EFFICIENT FARMING

FARM DAIRY CHEESE.

For every 9 or 10 pounds of cheese required, use 100 pounds of milk (10 gallons).

Take the fresh morning's milk and mix it with the night's milk in a vat, or some vessel suitable for holding milk; a clean wash boiler will answer the purpose. Heat the milk to 86 deg. F. by placing a clean can of hot water in it, or by setting the vessel containing the milk on the stove and stirring until the desired temperature is reached.

If colored cheese is wanted, use one teaspoonful of cheese coloring for each 100 pounds of milk. Add the coloring to a dipperful of milk and mix it thoroughly with the milk in the vat before adding the rennet.

Use one teaspoonful of rennet for every 25 pounds of milk. Dilute the rennet with a pint of cold water and mix it thoroughly through the milk by stirring with a dipper for about three minutes.

Cover the vat until coagulation takes place, which will be in about twenty minutes, depending on the ripeness of the milk; the sweeter the milk, the longer the time required.

To ascertain when the curd is sufficiently coagulated for cutting, push the forefinger into the curd at an angle of 45 deg. until the thumb touches it, make a slight break in the curd with the thumb, then gently move the finger forward. If the curd breaks clean across the finger without any flakes remaining on it, it is ready to be cut.

For cutting, regular curd knives are best. Use the horizontal knife first, cutting lengthwise of the vat, then cut both lengthwise and crosswise with the perpendicular knife. This gives small cubes or even size.

When curd knives are not available, a long-bladed knife may be used, cutting the curd lengthwise and crosswise of the vat in strips about one-third of an inch wide, then cut horizontally. By this method it is difficult to cut the curd evenly.

After the curd has been cut, it should be gently stirred with the hand, or with a small wooden rake for ten minutes before applying heat.

Heat the curd to 98 deg. F., taking about thirty minutes to do so. Continue stirring until the curd is ready for dipping; this is usually about two and one-half to three hours from the time the vat was set.

When the curd becomes firm and springy and falls apart when a handful is pressed together, it is ready to have the whey removed.

After drawing off the whey stir the curd over once, then pile it evenly at one end of the vat and cover it with a heavy cotton cover.

In about twenty minutes the curd will be well matted when it should be cut into blocks about four inches square.

Turn the blocks about every twenty minutes until the curd becomes flaky. This is usually about one and a half hours after dipping.

The next process is milling the curd and a knife can be used in place of a curd mill. Cut the curd into strips about the thickness of your finger, stir well, then apply the salt at the rate of one ounce of salt for every twenty-five pounds of milk.

Sprinkle the salt over the curd, mix it thoroughly and when the salt is dissolved the curd will be ready to put to press. Between 80 deg. and 84 deg. will be a suitable temperature to have the curd at this stage.

The cheese hoop, or hoops, should be made of heavy tin with two handles on the outside. A suitable size for home use would be 7 or 8 inches in diameter and 12 or 14 inches high. It is also necessary to have a wooden follower, which will fit nicely on the inside of the hoop.

Place a piece of cotton at the bottom of the hoop, as a temporary cap, then put the cheesecloth bandage inside the hoop. Carefully pack in the curd, fold over the end of the bandage, place on top a piece of cotton similar to the one at the bottom, then put on the wooden follower and put to press.

If a press with a screw is not available, use a lever press. Take a piece of scantling 10 or 12 feet long for a lever. Place the cheese hoop on a strong box about three feet from the wall. Nail to the wall a piece of scantling and under it put one end of the lever. Put a block of wood on top of the followed for the lever to rest on. A pail containing stones or iron may be used for the weight. Do not apply full pressure at first.

In three-quarters of an hour the cheese may be taken from the press, the bandages wet with hot water, pulled up smoothly and trimmed neatly, allowing one-half an inch to lap at the ends. Cover the ends with circles of stiffened cheesecloth, over that place a piece of cotton dipped in hot water. Return the cheese to the press until the following morning, when they should be turned in the hoops and pressure continued a few hours longer.

After removing the cheese from the press, place them in a cool, dry cellar to ripen.

Turn the cheese end for end on the shelf every day for a month and afterwards occasionally. These cheese will be ready for use in about 6 or 8 weeks.

To prevent the cheese moulding and to keep them from drying too much, they may be dipped in hot paraffine wax. Another method to prevent mould is to put a double cloth on the cheese until ready for use. The mould will be on the extra cloth, leaving the cheese clean when removed.

Packing Butter on the Farm for Home Use.

We have all heard the expression "The best is none too good." This applies especially to butter for storing, so says Miss Belle Millar of the Ontario Agricultural College. It is necessary to put away the very best if we want to have something good for using later on, as no butter improves in storage.

The can in which the cream is collected should be clean and free from rust.

The cream should be good flavored and should be churned sweet, or with very little souring.

A cream with high acidity will not make a long-keeping butter.

As pasteurized cream butter will keep very much better than raw cream butter it would pay to go to the extra trouble of pasteurizing the cream when the butter is going to be held for some time.

To pasteurize, place the can of cream in a larger vessel containing hot water. Stir the cream gently until the temperature comes up to 170 deg. F. Hold it at that temperature for at least ten minutes, then cool it quickly to a low temperature. Hold it cold for a few hours before churning it.

Churn at a temperature low enough to bring the butter in nice firm granules. Avoid overchurning. Wash the butter twice and salt in the usual way. Work the butter a little to mix in the salt, then let it stand in a suitable place for a few hours before finishing the working.

Have the butter of such firmness that it will stand sufficient working so that the salt will be evenly distributed and that it will be close in body and not show water pockets.

As butter keeps best in large packages, crocks, tubs and boxes are used. The crocks should be in good condition, free from breaks in the glazing, and should be well scalded before using. Tubs and boxes should be coated with paraffine wax and lined with heavy parchment paper.

Put the butter in in small pieces, pack solidly, using a butter packer or a wooden potato masher. Pack each piece by working from the centre outward. Pound well around the edges and in the corners so as to avoid having holes.

When the box is filled, level off the top and fold the ends of the paper over. If a tub or crock is used place a circle of parchment paper on top.

Make a paste by moistening some salt with a little cold water and spread an even layer over the top of the package, then fasten down the lid.

If using crocks it will be necessary to cover the lid with two or three ply of clean wrapping paper and tie it securely.

Butter to keep must be protected from air, light and heat, so after the packages have been made secure they must be placed in a clean, cool, dark place. The temperature should be low and even. Butter made in September is not subjected to heat like the June butter. Those who make butter in June for holding and have not a good place for keeping it would find it to their advantage to place it in a cold storage if there is one in the vicinity. The saving in quality would more than pay the storage fees.

The Dairy

Ordinarily my steers will bolt a good percentage of grain when fed shelled corn. This means I must have hogs behind them to save a part of this waste. It is sometimes hard to get enough hogs. I have lessened this waste to some extent by mixing a little oats and oil meal in with the grain. I find this combination causes the steers to relish the grain more, and they eat it more slowly.

This idea came to me about three years ago when I was feeding corn containing a lot of moisture. Apparently the cattle were getting little good out of it. I tried the oats and oil meal. Now I use this mixture no matter what kind of corn I have.

In starting cattle I use ear corn, in which I mix a little shelled grain. This prevents the cattle from eating too much grain at the start. As they become accustomed to heavy feeding, I gradually change over to shelled corn, oats, and oil meal. Plenty of clover hay and good clean water completes my ration, and I can average two pounds gain a day with steers that are halfway well bred.—T. J. D.

Not a bit too early to get set on an ice house. With one filled it will not be difficult to keep the milk right and the cream sweet during the hot days of 1924.

Care of the Brood Mare.

The horse is a necessity on the farm, and increasing interest in his breeding has been apparent during the past year, says Mr. G. B. Rothwell, Dominion Animal Husbandman; at the same time, he adds, there was never a worse time to raise "scrubs" and "skates" than the present. There is a demand for quality drafters which will continue, provided the right kind of horse is produced. Over production and poor judgment in breeding have brought about recent discouraging conditions.

While strongly advocating the use of good stallions, Mr. Rothwell directs attention to the importance of choosing a fitting mate. Still, it is due not only to careless breeding that animals of poor quality are so common; many undersized, poorly developed three-year-olds are the result of hot summers, of flies, bare pastures, trudging after hard-worked mothers, and, insofar as the foal is concerned, to a lack of a little grain, choice hay, and a few roots in winter feeding.

Fall foals, bred under favorable conditions, are, says Mr. Rothwell, almost invariably strong foals, free from taint or disease.

Speaking of feeding, the Dominion Animal Husbandman advises the giving of but little grain to the brood mare during the winter months, but advocates the feeding of a fair amount of good hay, timothy, mixed hay, clover or peas, oats and vetches. One feed a day, he suggests, of well-cured mixed or clover hay or of green cut oat hay will be found excellent. Turnips, carrots or mangels should form at least one feed daily, there being no better winter feed than roots. As to exercising, plenty of fresh air, natural, succulent feeds and work promote healthy functioning. A mare in healthy, natural shape means that the foal she is carrying is likely in a similar condition.

Medicines should be used only where indicated and not as a general hit-and-miss cure-all. The mare should get salt regularly. A tablespoonful of chick-size or pulverized charcoal in the feed two or three times a week is beneficial. A box in the yard containing a readily accessible mixture of salt, bone-meal and charcoal, it is suggested, will be found particularly good for colts and growing stock generally, and may supply just what some brood mares require in the way of mineral salts. All mares, however, do not require the same, and it is well to provide for obscure possibilities.

Poultry

High fertility and stronger chicks will result if the breeders are not forced during the winter. It is best to keep them below 50 per cent. production. Twelve per cent. animal protein in the mash is sufficient.

The cheapest male is the one with a pedigree record, stamina and body conformation; the most expensive one is the scrub which one usually gets when exchanging with a neighbor. Remember that egg production must be bred in, in order to be fed out.

"Shooing" hens is a bad practice. All movements should be quiet. Sudden fright affects the egg crop. If humane considerations do not influence the poultryman, that of financial gain should.

Dirty eggs should be cleaned by taking a greasy cloth, one greased with lard or butter, and wiping them. This will remove the dirt and at the same time close the pores in the shell and keep it air-tight.

To remove the pin-feathers from ducks, coat the ducks completely with paraffin, then start to remove the paraffin right down the middle of the breast and the coating will come off with the pin-feathers embedded in the paraffin.

You start drawing on your capital when you stop fertilizng.

Horse Sense

The term Heaves, or Broken-Wind, is applied to a condition affecting horses which is manifested by shortness of breath due to the air cells of the lungs becoming over-distended. It is caused in many cases by feeding horses dusty hay, particularly timothy and clover hay. Allowing horses to drink an excessive amount of water after feeding and just before going to work, and also overloading the stomach with bulky food always predisposes to the development of heaves, hence the condition is met with most frequently in horses which are greedy feeders. Over exertion when the stomach is full is always liable to produce heaves.

Symptoms of Heaves — Horses which are affected with heaves usually keep the nostrils dilated or wide open and have a hurried, wheezing breathing accompanied by a double lifting or pumping of the flanks which becomes intensified and more noticeable by exertion. The peculiar heaving of the flanks causes a ridge to appear along the lower end of the ribs, which is known as the "heave" line. Another symptom is the presence of a chronic cough which is more pronounced after feeding or drinking. Broken-winded horses keep the anus relaxed and pass much flatus, or wind, at times.

Treatment of Heaves—The essential feature in the treatment of heaves is to alleviate the condition by careful dieting. By reducing the amount of hay or roughage and feeding chiefly on grain and mashes and regulating the supply of water to the minimum, many badly broken-winded horses may be enabled to do ordinary work. Dusty hay of any kind should not be fed to broken-winded horses, as it will aggravate the symptoms, and to obviate such tendencies the hay should be dampened. The bowels should be kept regulated by feeding bran mashes, to which may be added a handful of Glauber salts, or flax seed meal. Heaves is usually benefited also by giving them from one to two tablespoons of Fowler's Solution of Arsenic in the food or drinking water each morning and evening for a period of two weeks from time to time. In many cases broken-winded horses become more serviceable when moved from a damp, muggy climate to a dry climate.

Killing Weeds in the Manure Piles.

There are very few seeds that will be destroyed by the addition of lime to manure. This is a very wasteful procedure, however, inasmuch as quicklime put in the manure will drive off the ammonia and thus the most valuable constituent will be lost.

A number of experiments have been made in various places and it has been found that where the manure is sufficiently fresh so as to develop considerable heat this will destroy all of the weed seeds in the interior portion of the pile. It is necessary, then, to take down the pile and rebuild it with the portions that were outside in the centre, so that they may undergo the same heating process and have the weed seeds destroyed. Also where this method is practiced it has been found that very few weed seeds survive in a viable condition.

A metal band to surround a stove pipe from which extend wire racks on which utensils or clothing can be dried has been patented.

It was her first visit to a farm and she evinced keen interest in all she saw. Being shown the dairy herd, she turned to the farmer and asked: "Which ones give the cream?"

Somebody has said, "Happy is the man whose pocket is empty enough that he may put his pride in it if necessary." This leads us to conclude that the farmer must be happy, as he has plenty of room in his pocket for his pride.

—AND THE WORST IS YET TO COME

The Sunday School Lesson

NOVEMBER 25

Christians Called to Be Missionaries—John 17: 18; Matt. 28: 16-20; Acts 1: 6-8. Golden Text—Go ye therefore, and teach all nations.—Matt. 28: 19.

LESSON SETTING—In the lesson for to-day we see that it is God's clear and expressed will that his followers continue the ministry of their Master, and that the world is the field of that ministry. Christ is the gift of God to the race. The Church has a divine mission to fulfil and this mission is imposed upon the Church by Christ, in words of unchangeable authority and unmistakable clearness.

I. THE GREAT EXAMPLE,—CHRIST, JOHN 17: 18.

John 17: 18. *As thou hast sent me.* This verse is part of the intercessory prayer of Jesus. He prays for himself, for his disciples, for those who shall afterwards believe in his name. In his prayer for himself he gives thanks that he has fulfilled the work which he was sent to do. His work was to make God known to men, and to speak to them the words of God. In v. 18 he passes to his disciples. He first reaffirms that he had been sent by God to the world on a definite mission. *So have I also sent them.* As the Father has sent the Son, so also has the Son sent his disciples into the world. This verse gives first to the missionary precedent for the disciples of Christ. They are sent as Christ was sent. Second, it gives the missionary authority. They are sent by Christ as Christ is sent by God. Third, it gives the missionary field. They are sent into the world as Christ was sent into the world. In the previous verse he prays that they may be equipped for their task by the sanctifying of the truth.

II. THE GREAT FIELD,—THE WORLD, MATT. 28: 16-20.

Vs. 16, 17. *The eleven disciples went away into Galilee.* In v. 10 Jesus gave commandment to the women to whom he appeared, that they should tell the brethren to go into Galilee where they would see him. *Into a mountain.* The hill is not known. Some think of the Mount of Transfiguration, others of the hill where the Sermon on the Mount was delivered. It would doubtless be some well known haunt where they had met often before. And so Jesus did not mention the place specifically to the women. *Where Jesus had appointed them;* where Jesus, through the women, had appointed a meeting. *They worshipped . . some doubted.* Some are so fully persuaded of the resurrection that they give to Christ the worship due to him. Others are bewildered with the wonder of it all. But they love even if they do not worship.

Vs. 18, 19. *All power is given unto me.* Jesus now proceeds to give his last and great commission to his followers. The giving of the commission is based on the power and authority of him who gives it. It is an empowered and authoritative commission. Christ is supreme in heaven and earth. Christ is not the conveying channel of power. He is the originating fountain. *Go . . teach all nations . . baptizing them.* To teach means "make disciples of." *In the name;* rather, into the name of the Father. Baptism is a symbol of the forgiveness of sins. It is also a seal of the fellowship with Father, Son and Holy Spirit into which the disciple is received.

Vs. 20. *Teaching them to observe . . whatsoever I have commanded.* The teaching of Jesus is to be the content of all their gospel. Jesus is the final revelation as he is the final authority. *I am with you alway . . unto the end.* The disciples go. The Master goes with them always and everywhere. This is a commission with promise as well as program, with companionship as well as authority. These words have been well called the marching orders of Christianity. World-wide evangelization has been thrust upon the Church as a paramount duty, by Christ.

III. THE GREAT ENDOWMENT,—POWER, ACTS 1: 6-8.

Vs. 6, 7. *When they . . were come together.* Jesus has showed himself alive after his passion by many infallible proofs, and had given command to the disciples that they should not depart from Jerusalem, but wait for the promised gift of the Holy Spirit. It was this gift that would enable the disciples to fulfil the great commission entrusted to them. In accordance with that command they are met together. *Wilt thou at this time restore?* This question shows that the minds of the disciples were still possessed by the idea of a temporal kingdom. *It is not for you to know the time.* It was a natural question to ask. It was the question of human curiosity that desires to penetrate the veil of the future. But Jesus turns the question aside. The great issues of the future are in the keeping of God. They are his concern.

Vs. 8, 9. *But ye shall receive power.* The disciples desire information of the future. Jesus says that they shall receive inspiration for the present. *Ye shall be witnesses.* This is the supreme duty of the disciple. He points to some one else. *In Jerusalem . . and . . Judaea.* Up to the death of Stephen this was the sphere of witnessing. In *Samaria.* This marks a step. Philip was the first to go there, Acts 8: 5. *The uttermost part of the earth.* It was Paul who blazed the world trail for the gospel.

APPLICATION.

The Mission of Christ and the Christian Are Similar, John 17: 18. As thou has sent me into the world, even so have I also sent them into the world. He was able to do that which no followers could hope to attempt, but there was nevertheless a similarity of purpose and equipment.

The Mission of All Disciples to Disciple All the Nations, Matt. 28: 16-20. The eleven, plus upwards of five hundred who met at an appointed mountain where perhaps the Sermon on the Mount had been preached, now received their missionary instructions. The kingdom of this world which was Jehovah's by right, was handed on to the only begotten Son who had risen from the dead in triumph. That kingdom must be won, however, at the point of the sword of the spirit, which is the word of God. The disciples were to be the soldiers of the cross. In this great movement for world evangelization, they were to do four things.

1. *Teach* the gospel of the kingdom. Superstition and error were to be rolled away and the true conception of God set forth like the clear shining of the sun after rain. What men and women think about God will color all their lives.

2. *Baptize* in the name of the triune God. An idea sometimes obtains that Jesus did not greatly care about the Church, and was wholly preoccupied with the gospel. This does not tally exactly with his great saying, I will build my church and the gates of hades shall not prevail against it. An unorganized discipleship could never survive the persecutions and controversies of the early Church. Organization, though not iron-clad in its details, was a part of Christ's plan from the first.

3. *Training* the world to observe the commandments of Christ. Christianity was not to make obsolete the Ten Commandments. Our Lord absorbed what was eternal in the law, and created some new commandments, all of which may be summed up under three heads. Follow me, love the brethren, disciple the nations. He came to earth with a glorious ethic about which he was profoundly concerned. "If ye love me, keep my commandments."

4. They were to lean for inspiration upon him who would be with them always, even unto the end of the ages. Jesus the missionary is still in the midst of all his followers. Here is one of Browning's shouts: "Shakespeare was of us, Milton was for us, Burns, Shelly were with us,—they watch from their graves." We know a shout worth ten of that. He ever liveth and watched from his throne,—not a grave, and we are co-workers with him. We are to watch which way he is going, down through posterity, and we are to move things out of the way for him. A voice still cries out of the wilderness, "Prepare ye the way of the Lord."

How the Trade was Made.

"John," said Mirandy, "I am ashamed of your old suit. You ought to get a new one before Christmas, so many of our folks may come to see us at that season."

"But, Mirandy," cried John, "I can not spare the money for a suit of clothes just now; the interest on the loan is almost due, and there is the note I gave when we bought that machinery."

"I wonder if you could not trade a hog with Sam Brown, the tailor; he has a big family and could surely use a hog," said Mirandy.

"You are sure one born manager," cried John. "I will see what can be done. I am going to town and will talk with O. B. Middleman; he knows about such things."

Sam Brown sat with legs crossed, stitching at a new pair of pants. He was thinking of the winter coming on and of all the little Browns that had to be fed. "I wish I could get a nice hog for the winter; if some farmer would trade one for a suit of clothes, I could make a fair profit on the clothes, and not have to hand out the cash. I will talk with O. B. Middleman; he seems to know more about such things than I do."

O. B. Middleman was sitting in a big easy chair, smoking a fine cigar; his wife was reading the latest magazine.

"Had a nice day's business to-day," observed O. B.

"What was the nature of the business to-day?" asked his wife.

"Oh, Farmer John dropped in the office and wanted to know if I thought he could trade a nice hog for a new suit of clothes. 'You might get a suit of clothes for two nice hogs,' I said. 'Get your hogs and I will see what can be done.'

"I stepped in to see Sam Brown, the tailor, and asked if he could use a nice hog for the winter.

"Just what I have been thinking of,' Brown said. 'Do you think I could trade a suit of clothes for one with some farmer?'

" 'You would need two suits of clothes for a nice hog, Sam,' I said. 'Hogs are high just now. Bring the suits to the office and I will see what I can do. I know a lot of farmers.'

"The result is, my dear, John has a nice new suit. Sam has a nice fat hog and we, by my up-to-date methods, have a nice fat hog, and I have a new suit of clothes. A nice piece of business to-day."

Exports of Live Stock and Products.

During the first nine months of the present year, Canada exported to Great Britain 29,470 more cattle, 1,489,600 pounds more beef, 2,946,400 pounds of bacon, 1,823,000 pounds more pork, and 4,600 pounds less mutton than during the same period in 1922. To the United States in the same period we exported 58,713 fewer cattle, 4,594 more calves, 51,580 fewer sheep, 3,369,700 pounds less beef, 10,100 pounds less bacon, 89,600 pounds more pork and 2,465,700 pounds less mution.

Happy Birthday.

"Happy birthday" is a much more significant wish than "Merry Christmas" or "Happy New Year," because, instead of being something flung back and forth among the crowd, it is for you in particular, and you alone. How many birthdays would you like to have? Do you realize that it is largely a matter for your own settlement? Will you have many or few?

If life is sufficiently to your taste to make you wish not only for happy returns of the day, but also many of them, you will give some heed to the way you live. You will seek to learn the rules of the "health game." When you are ill you will put yourself in the hands of a skilled physician, but, more important than that, you will have this skilled physician go over you periodically to repair any defects before they cause illness, knowing that it is far better and cheaper to avoid illness than to get well of it. And since you should have such an examination at some definite period that is not easily shoved aside, why not tie it up to your birthday?

When I was in the army I sometimes held "sick call," a term familiar enough to ex-service men. Some of the men who came to sick call were given C. C. pills and marked on the sick book for "duty." (The boys used to think ninety-nine per cent. got this treatment). Some were marked for "light duty." Some were excused from duty and marked "sick in quarters," and there were others so seriously ill that they were sent to the base hospital and in so doing temporarily dismissed from the company; "sick in hospital." It is estimated that some three hundred thousand citizens of Canada are sick enough to be excused from duty at practically any time you choose to inquire. But at the same time if four million of the remainder are sick enough to be below par they aren't what they ought to be. We are apt to think that if we are not sick abed we are well, as a medical expert says: "To many people the difference between being sick and well is the difference between a horizontal and upright position." The fact is that any illness that goes unchecked will eventually bring us to the horizontal position, and the man who is wise finds the ailment and gets it in check before it has any such chance.

Have a health examination on your birthday! The examining doctor must be a thorough man. He will test the weight, pulse, temperature, blood pressure; he will examine condition of heart, lungs, kidneys and every important organ. He will test the secretions to see if you are in vigorous function, and your excretions to see that you are eliminating all poisons. If you are beginning to have too high blood pressure, too rapid a pulse, abnormalties in weight, murmurs of the heart, he will go deep in the matter, find out why, and tell you what to do. If he finds nothing whatever wrong you will be glad to pay his fee for this glorious certificate and then you will go out to the open, jump five feet into the atmosphere, crack your heels together, and shake your fists into the face of the whole wide world.—C. H. L.

Corn and Sunflowers.

Tests of sixteen samples of different varieties of corn and five varieties or strains of sunflowers were made last year by the Division of Forage plants of the Dominion Experimental Farms at Ottawa. While recommending the Mammoth or Giant Russian sunflower, if it is desired to sow sunflowers as an ensilage crop, the Dominion Astrologist, Dr. G. P. McRostie, in his annual report, suggests that while sunflowers are listed and sold under different variety names, it would be well to keep in mind that there are as yet no pure varieties. Each of the so-called varieties is a mixture of a great many types. This, the report says, accounts in part for the wide variation in yield and reported value of many of our named commercial varieties. The report goes on to say that there seems to be a lack of appreciation of the fact that sunflowers, at the time they are harvested for silage purposes, contain a very large per cent. of water, and that their high yield of green fodder has resulted in many growers placing a value on them, in comparison with corn and other ensilage crops, much greater than they deserve, when considered in the light of their air-dry or absolute dry matter content. Tables are given in the report of yields, green and air-dryed per acre, both of corn and sunflower, an examination of which indicates that while the highest yielding sunflower types show over twelve tons more green fodder per acre than the highest yielding corn varieties, yet the former contain about three tons less dry matter.

In agreement with other varieties, the conclusion is reached that in districts where both corn and sunflowers can be produced with equal success, corn is the more desirable crop to grow. It is added that the range of the sunflower plant being greater than that of the corn plant the former, however, offers an opportunity to obtain a good quality and quantity of silage in districts where corn cannot as yet be profitably cultivated.

The report, which is to be had free on application to the Publications Branch, Ottawa, records a large number of tests with varieties of hay crops and field roots, and of breeding work with field roots, grasses, clovers, and alfalfa.

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