Soils and Crops

Address communications to Agronomist, 73 Adelaide St. West, Toronto.

Things That Lighten Farm Work.

Owing to the present scarcity of transient farm labor, the question of carrying on the farm with as little outside help as possible is a subject of considerable importance. One of the principal ways by which this can be accomplished is by the use of labor-saving machinery.

I use three medium-sized horses when fitting or sowing any kind of crop. When plowing a field, except fall plowing for a spring crop, I use a planker made out of three or four planks bolted together, on which is fastened an old mowing-machine seat. Just before quitting time at night I hitch my horses to this planker and go over what has been plowed during the day. This levels off the plowed ground, retains the moisture, and saves at least one third of the work in fitting the field for a crop.

On my steel-frame disk drill there was no seat to ride on. So I procured a plank as long as the drill was wide, and had two V-shaped irons made. These were bolted to the ends of the plank, and the upper ends of the irons were bolted to drill frame. These irons are made just long enough so that when the drill is in use the plank is about one foot above the ground.

By standing on either end of this plank it is very easy to guide my three-horse team, and I do not get very tired by the time night comes. This attachment is a great help when filling the drill with grain or fertilizer. I have other tools with fixed seats which make my farm work a pleasure instead of drudgery.

By planning my work I am able to save a lot of time as well as worry. If I made a specialty of dairying, or planted sugar beets or some such crop, it would require hired help all the year, which would make more labor for my wife as well as myself.

As I got very satisfactory results from my present mode of farming, it is doubtful if a change would pay in the end, even if I could make more money. Instead of paying out a portion of the income of the farm, which would be necessary if a different mode of farming was followed, my wife and I use this money for a pleasant excursion almost every season.

In this way we have traveled from the Atlantic to the Pacific, and through different parts of the country, and have found much pleasure in life, even though our bank account isn't large.

Thirteen Points to Watch About Your Orchard.

It would be easy to find hundreds of farmers in every province who are making some money out of their fruit, handling it as a side line along with crops, poultry, dairy products, or livestock. Indeed, it would be hard to discover a single neighborhood in which someone has not won a measure of success by such strategy. As a rule, we hear very little about that kind of fruit-growing; it is so much easier to write up the big and spectacular enterprises.

This kind of fruit-growing, however, to achieve its best success, must follow methods different from those of the famous horticultural stars. Boiled down to the fewest words your proposition is about as follows:

1. Begin with the home orchard.
2. From this determine what varieties can be grown successfully.
3. Determine what the local market wants.
4. Plant a relatively long list of varieties, giving due regard to local adaptations.
5. Grow varieties of good quality.
6. Plant enough to make an efficient farm unit, but not to swamp the local market nor to upset the balance of the farm.
7. Give thorough tillage.
8. Use cover crops and barnyard manure, also some intercrops with chemical fertilizer.
9. Spray thoroughly and intelligently, though some of the fine points of the professional may be omitted.
10. Prune cautiously, learning from experts as much as possible.
11. Grade carefully and pack honestly, but pay little attention to the refinements of closed packages for the fancy city markets.
12. Use clean standard packages.
13. Finally, charge a fair price and stick to it; and don't neglect to collect the cash.

After Value of Fertilizer.

I had heard farmers say that the value of fertilizer for following crops would run from 15 to 50 per cent. I thought then that their figures were way off, but the more I observe the more I think that they were right. In fact, I doubt if the after effect is often as low as 15 per cent.

I have in mind a field of two acres that was planted to onions one year. Complete fertilizer was applied at the rate of 1,000 pounds to the acre. The onion crop was good. The fertilizer evidently paid the first year. The sugar-beet crop that followed was raised without any fertilizer except a little applied directly in the row. This beet crop didn't seem to be so out of the ordinary, but when harvest came the field yielded 20 tons to the acre, while the neighborhood average was closer to 10 tons. If you distribute the fertilizer cost over two years, the yearly cost will not seem high. But when you consider that in many cases a difference is noticeable in the third and fourth year's crop it lessens still further the cost of the first application.

I also have in mind another field of onions that a neighbor tried as an experiment. He used about 1,200 pounds of fertilizer to the acre. There was perhaps a half-acre all told. About three years afterward I happened to notice his clover-hay crop. One could easily see the outline of the old onion field. This man is now a regular user of fertilizer. I could not tell just the amount of hay increase in this case, but it was considerable, and his oats crop the year before was so heavy that it lodged in that corner. Of course, an onion crop needs more fertilizer than the average farm crop. But the principle is the same with other crops, and you will find liberal applications of commercial fertilizer will pay for several years.

The Dairy

It costs twice as much to produce milk in winter as in summer, and in instances four times as much, according to Prof. F. A. Pearson, of the University of Illinois. Professor Pearson has just completed a survey of a number of herds supplying milk to Chicago.

"The study confirms the opinion of many dairy farmers of the great importance of pasture in milk production," he says. "The feed expense, according to our records, in the summer months in which pastures are good is occasionally only one-fourth of that in certain winter months, when large amounts of farm-raised and purchased feeds are used.

"The amount of man labor involved is considerably less in the summer months than in the winter period. This is true, we find, whether based upon the amount of labor used on the herd or whether based upon the amount involved in the production of 100 pounds of milk.

"Proper significance of this reduction in labor is appreciated only when it is shown that the savings in labor occur during the pasture season, when most generally maximum labor is needed in the field.

"The cost of producing milk, aside from man labor, feed, and horse labor is more or less even throughout the year. When all expenses are included, the net cost of making milk costs about twice as much in December as in June.

"It would seem that with milk costs so low in summer farmers would concentrate production during these months; but, since the selling price increases with production costs, it is to the best interests of the farmer and consumer to keep production fairly even throughout the year."

The highest grade muskrat furs are taken where food is abundant and the land is comparatively clear of timber.

Hogs

In spite of the best of care many fall pigs will emerge from the winter looking pretty sorry. Often they will be shaggy-haired, skinny, tails minus the artistic curl, dejected-looking, and seemingly fit subjects for the ax. But the warmth of spring, proper care and feeding will do wonders for them. I have had fall pigs that didn't look like five cents in April, yet by June they tipped the scales at 225.

The first thing to do with a backward pig is to free him from worms. When the worms are gone, one of the standard conditioners should be used. Wood ashes, salt, and soft coal should be where the pig can help himself at pleasure. The backward pig must have access to pasture. Green food is one of the best conditioners. In addition, the exercise is good for him.

Ground feed, such as oats or oats and corn, works wonders with runty pigs. I make sure that they have all the tankage they want. Nothing seems to revive a pig's spirits like tankage. The pigs should also have all the corn they want. Unless diseased, the pigs will soon shed their long hair, brighten up, and develop an appetite that is alarming. It is then but a matter of a couple of months till they will be ready for the market at 200 pounds or better.

Renewing the Septic Tank.

Several years ago our septic tank refused to work. The soil had evidently become so saturated that it no longer absorbed the refuse water. To remedy the difficulty I built a chamber some 50 feet away from the seepage part of the tank, connecting the two with four-inch field tile. The tile were placed at a depth lower than the level of the inflow into the receiving apartment of the tank. Since then the tank has worked without a hitch.

Saving Dollars Through Wise Planning.

In a recent survey, forty representative farmers were asked if they were satisfied with the field and building arrangement on their farms. Twelve of these replied they did not think their farms were properly arranged and most of these were in doubt just how their particular arrangement could be bettered. The remainder of the forty seemed to have given no thought to the arrangement of their farms and were content to operate them over a field arrangement laid out many years before. Of the forty, eighteen expressed a desire to rearrange their buildings, while the remainder were satisfied with the present layout. On the majority of these farms it was evident that little thought had been spent in their arrangement. On several, the farm buildings were located in the corner of the farm and with no thought of their relation to the fields. In other instances good farming land was allowed to remain idle simply because its location was too far distant from the barn to permit economic handling of crops and manure. In all cases no record had been made of the location of the tile drains except in the memory of the person installing them.

Usually the layout of a farm has been fixed by previous owners. The location of the fields, buildings, garden, orchard, and permanent pasture were established many years previous. In a majority of cases changes for the better can be made without much inconvenience and without a great expenditure of time and money, if the owner has a definite plan in mind and develops a scheme or schedule for making changes from year to year.

A number of factors enter into the arrangement of a farmstead. If the farm is considered as a manufacturing establishment, with the barns and outbuildings as the central plant, the field as producers of raw material, and the house as home, the problem of arrangement is simple. The layout of a farm should not be the result of accident or haphazard planning. The results brought about by a carefully thought out design and a thorough consideration of natural factors and the type of farming to be followed indicate the presence of a few simple principles.

Plan to Save Steps.

Buildings should be arranged primarily from a utility standpoint. The number of trips taken from the farm buildings to the fields on the average one hundred and sixty-acre farm in the course of a year number about nine hundred. It is essential that these trips be made as short as possible for the saving in time and distance will amount to a great deal in a year's time. For the highest degree of economy a location near the centre of the farm is undoubtedly the best. All the fields are accessible from the barnyard and very little time is lost in going to and from the fields. Hauling of farm crops and manure is reduced to a minimum, and when we consider that it costs the average farmer practically half a dollar to haul a ton a mile, this saving in time and distance is considerable. The water supply is concentrated and accessible from all the fields. The area in lanes is reduced to a minimum and the expensive fences to maintain them are practically eliminated.

Except in cases where the public road divides the farm most farm buildings are located close to the highway. This placing is not as efficient as the former, but in the minds of many has advantages which more than offset its disadvantages. It is easily accessible, and affords ready communication with school, town and rural delivery. The position of the house should be given primary consideration. It is best to locate it on a slightly elevated, well drained area, not less than one hundred feet from the road. Distances of one hundred and fifty and possibly two hundred feet are probably more desirable, in that the dust nuisance is reduced and a greater degree of privacy secured. An attractive approach to farm buildings over a winding drive through an open expanse of lawn, properly decorated with shrubs and vines, will do wonders in dispelling the impression that the house is a place "where children are raised," and the barn a place "where stock is kept."

The barn and other buildings form the factory of the farm, so that their relation to one another is important. As a rule, the barn should be situated back of the house, never between the house and the road. A placement by the side of the road where it limits the view from the house is not desirable and should be avoided unless some unusual reason makes it advisable. A direction opposite to that of the prevailing wind is desirable. It reduces fire risk and tends to carry the odors of the barn and stable away from the house. Yards and feed lots should be placed where they are protected from prevailing winter winds. A grove of rapidly growing trees is a good feature in connection with farm structures, when placed in such a position as to serve as a windbreak against severe winter storms.

Arranging the Smaller Buildings.

The location of cribs and granaries demand individual attention so that the exact placing of these structures cannot be specifically designated. In planning the arrangement of these buildings it is a good plan to disregard the routing of the man and give full consideration to the most efficient handling of feed, stock and waste, for in most cases a change of owners takes place before the buildings are worn out. Different kinds of farming will require different arrangements, for it is obvious that the requirements of dairy farming are distinct from those of a grain farm. However, a few simple rules can be applied to the placing of cribs and granaries. First, these structures should be placed where they are accessible from the field. Where grain farming is followed, the placing of the cribs and granaries is fairly simple, for it is not necessary to remove large quantities of feed several times a day. Sheep, dairying, and hog raising require the removal of large quantities of feed several times daily, so the shortest distance between feed storage and feed lots is the most efficient. Apply the old saying that a straight line is the shortest distance between two points. Do not carry feed around intervening buildings.

The machinery shed and shop, if combined in one structure, need not be placed close to the other buildings. It is a good plan, however, to have it placed so that the horses may be taken from the barn, to the watering trough, to the machinery and then to the fields with very little interference due to intervening buildings. If this building is used as a location for the power plant or the lighting system of the farm, a central location is desirable.

The water system on the average farm is one of the easiest handled. Water can be piped easily from place to place. Water tanks can be located where needed, doing away with the impression that the whole scheme must be worked out around the well, or source of water. A windmill, gasoline engine or electric power can be used in supplying running water to all parts of farm buildings. The placing of water tanks and troughs under partition fences, so that they are accessible from either side of the fence is a good feature.

Lessen the Danger of Fire.

The danger of fire is an objection to the close arrangements of buildings. Many farmers have wisely located their buildings several rods apart to lessen this risk. That this is a wise precaution cannot be denied, but it would seem that with a few simple fire preparations, lightning rods, several chemical fire extinguishers, with insurance, would justify a close arrangement when the saving of time and labor over the period of a lifetime is considered.

Convenience and economy of operation are the essential points to consider in planning a field arrangement. Very often, however, it is impossible to secure an ideal arrangement in respect to these two requisites, for the plan of the farm is often influenced by uncontrollable natural factors, such as the contour of the land, differences in soil, streams and other natural obstructions, prevalence of highways and the like. The type of farming and the rotation system should bear a close relationship with the layout of a farm.

Feed the Winter Birds.

If you want to have some birds around to protect your garden in the spring, feed them a little in the winter. It does not take much. A piece of suet tied to a tree, a little grain or weed seed in an open box nailed on its side to a tree or post will cost you nothing and will pull many a bird through some rough places in the winter. They will soon learn about it and you will have lots of friends. Put the box where you can see it from the windows, and you will enjoy the company. They are not beggars; they will pay their board.

Two pounds of grain a day and gradually increasing until ten to twelve pounds is being fed at the finish has been found by experiment to be the most profitable grain ration for long-kept steers.

The Welfare of the Home

A Child's Development Depends Upon Right Food.

The average diet of a child contains quantities of cereals in the form of bread, and dishes in which flour meal or starch is an important constituent. If large quantities of milk are added to a cereal diet, the child is well nourished and develops normally. On the other hand, if a child eats quantities of cereals but has little milk, he will be under-nourished, his mental development sub-normal, his vitality low and various diseases caused by improper nutrition may appear. Many adults whose physical condition is below par also need foods rich in vitamines.

Certain chemical elements found in the green leaves of plants are absolutely necessary for the well-being of the human body. Man does not eat grass but the cow is a most convenient machine for the conversion of grass into food for him. No matter what the price of milk, it is a cheap food because it contains the elements essential for health.

It is an easy matter to add vitamines to a child's diet. A glass of milk for each child at every meal is a safe rule. Milk should also be used liberally in cooking.

If one is not thoroughly familiar with the chemical composition of foodstuffs, it is very hard to plan a diet rich in vitamines unless milk and dairy products are used liberally. Such a diet balanced without the use of milk is always more expensive than a diet containing milk. Milk is the most nearly perfect food known and in itself furnishes an adequate diet for children, for a limited period of time. Fruit and "greens" form valuable additions to milk.

All natural foods contain quantities of vitamines. The American Indian knew over 500 edible plants. His diet also included the flesh of many small animals, birds, fish, insects, amphibia and, in some cases, worms. As a result of such a varied diet, the Indian was well-nourished, and had strong bones and teeth.

Civilization has greatly restricted the human diet. There are two reasons for this: The first is an economic factor. If the entire population of a country will be satisfied with a diet of meat and cereals, these can be bought at much lower prices than if several hundred articles are in demand.

The second reason for a restricted and an inadequate diet is that through a false sense of values, man has insisted on refined food. Coarse flours, coarse cereals and other foods contain the really vital food elements. Yet these are often not included in the diet. No insect or worm can thrive on refined white flour or refined sugar. They can live only on coarse foods which contain vitamines. Man, ignorantly, often tries to maintain his body on foods almost deficient in vitamines.

Children must have milk and other foods rich in vitamines. All vegetables, especially those whose green leaves are used, as lettuce or spinach, fresh fruits, dried fruits and all dairy products contain vitamines. Tomatoes, lemons and oranges are especially rich in these vital elements and supply what milk loses by boiling or pasteurization.

Cheating Cheaters.

I believe where no special precautions are taken rats and mice will often do more damage to our crops than anything else. We feel blue when water overflows a piece of land newly sowed, or when a crop just ready to harvest is damaged, yet we will store away our grain, giving little attention to where it is put.

I have done these things myself. I never gave a thought to the hole in the granary door and the hole in one of the bins along the haymow. I had pushed some rubbish in those holes until I could find time to patch up the places right.

Harvest time came and the crops were stored away. A little later on I noticed a sink hole in the wheat bin, and upon examination I found to my astonishment that perhaps five or six bushels of wheat had disappeared. Where could it have gone? Had someone broken into the granary? No. The lock was all right and the other bins were full, so it could not be that. After a few days of thinking I happened to recall the rat hole that had been filled in with burlap. My belief was verified when I discovered a small amount of grain that had fallen through the granary.

Oh, such a job! Eighty-six bushels of wheat to rehandle. In due time the holes were securely sealed with heavy galvanized sheeting. Being determined to see what the rats did with the wheat, I took almost a day to dig the hay away from along the granary. We found grain strewn everywhere—almost seven bushels in all, when it was scraped up and put through the fanning mill. The rats had not eaten a great deal in so short a time, but nevertheless it goes to prove how destructive they really are when given a chance to have everything their own way.

It has been estimated that there are more than 8,375,000 mice or rats in this country. Their damage yearly is more than $20,000,000. This loss alone is largely borne by the farmer. One way to cut it down is to wage war on rats and mice in every possible way we can. Begin by making your storage bins rat-proof.

So She Cured Herself.

After various "treatments" had failed to relieve Mrs. Bocock of her "troubles," Doctor Thornhill, the family physician, finally delivered the ultimatum:

"Mrs. Bocock," he said impressively, "after consulting with two specialists I have decided that your teeth have been causing all your trouble. They must all come out, Mrs. Bocock."

"And do you believe, doctor, that when my teeth are out I will be relieved entirely of all this suffering?"

"I do indeed, madam. In fact I know you will."

"Very well, then," replied Mrs. Bocock. "Who'd board a hired man all winter if he didn't work? Then why board the hen that never lays an egg?

The Profitable Skunk.

The advantages of the artificial raising of the fox, beaver, and muskrat, specifically, have been often pointed out, and here it is proposed to devote a few words to that much abused animal, the skunk. The fact that the animal is to be found in practically every part of the American continent, and that the pelt has sold as high as ten dollars, is sufficient to attract the attention of fur farmers and induce a study into the feasibility and advantages of the industry.

Many years ago Ernest Thompson Seton, the well known nature writer and naturalist to the Manitoba Government, advocated a more extensive artificial propagation of the skunk, and himself operated a most successful ranch of this kind. Because, largely of a prejudice against the little animal and its method of defence, skunk farming has never been firmly established in Canada as an industry, although the advantages and possibilities are obviously so great. Success on other parts of the American continent and elsewhere have demonstrated the feasibility of establishing the industry firmly and profitably in the Dominion.

The skunk is widely found over the Canadian Dominion in every corner and nook where it can find food suited to its needs, and notwithstanding the fact that it is persistently hunted, trapped and worried by dogs, it continues to thrive and multiply in close proximity to settlements. The animal is neither timid nor vicious and is practically omnivorous, devouring large quantities of insects including grasshoppers, crickets, beetles and caterpillars. In captivity, its feeding is very economical, the diet consisting of meat, fish, cooked cereals, vegetables and milk. The food problem is most easily solved where the ranch is established within reach of a hotel. The contents of the daily garbage can will feed a considerable number.

The skunk multiplies rapidly with litters of from six to twelve, the period of gestation being eight weeks. Descenting may be performed when the animals are five weeks old and all possibility of future nuisance may be eliminated, but in domestic raising this is not really necessary, contrary to general belief, as the animals become remarkably tame and friendly with those handling them and never bring into play the powerful weapon nature has given them except when badly frightened by some intruder.

Skunk ranching could be successfully carried on in practically every section of Canada, for the animal is indigenous to every part and would find his natural conditions wherever a farm was located. In wire enclosed pens of suitable land the animals will make their own burrows and dens and need little attention beyond feeding. The demand for pelts is steady and general, and the high prices prevailing during the past few years make skunk ranches very profitable concerns and augur a successful future for any development along these lines.