freely. Manure from the barnyard and other natural sources, the old stand-by is used when available, but it is hard to get in most localities in sufficient quantities these days. Experienced gardeners are relying more and more on commercial fertilizers. They know that large expenditures for artificial manures are entirely feasible and profitable in intensive market gardening. Gardeners who have not used fertilizers to any appreciable extent might well determine their value for themselves by experiment this coming season. High fertility means increased production, better quality, more profits.

4,000 Homeless Married Couples.

There are at present 2,000 young married couples in Harve without homes to call their own. Most of them are living in old lodgings out of repair. No building operations are going on because of the shortage of labor, and the situation is becoming more acute because each month 300 more marriages are being performed.

From 60 to 70 per cent of the world's production of copper is used in normal times in the electrical industry.

PURE BRED SIRES ARE ESSENTIAL

Soaring Feed Prices Make it Necessary for Farmers to Breed Good Animals.

Back in the old days, when our ancestors paid no attention to the keeping of live stock, the native stock, running wild throughout the country, produced only enough milk for their young. As time went on, however, men discovered the value of milk as a food for human consumption and they began to select the cows that gave the largest quantities.

Thus, we find that for many years livestock men have studied their herds, carefully selecting females that possessed high-producing qualities. These females were bred to sires whose dams had displayed high-producing tendencies.

As time advanced breeders learned to keep records of all the milk given, as well as the feed consumed.

The result is that now we have records of individual cows giving over 30,000 pounds of milk in a year.

What a debt we owe to those old improvers of our breeds, we cannot repay them, but we can continue to carry on the work that they so nobly commenced.

In so doing we will add greatly, not only to our own income, but we will contribute to the revenue of Canada.

No farmer can afford to neglect his live stock in these days when feed prices are soaring.

The use of pure bred sires, careful selection of females, with judicial economical feedings, together with the keeping of records, are essential points that the farmer of to-day connot overlook and prosper.

C. F. MacKENZIE,
Fieldman, Ontario Cattle Breeders' Ass'n.

THE BEST TIME TO BREAK UP OLD MEADOWS

The choice of the time to break up an old meadow is of the greatest importance. If the ploughing is done under unfavorable conditions the texture of the soil is injured, and the effect of this upon the crop is felt for a number of years. The proper time to break up the sod differs according to whether the soil is light or clayey and whether the meadow has been in sod for a number of years or not.

Plough the meadow as soon as possible after the hay is taken off in July or August. If it is an old pasture to be broken instead of a hay meadow, plough at the same date if possible, as such a pasture affords very little feed after that time, in the Eastern provinces. Ploughing three to four inches deep with a flat furrow-slice generally gives better results than ploughing more deeply. When the ploughing is done run a heavy roller crossways of the furrows in order to compact the soil so that there are no air spaces left between the furrow slices and the sub-soil. Going over the land each week with the disc harrow will do marvels in working up the soil, conserving the moisture and allowing the air to work through the depth of soil turned by the plough. These operations should all be done in good weather and when the soil is sufficiently dry. The chief effect of harrowing and rolling is to facilitate the circulation of the air and moisture in the soil and to aid in the decomposition of the sod. A soil deprived of air, of warmth and of moisture cannot give good crops for the simple reply of organic matter cannot become changed into a form available for crop production. The season suitable for the above work is so short in the East that it may be repeated that the ploughing should be done in the summer in order to give the sod time to rot. At that season of the year the work may cost a little more, but it should be done then in order that we may profit from the heat, which is one of the indispensable conditions for a good crop the coming year.

"Hole in the West" Closed.

"The hole in the West," the popular name for channels through the occupied territory through which articles of luxury poured into Germany, evading the import duties, is now closed. The Inter-Allied Rhineland Commission has agreed to enforce the new German ordinance imposing fines and imprisonments for infractions of the regulations on imports.

Knowledge That Pays

Knowledge is bought by effort.

It takes time and money to acquire it.

Book lore makes a man learned.

Knowledge of current events makes his opinion respected and sought.

Experience makes his services valuable.

And what does advertising do?

It adds to his knowledge.

It keeps him abreast of the times.

Advertising teaches how to get the most in value and enjoyment at the least expenditure of what he has earned.

The newspapers are a type-and-ink university.

Read the advertisements regularly for knowledge that pays.