

# EFFICIENT FARMING

## Managing the Tractor.

My not inconsiderable experience with tractors has taught me that the cooling system is of considerable importance, requiring more care than the average person would suppose. I have had my share of troubles due to poor circulation. In hot weather I find my tractor is especially apt to overheat, and if it is not looked into at once there is liable to be serious trouble later. Most tractor overheating is due to carelessness at some time or other, the results of which often do not show immediately.

I have used both types of radiators on farm tractors, and I find that while the honeycomb type will cool more effectively than the pipe system, so long as they are kept in good working order, honeycomb radiators get out of order easier. The reason for this is that most water contains limestone or other minerals which are crystallized by the heat. The surface through which the water passes in a honeycomb radiator being much smaller than in the other type, sediment will lodge much sooner, causing clogging. As a preventive against clogging I find that soft water is much better than well water for tractor use. Ditch or river water should not be used under any circumstances, as it always contains sediment.

A funnel used in handling lubricants should never be used to fill the radiator. It is certain to carry oil in with the water, which will form a thin film all over the cooling surface. This film will catch and hold any sediment that is in the water, and clogging is then well started.

I also want to caution against putting bran, corn meal, or other foreign substances in the radiator to seal up small leaks. This practice, while it may serve the purpose for a short time, paves the way for expensive repair bills later. A great many of the so-called radiator-repairing fluids and powders are but little better. When anything of this nature must be used, shave up fine a bar of coarse laundry soap, and put it into the radiator. This will stop small leaks in a few hours, but for a radiator of the honeycomb type I do not recommend this method. The best way is to locate the leaks and have them soldered. After the radiator once becomes thoroughly clogged there is little to do but to take it to an expert cleaner. This is usually quite expensive, but it is cheaper than buying a new one.

There are many other things that will cause overheating on most tractors besides poor circulation. But if the cause is not removed at once, bad circulation will result later, owing to the fact that boiling crystallizes any minerals in the water. For this reason the radiator should never be permitted to boil if it is possible to avoid it. The radiator should be kept full at all times; as there is no more cooling surface on the average tractor than is absolutely necessary. Keeping the fan belt tight will help, too.

One of the worst things to cause overheating is a slipping clutch. This can be recognized by a slowing up in the traction, the speed of the motor remaining unchanged. When this occurs, stop the motor at once and tighten up the clutch. Too much, too little, or improper grades of lubricating oil often cause overheating. You can detect this by the smell and by the unusual amount of smoke. Lubrication trouble must be corrected at once to avoid damage to the motor. Bad valve settings will cause heating and loss of power, and are indicated by a peculiar open sound of the explosions, and by blue smoke being blown back through the carburetor. By taking off the cylinder head, grinding the valves thoroughly, and removing any carbon deposits, this trouble can be corrected.

Faulty ignition causes overheating at times. This may be due to a number of causes—broken or defective spark plugs, poor wiring, short circuits and improper timing being the worst offenders. Ignition trouble should be remedied at once, as it will not get any better by neglect, and may cause much expense later.

Any type of tractor or motor with which I have had experience will deliver its maximum power only so long as it is kept properly cooled; and while many of these troubles named do not directly affect the cooling system, they will do so in time if neglected. With the present cost of operating a tractor, I find it difficult to do so profitably, unless the repair costs are kept down to a minimum.

## I Painted My Silo Before It Was Built.

I had an idea that silo-painting was a difficult task, so when I put up my silo, six years ago, I hit upon the plan of painting it before it was put up. This may sound like a fairy story, but it worked out very successfully.

Two neighbors and I purchased panel silos in the summer of 1914. The three made a full crew, and each of us stored our silo until we could get the foundations built. I bought wood preservative to put on the panels. It was in applying this that I conceived

the idea of painting the silo before erecting it.

I had stored the panels in an empty haymow. The first rainy day I set my sixteen-year-old boy and hired man to painting the silo. It took them about an hour to get started, but they soon made up for lost time once they got their system going. They used for a bench an old store box, six feet long and three feet high.

The boy put the panels on the bench and took them off while the hired man did the painting. They soon developed a great deal of speed. My son would open the crates, put the panels on one end of the box, and take them painted off the other end. He then stood them on end to dry along the side of the barn, the second layer being set out at the bottom about two inches, so each layer could dry uniformly.

I don't know how much of a job it is to paint a silo, but I do know how long it would take a first-class painter to do the job. The hired man and my son painted our 14x30-foot silo in just six hours per coat. They applied two coats in addition to the wood preservative, which I will leave out in my calculations. Several painters told me that it would take two good painters a day to put on each coat after the silo was erected. The greatest time is used in putting up scaffolding. In most instances where speed is desired, and on extremely high work, a swinging scaffold would be used.

Now for the figures to prove that I made money. It would cost to-day two days' labor for two painters, or \$28, not considering the paint. Now, what did it cost to paint it before it was erected? The hired man was getting \$80 a month, and the boy \$40 per month. At this rate the labor cost for painting the silo before it was put up was just \$4, which makes a saving of \$24. You may say that I could have painted the silo myself, even if it was up; but this would be impossible for me, and I believe for many other farmers. Very few farmers have ladders long enough to reach the top of a tall silo, and besides, it is practically impossible to paint a silo from a ladder. A swinging scaffold is not to be found on many farms, and very few farmers would care to use one. The great majority would pay the extra \$24 rather than risk their lives on a swinging scaffold.

Another advantage I found was in trimming the silo. This advantage applies only to panel silos. I was able to have the ribs painted white, a distinctive style in silo-trimming. The average silo looks very bare and plain if painted a solid color. It is next to impossible to have it any other way unless it is painted before it is built. I believe that I had the most attractive silo in our community after it had been painted in this manner.

Though I am not an expert painter, I can offer a few hints that may prove helpful in doing outside painting. I found that the wood preservative acted in a double capacity. I purchased all the preservative my dealer had, which was only enough to cover about one-third of the silo. I put these panels on the lower part of the silo. After six seasons I am satisfied that the preservative was a profitable investment. My only regret is that I could not buy enough to cover the entire surface. I can easily pick out the panels that were treated with preservative, as they are less in need of paint than the others.

The explanation is that in painting new wood it should first be primed. The pores are open, and absorb so much more of the oil than the color pigment that the color is left on the surface without enough oil to hold it. Consequently it soon wears off. Some painters take paint with an equal amount of linseed oil, and apply it to new wood and allow it to dry well before putting on the first coat. With wood preservative the same results are obtained as with a primer, and the cost is less. Besides, there is the advantage of preserving the wood from the destructive action of the silage juices.

Brushes cost so much now that it pays to take care of them. When they are to be kept overnight I remove as much paint as possible by rubbing on an old board, then hang them in water. This is important, as the bristles are easy to get out of shape if simply placed in the water. It is not a wise plan to keep them in water more than a day or two. If brushes are to be kept for a long period of time, I clean them with turpentine or gasoline, then wash thoroughly with warm water and soap, and hang up to dry. If I am going to use them again in a week or two, I dip them in kerosene, painting this on an old board, then hang them in a pail of kerosene. Before I use them again I always remove the coal oil.

An efficient, attractive house is an economic asset for the farmer, not useless extravagance as some seem to think.

The radius of human sight, under perfect conditions, is averaged at 45 miles; from the top of Mount Everest ten times this distance would be visible.

## IMPORTANCE OF PUBLICITY

### How the Fruit Trade is Nationally Served and Benefited.

Possibly few people ever stop to consider how far and how deeply publicity has entered not only into our social life but into every day business. Our forefathers went about their affairs in their own way, keeping note perhaps on the transactions of their neighbors, but heeding little in a practical way of proceedings outside their immediate circle or district. If orders came in from a distance prices were quoted and the goods shipped with little regard and less knowledge of the aggregate or average current prices. To-day all this is changed and facilities are forthcoming for knowing what is being paid in the world's markets. In other words market intelligence has become of the utmost importance to every man engaged in the sphere of production. Markets intelligence services have been established at many centres and, so far as Canada is concerned, especially at Ottawa. One of the most useful, as well as one of the most necessary, is the service in connection with the federal Fruit Branch. Sixteen years ago the branch commenced issuing monthly reports from June to October, showing commercial fruit conditions, crop reports and market values. These consisted of only a few mimeographed sheets. As time went by it was found that these were neither instantaneous or full enough. The reports were therefore increased in size until now they comprise from twelve to sixteen printed pages, detailing fruit crop conditions in Canada, the United States, and all competing countries. Notes are also given on transportation, the package situation, insect and fungous diseases and other relative matters. The data for these reports are supplied by federal and provincial officials and by the Canadian Fruit Trade Commissioner in Great Britain. Apples being the foremost exporting fruit from this country receive particular attention. A telephonic news letter is also issued every Monday and Thursday during the fruit shipping season. In addition special circulars are distributed bearing on special matters, such as tariff routings, car supply, ocean space, and so on.

### Booming the Export Bacon Trade.

Necessity knows no law and while the war was on speedy delivery of the articles needed was oftentimes of more consideration than the price. Besides, there were immense losses through the submarines which increased both the demand and the urgency. Now that trade is returning to something like its normal condition price and quality have again become the all-important consideration. In recognition of this the Live Stock Branch at Ottawa, in conjunction with the provincial departments of agriculture, are making extra efforts to maintain that quality in Canadian bacon that years ago procured for it a steady outlet in the British market. The prime importance of these efforts is proven by the fact that in the calendar year 1920 our exports of bacon reached the respectable total of \$34,000,000. As a step in the direction indicated and to stimulate interest in the type and quality of hogs that produce the kind of bacon acceptable to the British consumer, attractive prizes are to be offered for competition between members of the boys' and girls' pig club who enter exhibits at the school fairs. One object in this undertaking is to encourage the community spirit, which is justly regarded as the greatest force in promoting uniform and profitable production. Judging contests will be a feature of the competitions. An appeal is made not alone to the local farmers but to the people generally to do all that is possible to aid in the movement so that Canada may secure and maintain the premier position in a market that imports five hundred million pounds of bacon annually.

### International Standards for Eggs.

Increased consumption was one of the chief topics of discussion at the last International Poultry Convention held in London, England, in 1919. By resolution of that convention the different governments were requested to name delegates to a committee to consider the question of international standards for eggs as a basis for increased consumption. This committee, representing fifteen different countries, met some months later, reviewed the entire situation, discussed tentative standards and took note of eggs graded in accordance with existing standards. This committee will make its final report at the World's Poultry Congress to be held at the Hague, Holland, next month. Mr. W. A. Brown, Chief of the Poultry Division at Ottawa, testifies that during the deliberations of the committee, Canada's standards for eggs formed the basis of discussion, based as they are upon quality, edibility, and scientific study, the salient elements in the sale of any food product. The display of Canadian eggs graded in accordance with these standards was carefully analyzed and favorably commented upon.

## Secret of Scientific Feeding.

The average so-called bred-to-lay hen of the Mediterranean breed consumes about four ounces of solid food each day, or ninety pounds a year, besides the necessary green feed, charcoal, grits and shells. With ordinary care she will produce about ten dozen (fifteen pounds) eggs during her first laying year. The average weight of the above-named breed is about three and one-half pounds each; therefore, the hen consumes about twenty-six times her weight in solid food. The weight of her eggs is a little more than four times her weight, or six pounds of grain for each pound of eggs she produces. It has been proved that the less prolific layers have weak assimilation; therefore, the more food consumed the weaker the egg-producing organs become. The remedy, therefore, is to feed the hens according to their egg production, which can only be done by carefully trapping the flock and segregating the prolific, stronger layers in a pen, away from the others, also cull out the second-best layers and place them in a separate pen, leaving the poorest layers in the third pen. Feed the best layers their regular amount of the same kind of feed they have been accustomed to (about four ounces a day to each hen), reduce the rations of the next best lot to about three and one-half ounces. The third pen or poorest layers should be fed about three ounces a day.

Carefully note the increased number of eggs in the different pens and gradually add to the rations in proportion to the number of eggs laid. The 200-egg hen will require nearly six ounces of solid food a day. The grain feed, except the mash, should be fed in a good, clean litter which should be at least six inches deep. Thus, the hens are forced to exercise. This promotes vigor and utility. The proportions of the grain fed in the litter should be made to conform to the climatic conditions; for instance, during very warm weather, less corn should be fed, and vice versa when the weather is cold. However, it is safe to feed a well-balanced scratch food for the morning meal.

The mid-day food should be a mash, neither wet nor dry, but just enough liquid to moisten the mixture which should consist of one part wheat bran, one part cornmeal, one part hulls of oats. Add enough flaxseed-meal to allow a teaspoonful for each hen, a tablespoonful of salt, and a like amount of flowers of sulphur, should be added for 100 hens. Stir the mixture thoroughly before the liquid (preferably sweet milk heated to scalding temperature) is added. The flaxseed-meal and the sweet milk are valuable substitutes for meal. Do not feed more of the mash than the hens will clean up readily.

The evening meal should consist of equal quantities of cracked corn and wheat; but where the nights are very warm, the corn should be eliminated. When the nights are very cold feed the cracked corn exclusively. Bear in mind that inferior feed of any kind is not profitable at any price.

### Bees Help Fruit Growers.

Failure of some varieties of apples to set fruit may be due to lack of pollination. Some varieties of apples are self-sterile, and cross pollination is absolutely essential if a set of fruit is to be obtained. Other varieties are only partly self-sterile, and again cross-pollination is necessary. What is true of apples also applies to other tree fruits—such as peaches, plums, cherries, etc. A beeless country must in time surely mean a fruitless country.

The numerous white, showy, flower-clusters act as a guide to the insects, and may attract them far away. When a bee alights on a flower, the insect's hairy body may be covered with pollen from another variety of apple. As the bee works its way down to the bottom of the flower to get the nectar, it rubs its dusty body against the organs of the flower and cross-pollination is accomplished.

Weather conditions during blossom time have much to do with the setting of the fruit. If the weather is clear and warm, bees are active and cross-pollination proceeds rapidly; wet, cloudy and cold, the insects are not active and usually a poor set of fruit is secured. Strong, cold winds may often prevent the bees from cross-pollinating one side of the apple trees and this may account for the set of fruit on only one side of the trees.

Actual counts and observations at blooming time have shown that the honey-bee is decidedly the most important insect in the work of pollinating the fruit flowers. Many counts have shown that from seventy-five to ninety per cent. of the insects pollinating the blossoms were honey-bees.

### For a Stall Floor.

In the old horse barn father used blocks cut from old posts or rails to floor the stalls. When buzzing wood we cut up a number of blocks eight inches long. The dirt floor was dug out to allow for a base of gravel ten inches deep with a sand cushion three inches deep.

A binder of 2x8-inch timbers was nailed to the walls to frame the blocks in. The blocks were set on end and trimmed to fit as closely as possible. The cracks were filled with sand and well tamped. This gave a good cheap serviceable floor and one that was as easy on horses as concrete, according to our experience.—C. I. H.

## The Community That Ran Its Own Movies

The young people of our community had been for some time attending the moving pictures in our nearest town, when one of the girls said to her mother:

"I wish you would go with us to see the pictures some night."

"Why do you want me to go?" asked the mother.

"Because," replied her daughter, "I don't like the pictures as much as I did and I have been wondering what you would think of them."

Being a woman of rare judgment, the mother said, "I'll go with you to-morrow night," and kept her word. On her return from the performance, the mother lay awake a long, long time. She had not liked one of the pictures and wondered what could be done to combat this undesirable feature. When morning came she had a plan definitely formed, and that afternoon she called at every house in the community, inviting the mothers to meet at her home the next afternoon, bringing their sewing with them, if they chose to do so.

Curiosity and conjecture followed, and the next afternoon found every one of those mothers at the appointed place. When all the guests had arrived, their hostess told them of her conversation with her daughter and her subsequent visit to the moving-picture theatre, then described in detail the picture that had disturbed her.

Her audience were both surprised and perplexed. They discussed the subject at length from every point of view, and finally decided that as moving pictures had taken such a hold on the people of this day and generation the pictures had marvelous possibilities, and could be an influence for either good or evil. The women also realized that it would be almost impossible to keep their young people away from the pictures and finally decided upon a moving picture house for their own community.

The co-operation of the men was next sought and the women found them open to conviction and ready to help in every possible way. Finding that a good moving picture machine could be bought for \$1,000, fifty men were asked to loan \$20 each for the

purchase of the machine, and the response was unanimous.

An old schoolhouse which was to have been torn down was repaired and put in proper order. The women made a curtain and the machine was placed. Arrangements were made for securing proper but interesting pictures, the young people attended to the tickets and the management of the machine, while mothers and daughters, fathers and sons, all attended the performances.

Those who owned talking machines loaned them for the performances, although, later on, when the success of the movement was assured, a second-hand piano was added and the musicians of the community took turns in playing.

One evening, after the pictures had been shown, one of the boys suggested that chairs be placed against the wall and the floor cleared for dancing. The older people agreed and wisely refrained from showing their disapproval of the modern dances. Later on, they claimed the floor and were soon engaged in the various movements of the old-fashioned "square dances," and other singing games. It was no time before the young folks joined them, and mothers were sought as partners by their sons, while fathers claimed their daughters.

The plan has been working for two years; the old schoolhouse has been thoroughly repaired, a new floor and a platform or stage being not the least of the improvements. The men of the community agreed to contribute half the cost of the picture machine if the women would contribute one-fourth, and the young folks paid the remaining one-fourth. The returns from suppers and a fair provided the fourth part by the women, while the young people made up their portion by giving a few plays and a very enjoyable concert.

Every member of that little community attends the meetings held in the old schoolhouse. The moving pictures shown there are often educational, and always enjoyable. The people have become better acquainted with one another and there is a neighborliness which is admirable; in fact, the community is happy and prosperous and no one wants to leave it.

### Watch Your Money Grow.

On July 31, 1833, Horace Smith walked into the bank of his village and deposited a \$5 bill. It immediately began compounding at a very low rate of interest. On November 12, 1912, over seventy-nine years later, the holder of Mr. Smith's bank-book withdrew the sum of \$112.47, and on June 8, 1920, closed the account with a further withdrawal of \$134.46. No money had been deposited other than the original \$5 bill, but in eighty-seven years it had multiplied about fifty times and grown to the total sum of \$246.93.

Of course, Horace Smith died long before the account was closed. More than likely he forgot all about the existence of this nest-egg. Yet it is easily possible for any young man to save enough before he is twenty-five to make him free from financial worry at sixty-five. And it is better than a fifty-fifty proposition that he will be able to enjoy the results of his foresight. Statistics show that out of every 100 men who pass the age of ten years, fifty-eight will be living at sixty, and fifty-one will still be mingling with other folks at sixty-five.

A saving of \$60 a year, or \$5 a month, if persisted in for twenty years and compounded at five per cent. would amount to the snug little sum of \$2,088. An additional ten years would bring the amount up to \$4,185, and if saving at this rate were continued for forty years the comfortable figure of \$7,610 would be realized. If a man does not want to obligate himself to save any specific amount year by year, he still has little excuse for poverty at sixty-five, because a total of \$1,000 placed at compound interest before the age of twenty-five will return no less than \$7,040 at the end of forty years.

The fractional per cent. of interest should not be overlooked. If the \$1,000 above mentioned were compounded at five and one-half per cent. instead of five per cent., the sum at the end of forty years would be increased by \$1,478.

Agriculture is the backbone of the nation, and it's a backbone made up of at least three vertebrae—a fertile soil, an active brain, and an active body.

How many crops are there that can beat 826 tons to the acre? With ice eight inches thick, that would be the acre yield of a well-harvested pond or creek. The commercial value would average about \$3 a ton. That would make an acre of ice worth \$2,478. Of course, farmers would not expect to sell the ice for that, and would need only a small part of an acre. But that is what the ice might cost farmers if they had to buy it during the scorching days of this summer. During warm weather the use of ice in cooling milk and cream for shipment is often the means of saving these products from spoiling. Milk should be cooled to a temperature of fifty degrees or even lower before being shipped, to insure its being sweet when it arrives at its destination.



Little Candle By My Bed.

Little candle by my bed,  
You're a lovely thing,  
Sometimes like a lily tall,  
Blooming in the spring;  
Sometimes like a daffodil  
On a hilltop far;  
Sometimes like a beacon bright;  
Sometimes like a star;  
Sometimes, when the night is dark,  
Steadfast in your place,  
Like a small white angel near,  
With a shining face.

### Hardiness of Young Trees.

Owing to tendency of young trees to grow late in the fall there is great danger from winter injury. If the trees enter the winter with well ripened, mature wood they can withstand a much greater degree of cold without injury than when the branches are in a green, sappy condition, caused by a late growth.

By planting cover crops in the orchard late in the summer or early in the fall, it is possible to stop growth in the early fall, which will permit the wood to become thoroughly ripened and mature. In the east such cover crops may be planted so as to live through the winter, and possibly be turned under in the spring and used as green manure. These crops utilize in their growth a large amount of soil water up to the first frost, and tend to dry the soil. This reacts on the trees, checking growth and inducing early ripening of the wood.

The ideal cover crops start promptly into growth as soon as planted, thus insuring an even stand to check out weeds. It will therefore insure a heavy ground cover for the winter, acting as a protection to the roots, serving as a protection against thawing and freezing.

### No Time to Look.

It is a good old saying, "Look before you leap!" And yet, times come when there is no time to look; you have to jump, and do it right off.

We found it so one day when we were backing into a barn with a team and wagon with hay-rigging on. Our boy, then less than twenty-one, was on the wagon, handling the reins. I was down on the ground watching the performance.

It was a performance, all right. The striders under the bridge had become decayed and down went the team, wagon, boy and all. Wonder what the average boy would have done?

But our boy was not of the average sort. He stuck to the rigging and went down with the wagon. He called to the horses quietly, so that they did not get excited; he did not show any excitement himself. And when they struck the bottom, he got down and began to unravel the tangle. Because he had been so cool, very little damage came to team, wagon or boy.

It pays to school one's self to meet things like that which come up suddenly.