

EFFICIENT FARMING

Making Hay in Bad Weather.

With modern machinery, ample barn room and good drying weather, haying on the average farm is not a bad job. But when the weather is "catchy," then even with the best equipment the farmer is more or less brought under cover. There is, however, a general lack of appreciation of the amount of loss sustained through the exposure of the hay to rain and dew.

What do we consider a prime hay? The qualities sought by the best hay makers are an agreeable fragrance, that is agreeable to all excepting the hay fever patient, freedom from dust, a bright green color and, if a legume, the retention of the leaves upon the stems.

Experiments have been made at different experimental stations to determine how much the farmer loses when rain or dew falls upon a partly cured hay crop. These tests show that the loss is large, particularly in the case of alfalfa and other legume hay. About one-half of the original weight of an alfalfa crop is to be found in the leaves, they weighing from forty to sixty per cent. of the portion removed in cutting. Chemists have found that one-half of the fat and nitrogen-free extract, and four-fifths of the crude protein contained in alfalfa hay is to be found in the leaves. From these facts, it becomes apparent that to lose any considerable portion of the leaves means a large loss in the feeding value of the resulting hay. The plant food is concentrated in the leaves, while the stems have a higher percentage of indigestible woody fiber. Consequently when the leaves are broken off and fall to the ground, the percentage of woody fiber increases, while that of the digestible parts decreases.

In the absence of rains, with a south-west or westerly wind blowing, and with clouds to prevent the scorching rays of a hot summer sun from bleaching the crop, but little care is necessary to secure a prime grade of hay. The green color of the original plant can be largely retained. The rich aroma will not have been wasted. Under such conditions the ordinary farmer will be able to serve his stock with the finest forage salad during the winter months.

But the case is different when the days are muggy and wet. It is then that all the trials and tribulations of the hay maker are visited upon him. If he has been observing, he knows too well that hay which has been weathered will not be relished by the animals, nor will it keep them slick of coat and high in flesh.

The moisture dissolves and takes out of partly cured plants the most easily digestible elements. It furnishes conditions favorable for the development of molds, the spores from which make the hay dusty. Then, too, protracted rains often make it necessary to leave the windrows in bunches in the field so long that the stems beneath the piles of hay are killed. The legumes particularly are hard to handle under these unfavorable circumstances, since the larger stems do not dry so readily as do the stems of timothy, and besides, the leaves of legume hay are easily detached by much handling.

But the farmer is largely at the mercy of the weather man at haying time. There is comparatively little that he can do to save himself from much of the loss that is bound to come through bad weather. It is a fact, however, that the good farmer will in the long run make better hay under adverse conditions than will the careless man. The few things which can be done to maintain the desirable qualities of the hay crop are highly important and when properly done bring large returns for the energy required.

The first suggestion that we have to make is in regard to the time of

day that the hay should be cut. When the farmer finds that the weather is going bad the common practice has been to wait until the rain has subsided and the sun has had a chance to dry off the surface of things before the mower is started.

A Yankee farmer of my acquaintance follows rather successfully a different method. This farmer usually had a much larger acreage of hay than his neighbors, yet in spite of this he was almost certain to get his crop in the barn before the others, especially when the weather was unfavorable. His policy was this: When it started raining, he would don his raincoat, hook the team to the mower and proceed to cut hay. When the sun came out his hay would immediately start drying off. His neighbors would wait until the grass was fairly well dried out before they began cutting. Consequently our Yankee friend will be well started with his haying before the neighbors had made a start.

This man, who was a keen observer, had learned that rains do comparatively little, if any, damage to freshly cut plants so far as the feeding value is concerned. The great damage done by rains is after the hay has been partly or wholly cured. It is then that the moisture leaches out the nutrients as referred to above.

This same idea we have found helpful when trying to avoid the evil effect of dew. Instead of waiting until the dew is off the grass in the morning we found it possible to start the mower early in the morning or late the preceding afternoon. This frequently gave an advantage of an hour or two in the drying period of the day, which often meant the difference between getting the hay in the barn that day, or leaving it in the field over another night.

Then, too, thunder storms often appear at the most unexpected and inconvenient times. These storms not infrequently find the farmer with hay partly cured. Just what the farmer will do will depend, of course, upon the amount of hay he has down and the available help at his disposal. The best thing that can be done, under such circumstances, is to rake and bunch. These bunches should be of a size that will eventually dry out and still be large enough so that only a comparatively small per cent. of the hay will be exposed to the rain. The bunches should be built with care, thoroughly and build firmly so that they will not readily blow over.

Merely raking hay together into windrows with an old dump rake to protect the hay against rain is of doubtful value. A brisk rain will drive through such a windrow and reach practically every part of the loose hay. It, therefore, offers little protection and makes much extra work when spreading out to dry. If left in the swath the tedder can be used to advantage, but not so on the heavy windrows.

Generally speaking, it is best not to handle the hay when the surface is moist. Stirring the crop at such a time shakes the water down into the dryer hay below, which readily absorbs a portion of this moisture, thus increasing the time required to cure and dry the product.

To avoid undue loss of leaves from legume hay, the most approved plan of harvesting consists in allowing the crop to wilt a short time and then raking and bunching. These bunches are then permitted to stand in the field until they are thoroughly cured. It occasionally happens that one finds it desirable to put in the mow hay that is not thoroughly cured. In such a case a little salt or lime sprinkled over the hay as it is mowed away in layers will be found beneficial. These materials retard the fermentation processes and prevent the growth of molds. The palatability of the product is also improved, particularly by the salt.

The Melon Aphid.

Very often severe losses occur through the depredations of the melon aphid or "melon louse." The damage due to this pest can be greatly reduced and in many cases prevented by the use of proper control measures if applied when the insect first appears. The main trouble is that there may be quite a few present without attracting any notice. In a short time these few will have increased at such a rapid rate that before we are aware of it, the leaves and vines will be literally alive with them. They sap the strength of the plant by piercing them and extracting their vital juices.

This pest is not bad every year, but when present it may be found from spring until fall. In seasons that favor its increase, notably summers following cold and rainy springs, it appears in large numbers and does very serious damage. They collect in masses on the under side of the leaves, causing them to curl up and lose color, which greatly interferes with the ultimate development of the fruit.

In order to prevent its attack in serious numbers the plants should be examined occasionally to see if the pest is present. Particular attention should

Making a Rubber Stamp.

Sometimes it is desirable to have your name on a large rubber stamp for use in marking tools, tool boxes, or other articles. To make a stamp, cement two thicknesses of sheet rubber to a piece of wood. Use rubber from an old inner tube, if the rubber is good. The letters are formed by cutting away portions of the first layer of rubber with a sharp knife. Sandpaper the surface of the letters so they will print well. To use, brush some paint on a thick paper and use this as a stamp pad. Be sure to make the letters backwards, so that they will print right.

Poison Bait for Grasshoppers.

Poison bait is generally used to destroy grasshoppers. The bait for five acres consists of twenty-five pounds of bran (or equal parts of bran and sawdust), one pound of Paris green or white arsenate, twelve teaspoonfuls of banana oil (or six whole quarts ground up in a meat-chopper), ten quarts of water. Measure the amounts carefully; mix the materials thoroughly. Add enough water to make the mash crumbly but not sloppy. Apply the bait early in the morning or late in the evening. Scatter broadcast, not in piles. Use only about five to seven pounds to the acre. Scatter the most where the grasshoppers are thickest. Keep it away from children, stock and chickens. Carefully wash out all containers used in mixing the bait; do not let the calf lick them out.

When you plow an acre of ground, you talk about eight miles. A tenderfoot told us after plowing his first acre, that he had walked twice around the world.

Milkers to the front. Gentle words and gentle hands have the faculty of adding that extra pint of milk to the pail, and the extra pints spell profit.

The Dietary Value of Milk

BY HELEN G. CAMPBELL.

Canada is distinctly an agricultural country and dairying is one of the biggest branches of Canadian agriculture. From the standpoint of health, it is safe to say that there is no branch of work in Canada outside the field of medicine which has as great a bearing on the health of the people as the dairy industry. The health, wealth, usefulness, and civilization of any nation or any people depend largely upon the food of its people, and the dairy provides its share of food for Canadians, and a food of the highest order.

It is necessary to know the constituents of available foods in order to make a wise choice as to quality and quantity for the human body at different stages of growth and at different ages. No other subject is so-day of more vital interest than the welfare of the child, and no phase of this question is more important than protein food. The lack of wisely chosen foods in childhood may be a very serious stumbling block in the power of the child and a great handicap in after life.

Importance of Protein. The body is made up of cells which form the different parts of the body, such as bone, muscle, blood, etc. From the food we eat, the body gets the material for the formation of new tissues and for the upkeep and repair of the tissues. There is one constituent of food which serves this purpose, and that is protein, and it is found in eggs, meats, cereals, legumes, fish and milk and most milk products. All proteins, however, have not the same value; some foods supply protein of greater physiological value than that supplied by other foods. Experiments show that when protein from cereals is the only protein in the diet of growing animals, the body of the animal is liable to lose only about 30 per cent., but when milk is the only source, the body can make use of as high as 65 per cent. Furthermore, when an animal is fed both cereals and milk protein in combination, it can use all the milk protein and a much higher per cent. of the cereal protein. It is partly for this reason that milk is called a "protective food," because of the deficiencies of other foods. Milk is also made good by milk in the diet. Eggs and green vegetables are also deficient in this respect, "protective foods," but milk stands at the top in the opinion of those who are in the best position to know. It becomes apparent then that milk supplies the very best kind of body-building substances and supplements those supplied by other foods.

Minerals Are Essential. The quality of the mineral matter in milk is another reason for its importance in the diet. There are many kinds of mineral matter in our foods, but the chief and most necessary ones are lime, phosphorus and iron. It is this substance which gives rigidity to the bones and teeth, and the child cannot have a strong frame or a healthy body without a sufficient amount of food. Milk is the chief and cheapest source of lime and not only is it present in whole milk, but in skim-milk, buttermilk, cheese and all milk products, with the exception of butter. The mixed diet is often deficient in mineral matter and by far the most practical and safest way to be sure that the child will have all he needs is to give him plenty of those foods. Phosphorus is also abundant in the need of the body for this substance will be met by a liberal use of

The Dairy

"Dry off" every dairy cow at least six weeks before calving. To do that, withhold rich feed and let the cow live on hay, straw, fodder and a little silage or roots to regulate bowels. She should also take daily outdoor exercise. At the same time increase the intervals between milking until the milk is greatly reduced in amount; then omit a milking and lengthen the intervals again until milking can safely be stopped.

For years I have been successful in raising calves by hand. By this method I have the benefit of the cream and milk much earlier than I would otherwise. I always give the calves the new milk for the first two weeks, for it is necessary to their growth that they have it this length of time. At the end of the second week I give them skim-milk and gradually mix a little meal or bran with the milk. Calf meal can be used instead of milk, too. They soon learn to eat, and at three or four weeks of age I give grains and hay or any other dry forage that they will consume. I do not have any trouble in teaching them to eat whole grain like corn and oats by gradually leading up to it.

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For Home and Country

Town and Country Co-operation.

The Beeton Women's Institute is an outstanding example of the possibilities of an Institute in community work—the more remarkable when we consider that all they have done up to date has been accomplished within a period of fifteen months. They were organized a year ago last November. It is a typical, combination town-and-country women's Institute, with the town women in majority. One reason for this is, of course, that the country women round about are organized in Institutes of their own. The splendid co-operation between the town and farm women around Beeton is not entirely within the membership of the Beeton Institute but also in the way this Institute and the six neighboring rural Institutes go in together on a great deal of their community work.

One of the first projects was to get the Public Health Department to give them a demonstration in public health nursing, sending a nurse to stay in the district and do community and school nursing for three months. They held a child welfare clinic, taking in the children of the whole township, had the nurse's services for the three months, and out of this, hope to bring about the establishing of a permanent school nurse.

Last summer the Beeton Institute arranged a pageant—"The History of Simcoe County." The children and young people from the village and the farms were trained in a specially arranged historical play, in songs such as "To Thee Be Victory, O Pioneers," and folk dancing included an Indian dance. They had an outdoor stage, with wings and a back of solid cedars, an afternoon of sports and a parade of floats. All the pioneers of the county were specially invited guests, and Premier Drury spoke on "The History of Simcoe County."

Every Christmas the Institute has a rather unusual "Christmas Tree." The children of the Beeton school and of all the neighboring school sections are trained in singing the old Christmas carols. The tree is set up out of doors, and electrically lighted. The children come and sing their carols, and people from the whole neighborhood bring supplies for the Shelter, ending up with a Santa Claus and the children tagging after him, going to all of the merchants for donations, and a hot supper in the Hall for everyone.

The Beeton Institute has had three Demonstration-Lecture courses in Foods and Cooking, Home Nursing, and Dressmaking. In the Cooking Course they had splendid co-operation from the high schools. They have also brought in several outside speakers for the benefit of the whole town. Mrs. Fankhurst and Dr. Gordon Bates from the Social Hygiene Clinic were there recently and addressed a meeting of mothers in the afternoon and an open public meeting at night. Last winter they had a University Extension Lecture course in English Literature and Music, the lecture in literature, and the music instructor conducted one night a week on alternate weeks. The Bond Head Institute was so taken with the idea that it applied for the same course and got it. The course in music closed with a big musical concert by the Bond Head and Beeton classes and the professor in English concluded his course with an illustrated lecture on "The New Empire." This lecture was free to the whole community, to popularize the course for next year.

Last fall the Beeton Institute arranged a convention, inviting the six Institutes around. This was at the close of the cooking course, so they had a banquet and made it a very nice affair socially. At the evening meeting they had addresses from Pres. Reynolds and Mr. Segsworth and out of this meeting there developed a

series of community meetings with the view of bringing together the town and the country. One of the important things taken up at these meetings was the consolidated school question. A new school is being built in Beeton and the towns-people hoped the country people might decide to go in with them as a consolidated school, as otherwise, the "part time clause" of the Adolescent School Act is necessary for some of the rural schools to add extra rooms and equipment to take care of their "part time" classes. Mr. Morris and Mr. McWhirter, a farmer appointed by the Government to investigate consolidated schools, addressed some of these meetings.

But this Institute does not depend entirely on outside help for its educational work. They have their own monthly meetings regularly when the members have their own addresses and papers and discussion. This year's program includes such subjects as "The Prevention of Diseases," "Music in the Home," "Different Methods of Preparing Eggs," "Poultry" (by the County Agricultural Representative), "Duties of Parents to Children," "The Twentieth Century Boy," "The Evolution of a Farm Woman," "Pickling and Preserving," "The School and Home," "Cultivating of Flowers," "Canadian Authors," "Christmas Candles," "A Well Planned Day," "How to Raise a Family." Their September meeting will be held in the new school when they will have the principal and a member of the Board speak to them about their duties to the school. In November their meeting is made a social family gathering with the men of the neighborhood invited, and they have the reeve address them on their "duties" to the community. These meetings, of course, do much to create a closer sympathy between the Institute and the school board and the council.

When the Institute was organized they secured an unfurnished room in the library as their "club room." They, of course, had no funds on hand and the problem of getting chairs rather troubled them, so they asked each member to bring her own chair to the first meeting and to leave it. In this way they managed to get their room seated without expense. Since that time, as their membership and their funds have increased they have bought extra chairs and a phonograph. This winter they developed a very popular feature in the "Club Room," in the way of a "Story Hour" on Saturday afternoons. It is typical of the spirit of this Institute that they should get the teachers and school pupils of the surrounding rural school sections interested in this. Rural teachers as well as those in town take turns in conducting the games and story telling and kindergarten work for small children. They have also bought several phonograph records from the opera with stories of the same to help the children toward an appreciation of good music.

In work outside their immediate community, the Beeton Institute is concentrating chiefly on work for the county Children's Shelter. They accumulated the Shelter donations of Christmas time, clothing, and candy at a supply of fresh eggs for Easter. They are thinking of opening their club room one evening every month to do sewing for the Samaritan Club itself, but because there are some women of limited means in the town who feel that there are many things they cannot do for the Institute but who would be glad to help in this way. These meetings will be open to everybody and should bring all the women of the town together.

Bedtime Stories

Blue Water.

When little Charlotte saw the ocean for the first time she cried, "I didn't know it was that big!"

She watched the great waves come rolling in. "I don't believe I'll go on a windy day," she cried. "I'm crazy to wade, but the water's too wild."

Still, she felt rather dismal as she wandered down the beach through the sand and heard the other people shouting in the water. How cool and happy they must be!

After a while she saw a little boy sitting alone in the sand. "Are you afraid of the ocean?" asked Charlotte.

The boy laughed. "No," he said, "I've been sick, and so I can't bathe in the ocean. But who wants to wade?"

"I do," Charlotte said wistfully. "But I'm not going into that ocean on a windy day."

"Maybe you'd like to wade in a little ocean about as big as a bathtub," the boy said.

Charlotte thought he was making fun of her, but he added, rising to his feet, "I mean it; come along."

Charlotte followed him eagerly through the hot sand. "My name is Donald," the little boy remarked.

"Mine's Charlotte," the little girl said.

"Here's your little ocean," said Donald, suddenly stopping before a group of rocks.

Charlotte moved nearer and stepped over the edge of the largest rock. "Oh, what a cunning little ocean?" she cried.

There among the rocks was a still pool that had been left by the last high tide. Presently she was stepping into the cool blue water.

"Oh, how lovely and cool and blue!" she cried.

"I believe I'll wade after all," said Donald.

And they spent half the day in their sky-blue pool.

THE AVERAGE AND SUCCESS

THE AVERAGE AND SUCCESS

When we take upon ourselves the excitement of reading statistics we soon come to the realization that what is called the average is pretty low.

When we consider the average yield of corn, wheat and other crops, the average production of the dairy cow and the average losses from pests and diseases as well as the average income from the farm it makes one wonder how some folks get along.

Take, for instance, the average yield of corn, 26.6 bushels per acre, this would produce an actual loss on the crop, even in a high-priced year. Then compare this average with the eighty and the hundred-bushel yields that are produced by those who make a business of growing corn.

If it takes a little more than the average yield to cover the average cost of production, one can readily see that it is the average plus the fifty, sixty or seventy bushels which spells success. It's the plus that brings the profit.

It may cost a little more to grow the big crops, but besides growing larger crops, these plus men grow better crops, and therefore, because of the quality, they often get a better price per bushel. The few added cents in cost and care means added dollars in profits.

Isn't it possible that the most of us are like the old hen who was trying to spread herself? Wouldn't it be better if we covered less ground but covered it better? And wouldn't we be more likely to hatch out better crops in doing so?

Sterilizing Necessary. A careful study of the milking machine under varying conditions shows it to be necessary to sterilize the milk-tubes and teat-cups, either by means of nonpoisonous chemicals or by heat. Mechanical scrubbing devices which, according to experts, will clean the parts exposed to milk, and other dairy utensils more effectively than can be done by hand fail, however, to kill bacteria. The great difficulty seems to be in making the average person understand the difference between a clean and a sterile milking machine. Hot weather makes it extremely important to those who are using the milking machine that they give the closest attention to keeping down bacteria through careful sterilization.

My stable lantern smokes. It does? Well, soak the wick in strong vinegar, dry and watch results.

More than one good cow has been killed by eating pieces of baling wire, nails, etc. A word to the wise is sufficient.

Milk from a fresh cow can be used for feeding an orphan colt. This milk should be diluted one-fourth with water. Add a tablespoonful of sugar and three teaspoonfuls of lime-water to each pint of the diluted cow's milk.

The people who keep their troubles to themselves have gone a long way toward mastering the secret of popularity.

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