

# Soils and Crops

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

## Better Farming in 1921.

"How am I going to handle the work on my farm in 1921?" is a question every farmer is asking himself this winter.

The smartest farmers I know don't put off figuring out this problem until the spring work starts. They know they will then be too busy, and it may be too late to make just the adjustments they would like to make to save labor, purchase labor-saving machinery, and provide some of the things that may be needed to make their workmen more contented and efficient.

I can see three ways of helping the situation: First, reorganize the farm work to reduce and distribute the labor and to make each hour of labor more productive; second, use labor-saving machinery to the fullest possible extent; third, try to make your laborers more efficient by making working and living conditions more pleasant.

It is often possible to change the cropping system to reduce the acreage of crops that require a large quantity of labor and increase the acreage of those that require less. More land can be seeded down to grass. A young farmer said last spring: "I am seeding more and more of my cultivated land to grass. I will pasture dairy cows, use a milking machine, and cultivate just the area of land that we can work ourselves."

This is a sane view to take. The total production of the farm will be decreased much less and the profits will be much greater than if an attempt were made to cultivate more land than could properly be farmed.

In many cases where a four-year rotation of corn, oats, wheat, and clover or a five-year rotation of corn, oats, wheat, and clover and timothy are used, an additional year could be added to the rotation, perhaps with the timothy, the land left to grass a year or two longer, and used for pasture. Such a system would reduce the work during the busy season of the year, would add rather than detract from the productivity of the farm, and would make it possible to handle well the land that was cultivated.

There is nothing gained by trying to cultivate more land than can be worked timely and well. To produce a crop with the least labor, I must push my work, not let the work push me. A field plowed in good condition at the proper time can be fitted with much less labor and expense than if the ground is plowed when hard and dry. A man that is ahead of his work can do every farm operation at the right time. It is not necessarily the largest field that produces the most grain.

If you must reduce the area of land under cultivation, try and keep up production by doing the work at the right time, by using the best seed of proper varieties of grain, and, when necessary, by using the right amount of the proper kind of fertilizer.

In these times the most successful farmers try to make an acre of land produce as much as we used to grow on an acre and a half or two acres. I know this is easier said than done, especially if we are to secure this increased yield without much additional outlay of labor. But it can be done. There are farmers doing it in every section of Canada, and our farm-management investigations show that it is these men who have a large acre production that are us-

ing their labor the most economically and making the most money.

Another thing: Are you making the greatest possible use of your labor-saving machinery? The farmers on many of the smaller farms in the eastern part of Canada could learn some valuable lessons in the use of labor-saving machinery from their cousins on the larger farms in the West.

Often two men may be seen at work in moderate-sized fields with a team, both working at a job that could have easily been done by one man with larger equipment. The farmer of the West has learned long ago the value of larger equipment. Many Eastern farmers have thought this was simply because the fields were larger, thus making it practical to use gang plows and four to six-horse disks. This type of equipment can certainly be used to better advantage where fields are large, but scarcity of labor and the need of more economical production, rather than large level fields, have been responsible for the introduction of large labor-saving machinery in the West. Surely, it is time on many farms in the East to give each man at least four horses and provide riding implements.

Power machinery can also be used to good advantage to save man labor. Where a vast amount of work must be crowded into the shortest possible period, owing to unfavorable weather, as was the case last spring, the tractor will be a valuable supplement to the teams when conditions are such that its use is practical. The tractor can be operated a much longer day than horses; in fact, some farmers in the West make a practice of operating their tractors day and night during periods when work is rushing.

A greater substitution of the tractor for team labor will often reduce the cost of man labor. It should be remembered, however, that it is seldom profitable to operate a tractor when the teams on the farm are not used to the fullest extent. The tractor should be used in addition to the teams on the farm, and in only a few cases can it be expected to replace them entirely. Under certain conditions the number of teams on the farm can be reduced when a tractor is purchased, but more often the tractor is used to best advantage as substitute for team labor for certain kinds of work, and to supplement the work of teams when work is pressing.

The present labor shortage following the World War will probably stimulate the invention of new types of farm-labor-saving machinery, and may eventually react to the benefit of all of us. You can well afford to keep informed of new types of labor-saving machinery on the market. Study the operation and use of these machines. They may be able to save labor on your farm.

If we are going to hold the labor we now have on our farms, or attract additional labor, isn't it time that we asked ourselves and the young men that are leaving the farms why they prefer to work in the city?

I have talked with a good many men regarding this, and here are their answers: First, "We earn more money in town." Second, "We have shorter working hours." Third, "We think the work will be less monotonous." Fourth, "Living in the city is more pleasant."

It is true that these men will draw higher wages in the city than they can earn in the country—in dollars; but, at the end of the year, in which place will they have the most money? Nine times out of ten the farm workmen have more money in the bank at the end of the year than the city lad. Wages may not be as high, but living expenses are much less and savings are easier.

When a workman in the city is so fortunate as to be able to save a little money, there is small opportunity to invest it safely. The country boy's savings can be invested in dairy cows, brood sows, work stock, and machinery. After a small accumulation of this kind the workman soon becomes a proprietor on a rented farm, and no longer a "hired man." He becomes his own boss, with added opportunities for investment and saving.

How about the hours in town and country? It is true that the farm workman is on the job more hours than the city man, but if the time required to go to and from work in the city is counted, the day will usually average longer than in the country. In the country the workman's occupation is varied. In the course of a year he will not put in the number of hours of hard, intensive work that will be required of either skilled or common labor in the industries.

When it comes to living conditions, the city job is in some ways the more attractive. The farmer has not learned that the factory operator has known for some time that it is necessary, in order to secure good labor, to provide conditions that will be attractive. A little more attention to the comfort of the men on the farm will do much to hold farm labor. Mr. W. I. Drummond, in speaking of the farm labor problem, summarizes the situation well when he says:

"The solution of the farm-labor problem will come when farmers generally stop admitting that a man can do better in the

city, and begin 'selling' their own proposition. Many of them are knocking their own game, when they should be boosting it."

To begin with, each farmer who wants hired help should be sure that the conditions under which such help is required to work and live are acceptable to a self-respecting man. If they are really attractive, so much the better. This is not hard on the ordinary farm, but it is far too often ignored. The hired man needs a bed as well as a lantern. There is such a thing as too long hours, even on a farm. Eight hours are out of the question, but sixteen are unnecessary, unwise, and unprofitable.

"A job on a good farm, with an employer who is reasonable and fair, is the best kind of a job for any worker. Such jobs ought to be at a premium, and they will be if the proper educational effort is substituted for the present 'viewing with alarm' and 'we're going to starve to death' propaganda."

## GROCERS TAKING LESS PROFIT ON MANY LINES

### Red Rose Tea People Make Further Statement.

Some of our friends among the grocers, in speaking of our letter to the press on grocers' profits have indicated that apparently it has been construed by some readers to mean that Red Rose Tea was the only article on which the grocer takes a smaller profit, in order to give his customers a higher quality.

It was not our intention to convey such an impression, as we know that most grocers sell well known brands of other goods at less profit than they could make on some brands equally well known, and for the same reason that they recommend Red Rose Tea, simply to "give their customers the best possible value."

In our letter we mentioned Red Rose Tea because it naturally came first to our mind and because we knew that grocers were selling it at a less profit than they make on other teas.—T. H. Estabrooks Co., Limited, Toronto, Ont.

"Come, let us go to the clean-swept skies,  
Let us go back where our freedom lies,  
Back to the scent of the clover sod,  
Back to the old home farm—and God."

## Handle Hatching Eggs Carefully

As poultrymen, you and I want as near 100 per cent. hatches as we can get. It is a big step toward bigger profits, therefore good business.

If you are like I am you get a lot of free advice on this point, which you ignore, because you don't know why it is good advice.

For instance, we are told that we must use fresh hatching eggs. But why? Also that we must gather them as soon as they are laid, that we must turn them often, and keep them cool and moist. But why?

From study and experience I have learned the answers to those questions. And here they are for you, if by any chance you do not already know them:

1. Why must we use fresh hatching eggs?

Because the life germ in the egg grows weaker the longer it is kept without hatching, and a weak life germ means that you will get no chick. That means a poor hatch, lost time, and lost money.

2. Why must we keep hatching eggs cool and gather them as soon as laid?

Because warmth starts the life germ growing before we are ready for it, and exposes it to quick death from change in temperature—just as an unseasonable spring day will start tree buds, with the danger of later being killed by frost. We must gather eggs often to keep the sun and other influences from starting the life germ to growing.

3. Why must we turn eggs often? Because if the egg is left too long in one position the yolk, containing the life germ, tends to float to the top. If it is allowed to remain there, the germ, because of the evaporation of air that is going on in the egg, will adhere to the shell and die.

4. Why must we keep hatching eggs moist? Because the porous egg shell absorbs the necessary moisture to keep the egg healthy; and if it cannot get that moisture from the air about it, it is weakened and ruined.

Every egg is fertilized before it is laid, while still in the yolk stage, before the white is formed, and while the yolk still clings to the yolk cluster. As soon as fertilized, the egg germ, after a little growth, becomes dormant, goes to sleep, so to speak, and in a normal fertile egg the germ is still dormant at the time of laying.

### Germ Weakens With Age.

This fertilized germ remains dormant until warmth is applied to the egg. The amount of heat necessary to "wake it up" varies, depending on the length of time the warmth is applied, and the age of the egg. Even in an egg handled under the best of conditions, the germ continues to grow weaker until it is so weak that it will never develop, and sooner or later dies. The fresher the egg the better for hatching.

The dormant stage in the egg germ is much the same as the dormant stage of tree buds. In this stage both can stand abuse, but the minute they wake up, look out, conditions must then be about right.

## Concerning Important Glands

By F. W. ST. JOHN, M.D.

Since the discovery that certain glands of the thyroid, ovary, suprarenal, and others furnish to the body a so-called "internal secretion," which has to do with very important functions of the human economy, it has become more or less of a fad among the medical profession to use the various gland extracts to supply deficiencies which occur.

In many instances preparations of thyroid, peptic, and other glands seem and probably are very useful. This will be true only when used in selected cases. There have been on the market for several years preparations containing one or many of such substances.

Recently a few doctors in America and Europe have successfully transplanted parts of glands from recently deceased human beings or from living monkeys into the human subject, and a few cases so treated showed signs of rejuvenation. Whether this rejuvenation was actual or psychological remains to be seen.

As is usual, the patent medicine venders have seized upon this situation as an opportunity to make money, and are now offering medicines containing gland extracts which are supposed to renew youth and prolong life.

While in carefully diagnosed cases there are no doubt benefits to be had from the administration of such remedies, unless every phase of such a case is thoroughly understood the remedy may be worse than useless. It is much better to leave such matters to those who know the most about them (the doctors) and they know little enough about the vital processes of life.

If wholesome living, wholesome exercise in the open air and a goodly amount of mental and physical labor, together with sufficient properly cooked food to maintain a proper balance, do not enable one to prolong his youthfulness I believe that the fountain of life will not be found this side of the grave.

Maple sugar utensils in shape? Sap will soon be dripping.

If your farm is not already named, try for the best-fitting name and use this perfectly dignified and effective way of advertising it, thus increasing the value of your farm. Put the name on your envelopes, letterheads and in advertisements.

## THE SUNDAY SCHOOL

MARCH 6TH.

Jesus Among His Friends. St. Matt. 26: 1-13. Golden Text—St. Mark 14: 8.

Time and Place: Tuesday, April 4, A.D. 29. Simon's house in Bethany.

Connecting Links.—Jesus put very high value in His teaching, upon the simple homely virtues of kindness and thoughtfulness. In the last of the three great parables of chapter 25 He declares that the highest commendation of God, and the richest rewards of eternal life, shall be for those who feed the hungry poor and show hospitality to the stranger, and visit those who are sick or in prison. Even those who do not know that they are thus serving and honoring Christ are included in His declaration, for, He teaches, they who thus minister to human needs are truly ministering to Him.

The Plot, vv. 1-6.

1-2. When Jesus had finished, the last discourses and parables of Jesus have been collected by Matthew in chapters 20-25. These are now finished. He goes on to tell of the betrayal and death of Jesus. Mark makes the transition more briefly in 14: 1-2.

After two days. These words were spoken probably on Tuesday and the passover was to be eaten on Thursday evening. The day set for the passover in the Jewish law was the fourteenth of the month Nisan, which happened in this year to be on a Thursday. The feast was to be held in the evening, after sunset, and so, according to the Jewish mode of reckoning time, which made the day begin at sunset, it was in reality on the fifteenth, and on the next morning (Friday morning), Jesus was crucified.

3-5. Unto the palace of the high priest. The high priest at that time was Joseph Caiaphas, the son-in-law of Jesus, who had formerly held that office and was still a person of great influence and authority. Caiaphas was appointed in the year A.D. 26 and continued in office twelve years. The chief priests and elders, some of whom were members of the great Jewish council, consulted that they might take Jesus by subtilty. It would, apparently, have been easy enough to take Him at any time as He went openly through the streets of Jerusalem, but they feared an uprising of the people and the consequent wrath of the Roman authorities who would have held them responsible. The city was full of people, assembled for the passover celebration, and many were from Galilee and were friends and partisans of Jesus and His disciples. These, under the leadership of such men as Peter, who, as we know, was quite ready and willing to fight for his Master, might have made a great deal of trouble, and as a result there might have been imposed upon the city a severe punishment or a heavy fine. It is no wonder, therefore, that they proceeded cautiously, and consulted how they might quietly and secretly accomplish their evil purpose.

Mary's Gift of Love, vv. 6-13.

6-13. When Jesus was in Bethany, just before telling the story of Judas' treachery, Matthew turns aside to tell an incident of the previous week in Bethany, in which the mercenary character of Judas was revealed, in contrast with the simple and beautiful loyalty and self-forgetfulness of Mary.

It is not certainly known who Simon the leper was. A similar story is told in Luke 7: 36-50 of a dinner in the house of a Pharisee named Simon, but the woman there mentioned is called

"a sinner," and can surely not be identified with the gentle and loving sister of Martha and Lazarus. No doubt this Simon had been healed of his disease, otherwise there would not have been held such a feast in his house, and it is an interesting conjecture that Jesus Himself may have been the healer. With them sat Lazarus, only a little while before brought back from the dead. It is no wonder that the heart of this loving woman was stirred to its depths. Her gift was prompted by gratitude and thankfulness for the healing of a friend and the restoration of a brother, that of the woman of Luke's story by thankfulness for a life cleansed from sin.

The alabaster box was probably a bottle or vase with a narrow neck, made out of the soft alabaster stone found in that country. It was closely sealed, and opened by breaking the neck. Immediately the perfume would fill the whole room. The fragrant oil, which is called in Mark 14: 8, "spikenard," was obtained from an Indian plant, sometimes called because of its appearance, Indian spike, and was rare and costly.

Given to the Poor. The objection was taken on low ground. The gift of love is not measured, and where such love as that of Mary abounds the poor will never want. The poor widow gave out of her poverty to the treasury of the temple which she loved and was richer for the giving. The world is immeasurably richer for the costly gifts which have been made to Christ's church all down through the ages. "For the heart grows rich by giving," and it is wealth of heart and soul that makes always and everywhere for human good.

For My burial. Jesus makes the act of Mary a symbol and prophecy of His approaching death. Of course Mary did not mean it that way, and she must have hoped, when she heard Him say these words, that the day of His burial, when it was the custom to anoint the body with perfumes, was far distant. Jesus declares also what has become abundantly fulfilled, that her simple act of faith and love will be told wheresoever this gospel shall be preached to the whole world.

### Application.

A "beautiful" work was what Jesus called Mary's deed and on two counts. "Me ye have not always." It is not easy to live as Jesus did surrounded by suspicion and animosity, to be aware that even in the circle of the most intimate friends there was one willing to sell you to your enemies, the dullness and lack of understanding of the part of those who were faithful. His heart must have longed for sympathy. How He loved His friends and how the thought of leaving them must have wrung His heart. And here was an outburst of affection from one who evidently loved Him far above all earthly treasure. It was a source of strength and solace. Then, too, He read into her action an unsuspected significance, "for my burial." Mary had no thought of this. It seemed a far cry from the festivities of Simon's house to the tomb hewn out of a rock, yet Jesus was right. And He often surprises those who give to Him with the far-reaching issues of their gifts. Even the least service rendered the "least of these" is "unto Me." What revelations await generous souls in heaven when the story of what they have really made possible is made plain.

drove past the old well in the field; and as I drove on, considering the event, I thought that there are more wells than oil wells. There are the wells of the human heart; and those sometimes fail to flow just as the oil wells do. And when they fail the Master sometimes sees fit in His wisdom to "shoot the well" of the human heart. It seems cruel sometimes, these broken plans and crushed hopes. How many torn hearts there are in the world! And the Master has thought best to have it so in every case. But, oh, how rich is the oil of love and sympathy and kindness, and how full is the stream that flows from those broken hearts! If breaking the heart brings grief, surely the "oil of gladness" that flows at last will soothe and heal the wounded heart; and in the joy that follows we shall not remember the grief.

## SHOOTING A WELL

Something very unusual was going on at the old oil well. Three or four men with a spring wagon were there; the pump had been removed, and two of the men were peering down into the pipe. Although not a gusher, it had at first been a good, flowing well. But after a few months the flow had grown less and less until it stopped altogether. Then a pump had been installed and for a long time kept the oil flowing. At last, however, even the pump brought no oil. I had heard that the well was to be abandoned.

Having tied my horse to a tree, I walked over to the well. The men were evidently getting ready for serious work; there were several cans full of some liquid, which they were handling tenderly.

When all was ready the longest can was lowered into the well. Down, down it went while the men waited quietly.

I asked one of them what they were doing. "We are shooting this well," he answered. "It has stopped paying, and we hope that by setting off a charge of nitroglycerine down below we may break things so that there will be a good flow of oil again."

I was too busy to stay longer; so I drove on down the road. But as I rode I found myself unconsciously straining my ears for the sound of the explosion. I was disappointed, however, for I heard no sound. But although no sound reached my ears, the explosion came at the proper time down in the heart of the earth. What a terrible ripping and rending there must have been!

When the vibrations had died away in the bowels of the earth, there was an oozing and trickling as if the life-blood had begun to run from the terrible wound within. And truly it was so, for when the pump was installed again and the power connected the precious oil rose and poured out, barrel after barrel.

Those things I learned when I again

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