

# Efficient Farming

## FILLING THE PROSPERITY TANKS.

The silo is the cheapest and most efficient coarse fodder storage building that can be erected on the farm. A ton of clover hay or corn, field-cured and stored in the farm barn, requires at least 400 cubic feet of space. The same quantity of corn or clover would occupy but fifty cubic feet of silo space.

The storage of fifty tons of clover or corn made up as dry hay or corn fodder, would require a barn 40 x 330 x 16, costing not less than \$1,200. The same quantity of fodder made up as silage could be stored in a silo 10 x 30, costing not to exceed \$300.

The silo has made possible the extensive use of plants that are not sufficiently palatable in their natural state to be of great value. The ensilage process, when practiced on sunflowers, mustard, coarse sweet clover and Russian thistle, makes palatable acceptable ensilage. Also, the silo may be made to serve a useful purpose by providing a medium through which weed-infested crops may be handled, by being utilized to save grass, clover and grain crops in seasons too wet for haying or grain ripening.

During the season of 1920 a very large portion of the cut and stocked grain crop of the Pacific Coast would have been lost had it not been that the farmers had silos. Owing to continued unseasoned weather the grain sheaves made a luxuriant growth, developing about eight inches of matted green top. In this condition the crop originally intended for grain was put into the silo along with such green material as was available at the time; moisture and acid culture were added in quantity sufficient to control the fermentation processes. A good silage resulted, the silo having saved the crop.

Successful silage making depends first of all on fermentation processes, which are largely controlled by the amount of air present in the mass of fodder. Silos built with air-tight walls will cut off the air supply from the outside and reduce the losses to a minimum. Air-tight, hence satisfactory silos, may be made of wood, stone, brick, monolithic concrete blocks and tile.

Generally speaking, wooden silos are cheaper to erect, but less durable than the others. Wooden silos when standing empty dry out. If before they are filled they receive attention, and the hoops are tight, they will keep silage perfectly, for the wood will swell sufficiently to make them air-tight. Silos made of other materials, if properly constructed, are always air-tight.

Silage will keep perfectly in a silo of any kind which is air-tight. On the other hand, spoilage always results when air enters the silo at the sides or at the bottom, and often cause large losses, a few small openings will allow sufficient air to enter to spoil the whole mass of ensiled material. The top of the ensiled material will seal itself through decay of about a foot of material, less when very green crops are used, and more when more matured crops are put in. Spoilage can be largely eliminated by cutting thoroughly the last few loads of silage as they are cut up, by covering the silage with a layer of finely cut wet straw.

Silos less than twenty feet deep do not give the same high efficiency as silos over thirty feet deep. Height is required in order that the weight of the mass may be sufficient to compact the cut material and reduce the air content to a degree not favorable to extensive fermentation. The deeper the silo of any given capacity, the smaller the cross or top surface exposure. This is important, since silage will spoil rapidly if exposed to the air. The modern practice is to build the silos high, and of a diameter that is in keeping with the daily feed requirements, the aim being to have the silo as small in diameter and as high as it is practicable to build. The deep silos have the distinct advantage, in that a better silage can be made and there is less wastage on exposed top surface. Low, wide diameter silos are easier to fill and empty, but do not pack well and surface waste quite heavily.

The wall or walls should be smooth and vertical. The structure should be true and of uniform diameter throughout to facilitate the undisturbed settling of the fermenting mass. Any obstruction, such as a bulge or cavity interfering with the settling will show considerable spoilage at the time when the silage is being removed. If the sides or walls are not vertical and parallel, good results cannot be expected.

The outward pressure of the cut fodder during settling is approximately eleven pounds per foot for each foot of depth.

At the bottom of a thirty-foot silo, the pressure on each square foot would be over 300 pounds. A silo ten feet in diameter and thirty feet high will have to stand an outward pressure on the lower foot wall of approximately 9,430 pounds. The pressure on the tenth section is about 6,000 pounds, or 210 pounds per foot. These pressures indicate that the silo wall must be strong and secure. Square silos failed to be fully efficient, largely because they were not built stiff enough to stand the pressure without

bulging during settling. The bulging left air spaces, and molding followed. After the silo had fully settled, there is little or no lateral pressure.

The inside of a silo is no place for a lazy man during filling time. Only the most dependable workers should be entrusted with the spreading and packing of the finely-cut fodder. The lazy man will lean up against the silo wall or sit down and loaf, letting the cut fodder pile up. With the heavy and light portions separated, and with the leaves all together, soft, spongy areas develop in every foot throughout the mass. It can be smoothed over at the time, but the telling evidence of loafing is generally seen in the mouldy sections when the silage is removed.

The best corn may be grown, the best of silos built, the cutting machinery may be used, yet the silage largely spoiled by loafers neglecting the spreading and packing of the fodder as it goes into the tank.

All silage material should be finely cut. Coarse stalks and hollow clover and grain stems must be cut short and be crushed or broken in order to pack well. The use of the flexible distributor tube is a great aid in the even spreading of cut fodder. It, too, should be operated by a man possessed of sufficient energy to do an honest day's work.

The highest grade of corn silage is made from those varieties of corn that produce a large proportion of grain in the total weight of crop. Large-growing southern varieties of dent corn that give an immense green weight of fodder per acre, will, as a rule, produce a very poor silage. Many dairymen prefer flint varieties and the small stalk varieties of early maturing dents for silage purposes. From such, a rich sweet silage can be made. The weight per acre may not be nearly as great as with the late maturing, large-growing dents, but when the silages are compared on the digestible dry matter basis, the smaller growing earlier maturing dents and flints have the advantage. Only such varieties as will ripen at least a few ears should be used, even in most northern sections.

In the early years of silo experience the practice was to grow big corn. Little attention was paid to the grain yield, and much poor silage resulted from the twelve to fourteen-foot stalks that went into the silo without the very necessary two-pound, well-glazed ear. Hard experience has demonstrated that there is more milk, beef or butter in a cubic foot of silage made from corn that consists of big juicy stalks.

## Canada's Production of Butter and Cheese.

Canada turned out 163,456,759 pounds of creamery butter valued at \$58,894,008 last year, compared with 152,501,000 pounds valued at \$53,463,282 the year before. The price of butter in 1923 averaged 34 cents per pound against 35 cents per pound in 1922. Of last year's production, Quebec manufactured 60,179,616 pounds valued at \$20,741,454; Ontario, 54,773,180 pounds valued at \$19,443,505; Maritime Provinces, 6,319,574 pounds valued at \$2,352,521; Prairie Provinces, 39,223,225 pounds valued at \$13,108,043; and British Columbia, 2,961,154 pounds valued at \$1,250,485.

Of cheese, Canada manufactured 11 per cent. more at an increased value of 31 per cent. last year compared with the year before, the total manufactures in 1923 being 151,483,353 pounds valued at \$28,829,366. The average price of cheese last year was 19c compared with 16c in 1922. The Maritime Provinces produced in 1923, 2,671,238 pounds of cheese valued at \$514,404; Quebec 46,770,556 pounds valued at \$8,763,782; Ontario 99,536,405 pounds valued at \$18,842,102; and the Prairie Provinces 2,216,058 pounds valued at \$438,023.

It will be noticed Quebec manufactured the most creamery butter and Ontario by far the most cheese.

## Cost of Rearing Pigs.

A record of the cost of keeping a sow for a year and feed consumed by herself and litter at the Lennoxville, Quebec, Experimental Station, showed that each pig at weaning age had cost \$2.29. Four Yorkshire brood sows were used in the experiment. Each sow raised two litters and raised an average of 18.8 pigs, which were weaned at from six to eight weeks of age. The feeds used consisted of middlings, oats, barley, oil meal, tankage, clover hay, roots, and skim-milk, besides pasture for four months. The particulars given are from the annual report of the Station, issued by the Department of Agriculture at Ottawa.



One of the newest ideas throughout England is the sale of miniature busts of the Prince of Wales, all proceeds to go to Lord Haig's £25,000 campaign for the benefit of British ex-service men.

## We Are Lifting Our Mortgage With a Stove Lid

BY MRS. GRACE BATES.

A tourist camp near our little farm has furnished us an idea that is paying off the mortgage for us. My husband and I are town-bred. We planned when we bought our farm to raise pigs and chickens and keep five or six cows. We have discovered that there is real money in selling good things to eat to people in the tourist camp. A similar trade could be built with town-folks from any farm properly located.

Some hikers wanted to know one day if we had any chickens for sale. They said they would call for them next day. I baked bread and two green apple pies the next morning, and when I saw those articles on the table beside my dressed chickens the thought suddenly occurred to me, "When those people call for their chickens, perhaps I can sell them some bread and pie."

I set the stage properly, dressed chickens close to pie and bread. They bought the whole display.

So the idea was born. The next day I carried bread, pie, and fried cakes down to the camp and sold two dollars' worth.

In less than a week I could see that the business was too much for me. So I drafted the "gudemans." He got eggs, vegetables, and apples ready; I baked a quantity of food; and away we went at ten o'clock. We have adhered to that hour ever since—ten o'clock every day but Sunday. Another of our first plans was always to take orders for dressed chickens. We don't take them unless ordered, because they won't keep.

Believe me, we used to sit and look at each other on the way home some days when our sales amounted to fourteen dollars and sometimes as high as twenty. We soon began to pay up some of our bills. We had borrowed every cent for stock and equipment.

That was the first year, and last summer was the second. We started June 18th, and in ten weeks we took in \$1,000 in round numbers. We built a screened-in back verandah, and there we did most of our work, baking in the kitchen range. We also had an oil stove with an oven.

When we took orders we scrupulously filled them—all but once. Some people who didn't eat meat on Friday ordered a quart of baked beans. Somehow we overlooked this order, and when we got to them, the bean kettle, like Mother Hubbard's cupboard, was bare. Suffice it to say, they would have nothing more to do with us during their stay. Fortunately this happened to us only once.

I always baked a quantity of food, and if I had orders I baked more. The idea is to have food on hand. There are many who won't give orders, so we sell them as we find them. At the beginning of the season I bake less, baking more as the crowd increases. It is better to have too little than too much, for things must be fresh.

We take the seasonal vegetables and fruits and eggs. Of baked foods the first favorite is pie—apple, berry, lemon cream, vanilla cream, custard, pumpkin, and chocolate. I usually bake mostly apple and two other kinds one day, and so on. I've baked as many as 28 in one day. I carried them in biscuit boxes last year, with a pie tin inverted for a cover; but next season I'm going to have a tinner make a regular pie carrier, like a baker's.

Brown bread is next, and this is so simple any child (or man) can make it. It is just a sour-milk graham bread with a cupful of bran added, baked in a loaf. It's delicious and recommended by doctors. Whenever tourists broke camp they usually bought a supply to take home. It makes wonderful sandwiches. We mix four loaves at a time in a crock, put them in four pans which just fit the oven, placing them on the bottom first. Then four more, placing the first ones on the top grate; thus we're able to bake eight loaves at once.

"I learned that one should make things good, not stint them. Ask enough to make a reasonable profit and they'll sell fast. I've never forgotten the story about my grandmother, who was a famous cook. Someone said to her:

"Why is it, Mrs. Blank, that your cooking always tastes so good?"  
And my grandmother answered:  
"Because I put good things in it; that's why."

We don't try to soak people because they're tourists. That's piggish and unprofitable. We've never tried it, but we've seen it tried. It may work once, but not often the second time.

White bread, rolls, and cookies we don't bother with. Bakers can make these good and cheap, and they can far undersell the private individual. These take much time and stove room, which count in a rush.

One should have a variety. It takes some time to sell one thing. One can sell several articles almost as quickly, and have more cash at the close of the deal. Also, one should be business-like. We feel that this is as legitimate and honorable as any business, and conduct ourselves accordingly.

There is much pleasure in this, as well as profit. We meet strangers, get acquainted, try to give them a good opinion of our locality and make many good friends.

This is a cash business; no credit asked nor given. Credit makes poor customers and poor friends. We inquire of our customers whether they'll be in need of any article produced on the farm in fall or winter, and can dispose of our winter products in this way.

I mustn't omit to mention that cleanliness is very essential. Vegetables are severely scrubbed, eggs well washed, food containers are dust and fly-proof and clean on the outside, and we ourselves are clean as to dress and person. Bunglow aprons are approved apparel, and may always be neat and clean.

One lady became my customer because the first bake-lady who came along had dirty finger-nails. People may be made of dirt, but they seriously object to eating it.

## Maturing of Cheese.

The Dominion Dairy and Cold Storage Commissioner, Mr. J. A. Ruddick, in his last News Letter calls attention to Section 12 of the Regulations under the Dairy Produce Act which reads: "No cheese shall be graded until it is sufficiently mature, in the judgment of the grader, to permit of the quality being properly determined."

The Commissioner says that during his recent visit to the United Kingdom he was more than ever impressed with the necessity of Canadian factories stopping the practice of shipping their cheese when only a day or two old. He further states that factories that pursue a reasonable course in this matter and keep cheese until it is properly matured, will receive the protection to which they are entitled. Henceforth shipments of cheese that are too green for grading will be warehoused at the maker's expense until they have become reasonably mature. Mr. Ruddick believes every intelligent operator will appreciate a system that places all factories on the same footing.

Cleaning up dairy herds is one of the best methods of advertising dairy products to a discriminating public.

Breeders with early hatched cockrels often hold them too long, especially if they have plenty of feed and do not need the money. Then they find that the price per pound drops until the four and five-pound birds bring no more money than they would have brought as broilers when weighing two or three pounds.

# The Sunday School Lesson

SEPTEMBER 21

Jesus Makes a Missionary Tour, Mark 1: 35-45. Golden Text—Thou canst make me clean.—Mark 1: 40.

I. JESUS THE MAN OF PRAYER, 35-38. INTRODUCTION—Mark 1: 21-24 contains the record of a whole day's work of Jesus. The scene is Capernaum; the time is the first Sabbath which Jesus spent in that city. In the morning Jesus attended the synagogue and taught. At midday, Jesus leaves the synagogue, and going to the house of Simon and Andrew, heals the mother-in-law of Simon. At sunset, extraordinary scenes are witnessed in the usually quiet streets of Capernaum. "Working all day" is the title that might appropriately be given to the picture of Jesus in these verses of Mark.

At the next morning, when the crowd reappears, Jesus is gone. The streets are again thronged with people waiting with their sick, but the Healer is nowhere to be found. Anxiously Peter and his companions go in search of Jesus, and find him in the solitude outside of the city, praying. This brings us to our present lesson. We are now to see Jesus as a man of prayer.

I. JESUS THE MAN OF PRAYER, 35-38. V. 35. The prolonged labor of the day before had curtailed Jesus' hours of rest. Nevertheless, long before day-light, he leaves the city for the solitude where he can find a time and place for God. He must pray in order to fit himself for the day before him. What did he ask on bended knee in that dim hour, while the first faint morning rays were stirring in the leaves? We are not told, but we know it must have been to be wholly surrendered, to be utterly guided by the Father's will, to be given strength for all that the day might ask of him. Men sometimes think that work can serve as a substitute for prayer. Our Lord did not think so. When ever worked as he worked? Yet he also prayed, for prayer is not work, or anything else but prayer.

Vs. 36, 37. It seemed extraordinary to Peter and his friends, that Jesus should absent himself when all the world was waiting for him in Capernaum. Had he not an engagement to keep with all these anxious souls who were living the streets with their sick? But Jesus had also an engagement to keep with God.

V. 38. Jesus explains that he must not return to Capernaum. His primary task is to preach to the souls of men, not to heal their bodies. The time is short, and the message of the Kingdom is urgent. He must go on that very day to preach in other townships of Galilee, for he has otherwise shirked so. When Jesus tells Peter that it was to prepare by prayer for this missionary journey, that he came away from Capernaum that morning. Similarly we find Jesus spending a night in prayer before he chooses his twelve disciples. (See Luke 6:12.)

II. JESUS THE GREAT PHYSICIAN, 39-45. V. 39. We are not told the length or extent of this journey, in which Jesus now visits the synagogues of Galilee. His task is to proclaim the nearness of the Kingdom and to lead the souls of men to God. But in the furtherance of this task of leading men to God, he heals whenever the sick are brought to him. In particular, Mark records that he cast out "demons." It was universally believed that "evil spirits" entered into people, and produced delirium of mind, convulsions, hysterical cries, and spiritual distress. Men lived in terror of these demons,

as they still do in China and in many other heathen countries. Whenever, therefore, any of the above symptoms occurred, it was at once concluded that possession by demons had taken place. Jesus saw in all this, the signs of Satan's fearful domination over the souls of the sufferers, commanding the demons to go, and bringing back to the disordered mind, the sense of God's love and power to save. Mark sees in these conquests of the terrors inspired by demons, the most wonderful proof of Jesus' Messiahship.

Vs. 40-42. These verses tell also how Jesus cleansed a leper. Strictly speaking, the leper had no right to leave his seclusion and to appear among men. But necessity in this case knows no law. The leper flings himself at the feet of Jesus, crying, "If thou art only willing, thou canst make me clean." It shows the wonderful pity of Jesus, that at this moment he does not even hesitate to touch the leper. He knew it to be God's will that at that moment he should touch the man, and should say, "I am willing; be thou cleansed."

Vs. 43, 44. But Jesus sternly charges him to say nothing about his cure, but to go at once to one of the priests with the offering required in the law of Moses (See Lev. 13:49; 14:2-32). He was to do this "as a testimony to them," that is, to show that he is cured, or to show that he is a prophet of God in Israel. (See 2 Kings 5:8.)

V. 45. The healed leper does not remain silent, as Jesus commanded, but proclaims his cure far and wide. The result is described in the present verse. Jesus cannot enter any of the cities for a time. The popular excitement is too great for men to listen calmly to his message, and he chooses the quieter places for his work.

A LEOPER. We use the word "leprosy" for a particular disease; apparently the Biblical writers, even in the *Law* (Lev. chs. 13, 14) used the term for several distinct maladies. Setting aside the leprosy of the skin (Lev. 13:47-59) and the leprosy of the garment (Lev. 13:47-59) as peculiar and obscure, there remain several skin diseases as well as more deeply seated affections of the human body. The plague on the head or beard, "the scall" of Lev. 13:20-37, was, according to many physicians, some variety of contagious and inveterate ringworm. The disease is still common among poor Jews and Moslems. The same classes are affected by leucoderma or vitiligo, which produces a discoloration of the skin such as is described in Lev. ch. 13, or it may be that Lev. ch. 13 includes also psoriasis or English leprosy.

What is called leprosy to-day is a disease that produces commonly, a thickened condition of such features as the eyebrows, the sides of the nose, the cheeks, the chin and the ears. The thickening gives to the hands and feet a lumpy appearance. In some cases the joints of the fingers and toes are affected and parts fall off, while lumps on parts exposed to rubbing often become open sores. At the same time the thickening extends to the mouth and throat, and the voice is reduced to a husky whisper. These are the obvious features of the disease, but sometimes they are entirely absent. What is fundamental is that in every leper the nerves of the skin cease to act, he loses his sensibility, and there is a profound lowering of the vitality and efficiency of the organism.

## Rations for Laying Hens.

What was regarded as the best ration for laying hens was fed for two years in succession to birds in the Egg-laying Contest conducted at the Nappan, Nova Scotia, Experimental Station. The scratch grain mixture consisted of 100 pounds of wheat, 100 pounds of corn, 50 pounds of oats, and 50 pounds of barley. The dry mash, which was kept constantly before the birds, consisted of a mixture of 100 pounds of bran; 100 pounds of middlings, 100 pounds of crushed oats, 100 pounds of corn meal, 50 pounds of oil meal, 50 pounds of beef scrap, 50 pounds of blood meal, and 15 pounds of charcoal. These mixtures were used constantly from the 1st of November, when the test commenced, until the fourth of September the following year. During the remainder of the year the 50 pounds of barley in the scratch mixture was replaced by 50 pounds of oats, and in the dry mash the 100 pounds of crushed oats was dropped and substituted by 50 pounds of bonemeal. The green feed used during the winter months consisted of sprouted oats were used instead. Each pen consisted of ten birds, kept constantly housed in a shed roofed withing 10 by 12 feet in size. Nearly two-thirds of the front of the house consisted of glass and curtains. Hoppers supplied with grit and shell were provided for each pen.

Green feed fresh from the fields in late summer and early fall helps to prevent the usual decrease in dairy production at this time of the year.

If the breeding of thoroughbred poultry was more generally conducted on business principles, when engaged in largely for the sake of expected profits, we would not hear of so many disgusted or badly disappointed breeders. A large proportion of the beginners commence with an enormous amount of self-conceit and false ideas and a very small amount of experience, and until this is directly and completely reversed, success and profit will never be attained.

## Restraint for a Cow.

Sometimes it is very desirable to know how to restrain a cow from kicking, without casting or applying hobbles or chains. When a cow gets a caked udder, and one teat or quarter must be drained through a milk tube, try the following method which has always been successful with us: One person grasps the cow's nostrils with his left hand, using the thumb and two fingers. He raises her head, just as though he was going to drench her, except that he holds her head around more to her side. When the milk tube is to be inserted, the person holding the cow pinches the nostrils as tight as he can, and the effect is much like twitching a horse. Of course, there are cows so vicious that only tying up the hocks will restrain them, combined with the above described method. But it is remarkable how this simple mode of restraint will take a cow's mind—if she has one—off her real troubles, and how much can be accomplished without getting her frightened or stubborn.

## Hints About Horses.

Do we owe a debt of gratitude to Horses? Are they not faithful, obedient, uncomplaining servants? Do they not trust us, and is not their welfare in our hands? Will you do all you can to help good and regular meals, a good stable and bed, careful grooming and sensible treatment.

He needs three meals a day. A troop-horse's daily ration is 12 lbs. of hay, 10 lbs. of oats and 8 lbs. of straw.

When he is working hard he needs food and water every two hours. It is cruel to keep a hard-working animal thirsty. Hay dipped in water will keep him cool if he cannot have a drink. See that the manger is kept scrupulously clean. Horses are extremely clean feeders and will not clear up their food if there is dust in the remaining portion of it. A pile of rock salt should be kept in the manger. The horse enjoys it, it does good and promotes appetite.