The Importance of Saving Good Breeding Stock.

During the past four years, millions of men who had previously been producers of the largest part of food stuffs required in Europe, have been engaged in fighting for their country, and, as a result, thousands of farms, flocks and herds have been depleted and the finest lands made unfit for cultivation. These European countries are looking to Canada for good breeding stock to re-stock their abandoned farms. The demand is unlimited and European markets will be able to receive double our present production, if we can produce stock of the quality required.

It is the sires of high quality which have made many a herd great and have done so much good to the live stock industry of Canada. Often the highest priced stock is the cheapest in the end.

A pure-bred sire of good type and individuality is the one that should be used by every live stock breeder in the country. The sire whose ancestors have not made good, or that is a poor individual, will likely turn out to be a liability rather than an asset. His use will never improve live stock even if one does get him cheaply. He is dear at any price. It is also very important that the females used as a foundation are good, strong, healthy animals of robust constitution representing the best type of the breeds which you are working with, and that they are descendants from ancestors that have proved worthy of the breed they represent in regard to conformation, quality and production.

This year above all others, with the high price of hay and live stock, farmers should endeavor to utilize to the best advantage possible, all roughages such as straw, corn stalks, etc., by running these through a cutting box and mixing with a small amount of cut hay, with the addition of a few pulped roots and a small quantity of meal, you will have a food which breeding stock will thrive and winter very well on, and at the same time enabling the farmer to keep his usual quota of breeding animals.

A good many farmers are in the vicinity of lumber mills or finishing mills where they are able to procure sawdust or shavings for bedding in the place of straw, or where they could use dry muck for an absorbent. By utilizing all the home grown roughages and keeping more live stock, the farmer will be increasing the fertility of his farm by a method which has been proven most conclusively the best and most economical way of maintaining agricultural production, never more essential than at the present time.

Losses Due To Controllable Diseases.

Among the diseases of economic plants there exist some for which effective control measures have not yet been discovered. Besides these are a large number where control is possible, but only after persistent efforts extending over a number of years. And finally there are a goodly number that readily respond to measures of control.

If we take into consideration the enormous losses resulting from plant diseases every year wherever farming and fruit-growing is an industry of importance—as in Canada—then it will be realized that negligence and indifference towards the control of such diseases as can actually be controlled, are causes of great national loss.

The person causing a forest fire through negligence or carelessness, renders himself liable to prosecution and a deservedly heavy fine, yet it is rarely that the culprit himself is the loser; the loss is debited to the whole nation owning the forests. In allowing plant disease to persist and become widely prevalent, persons are similarly guilty of criminal neglect, particularly at this time when the question of food is of far greater importance than all the gold in the world. Yet though Canada as a nation is the prime loser through the cumulative effect of such waste in production, other nations, now so markedly dependent upon Canada as a source for the necessaries of life, also suffer in consequence. Moreover it is not a commercial question of sharing in the loss and thus reducing it, but one of having to do without food which is lost through negligent members of a community.

Grain rust causes annually millions of dollars loss. This can only be reduced by certain safety measures, but cannot so far be controlled. But the same grain that has escaped the rust is yet very seriously reduced in yield by smut diseases. In some years smut, quite apart from rust, has caused losses amounting to more than twenty million dollars in Canada alone. Smut of grain is a disease that is easily controlled by the very simple and highly effective means of seed treatment. Either from ignorance or from negligence, smut is still widely prevalent. Only this year were received reports of smut affecting one field up to 80% and more. Another example of a disease causing severe damage, but which may be readily controlled, is Late Blight of potatoes. The losses from Late Blight and the rot it causes among stored potatoes amount to several million dollars per annum. On the question of disease control, valuable information has already been published by the Dominion Experimental Farms, but farmers are urged to refer their problems more freely to experts at the Farm, from whom they will receive the best attention.

Disease control is of far greater importance in agriculture and gardening than is realized by the general public. Diseases, once they have attacked economic crops, can rarely be eradicated. A plant that once has fallen victim to disease, will never give a normal yield. Poor yields are in nine cases out of ten due to lurking disease, hence individual effort becomes a necessity in saving the nation the deplorable devastation due to plant diseases.

Poultry

Hens that are not well-fed cannot be expected to lay well enough to make a profit.

Any fowls which have not completed their new plumage by December 1st will not lay much, if any, during cold weather.

In view of the high price of poultry feed it is best to market all surplus poultry except that to be kept for sale, for breeding or exhibition purposes, as soon as possible.

It is very poor business to market any kind of poultry which is not well fattened, because a few cents' worth of grain will often increase the selling price of the stock several times the cost of the grain.

Don't forget to make use of all of the by-products like skimmed milk, clabbered milk, waste vegetables, kitchen scraps, ets. All these make good food for poultry and help to cut down the cost of feeding.

Washed eggs do not retain their keeping qualities. There is a gelatinous substance on eggs, which seals the pores of the shell, and water seems to dissolve it. When this substance is dissolved the air is admitted and decomposition begins. Washing also has a tendency to harden the shell, letting too much moisture escape, and thus injuring the vitality of the egg.

Dirty eggs should not be sent to market, however. They may be safely treated by using a woollen rag only slightly dampened with water to rub off the dirt. Stains on eggs may be removed with cider vinegar. Clean nests will insure clean eggs.

Poisonous Plants in the Hay.

Much loss may be avoided by paying a little more attention to the quality of food that is fed to live stock. To use as food, hay which is 50% coarse and unpalatable weeds is not the best means of keeping stock in good condition, nor is it more wise to feed them poisonous plants.

Most animals have an instinctive knowledge of injurious foods and will push aside and leave suspicious portions of their hay. But this refuse is often chopped up with the fodder in such a manner that they must eat it or starve.

Bracken is conspicuous in hay by its coarse foliage and rusty green color. A closer examination will reveal on the under side of the leaves, a narrow band or margin of rusty brown. All bracken should be removed from the hay and burned. It will not do to leave it for bedding, as greedy horses will eat their bedding while waiting for their regular feed. No ill effects appear after eating it once or twice, as bracken poisoning is slow and cumulative.

The leafless branches of horsetail are also readily distinguished by a difference in color, being of a darker and more bluish shade of green than the ordinary hay. Other differences are, the hollow stems, the leafless, furrowed and jointed branches with sharply pointed teeth around the joints.

The poisoning of cattle in the west has occurred from eating the seed-pods of larkspur dried with the hay; loss might easily have been avoided by picking out the coarse stalks with the three-parted pointed pods. The leaves of the larkspurs resemble those of the buttercups and are very toxic in a fresh green state. But with maturity they lose their toxicity which then becomes concentrated in the seeds. Thus a very small quantity of pods and seeds will cause death.

Another noticeable plant among hay, harmful to sheep, is the lupine. The pods and seeds are the most poisonous portions of the plant and these are often cut with the hay in the western provinces. The action of the poison is not cumulative and hence animals may feed upon the plant without much harm unless the toxic limit is reached. The toxic dose for sheep of the seeds alone is from ¼ to ½ lb., and that of the seeds together with the pods is about 1½ lbs. The pods are about an inch long, more or less hairy and arranged at intervals along the stem.

A few moments spent each day in looking over the hay will well repay even the busiest owner of stock.—Experimental Farms Note.

A very pretty knitting bag or school bag for a child can be made from burlap with heavy initials done in silk or wool. This makes an acceptable Christmas gift.

The Sunday School

INTERNATIONAL LESSON
JANUARY 5.

Lesson I. Pharaoh Oppresses Israel —Exodus 1: 1-14; 2: 1-25. Golden Text, Psalm 72: 4.

1: 1-7. "The sons of Israel." The names of Jacob's twelve sons are given here and of the entire seventy, including Joseph and his two sons, in Gen. 46: 8-27. These names are of Jacob's children and grandchildren, but they must represent a very much larger number of people. The sons of Jacob were already heads of important clans, and must have been followed by their clansmen and servants. These formed a community of herdmen and shepherds in the pasture lands of Goshen, in the north-eastern part of Egypt. It is quite possible, however, that some of the Hebrew clansmen remained with their possessions in Palestine, and that some of those who went down to Egypt may have returned after the years of famine were past. In the correspondence of an Egyptian king of the fourteenth century B. C. we find mention of a people called Chabiri, or Habiri, in Palestine, and in an inscription of the thirteenth century B.C. the name Ysiraal occurs in a list of Palestine states. These names may be identical with Hebrews and Israel.

The period of the sojourn of the Israelites in Egypt must have been a long one, how long we cannot tell. According to Gen. 15: 13 it was four hundred years, or, according to Exod. 12: 40, it was four hundred and thirty years. But Gen. 15: 16 predicts the return of Israel from Egypt "in the fourth generation," and in Exod. 6: 16-18, Amram, the father of Moses, is said to be the grandson of Levi, and so the greatgrandson of Jacob, and Moses' mother is called a "daughter of Levi" (Exod. 2: 1; 6: 20). It is possible that a generation was reckoned a hundred years, but in actual fact four generations could hardly have covered four hundred years. The fact seems to be that, in Genesis and Exodus, we are dealing with a period before any definite or exact historical records were kept, and, while the main facts of the historical personages stand out clearly and distinctly, the detailed account of the years is wanting, and the reckoning of time varies, therefore, in the different older sources upon which the writers of these books depended.

It is commonly supposed that Joseph went down to Egypt during the period of the Shepherd Kings, who were Asiatics like himself, and who would have been disposed to welcome the immigration of Asiatic tribes like the Hebrews. The dates of the Shepherd Kings are variously placed between 2000 and 1580 B.C. Joseph and his brethren would, therefore, have settled in Egypt as early, at least, as 1600 or 1700 B.C. The date now commonly assigned to the Exodus is 1230 B.C., so that a period of four hundred years is quite possible between Joseph and Moses.

1: 8-14. "There arose a new king." The rule of the Shepherd Kings came to an end about 1580 B.C. The kings who followed were native Egyptians of the eighteenth and nineteenth dynasties. Many years had now passed, and the great things which Joseph had done for Egypt were forgotten. The new king here referred to appears to have been Rameses II, third ruler of the nineteenth dynasty, and one of the greatest of Egyptian monarchs. He is famous both for his victorious wars and his great building operations, in which he used the forced labor of his subjects and of a multitude of slaves. The store city of "Raamses" (the same name with slightly different spelling) was called after him, and inscriptions found in the ruins of "Pithom" by recent explorers show that it was founded also by Rameses II.

The increase in numbers and wealth of the Israelites of Goshen excited the jealousy and fear of the neighboring Egyptians. "Let us deal wisely with them," they said. Their wisdom, however, was purely selfish and cruel, and first imposed heavy burdens of forced labor upon the Hebrews, then murdered their infant sons. Rameses built or renovated numerous temples, besides the "store cities," which were for the laying up of provisions, munitions of war, and goods for trade. Many of the Egyptian kings had used the same system of forced labor, described by the French word "corvee," and we have an example of similar tyrannical cruelty in the treatment of Belgian and French citizens by their German conquerors during the recent war.

"In morter and in brick." The Black Nile mud was used both for bricks and mortar, and was mixed with potshreds and with straw to give it coherence. The Hebrews were employed at this laborious task of brick-making, and also in constructing dykes and canals for the irrigation of the fields, and in lifting water in buckets attached to long poles, from the river, for the higher cultivated lands.

2: 1-8. "The ark of bulrushes," or papyrus, was made like a boat, of reeds bound together and made water-tight with bitumen, or asphalt, and pitch. Similar boats are still used on the Euphrates river.

A Child.

Her voice was like the song of birds,
Her eyes were like the stars;
Her little waving hands were like
Birds' wings that beat the bars.

And when those waving hands were still,—
Her soul had fled away,
The music faded from the air,
The color from the day.

An old fur coat badly worn out in parts, can be cut down for a very good robe for baby's sleigh.

Bedtime Stories

The Hill That Wanted To Be a Hollow.

Once upon a time there was a little green hill with a necklace of lovely mossy stones and a crown of winderful willow trees. For many centuries it was a very happy little hill. So many interesting things happened to make it so. The villagers from the valley below came there on fine Sundays and rested and had picnics under the willows. The most delightful birds made their nests there in the spring. It could see so far on every side and felt so close to the big blue sky that it fairly thrilled with happiness.

That was before it got to talking so much with the valley that nestled down below. In the valley were many villages, many busy farms and a merry rushing little river that bubbled along, always talking or singing, and always joking.

When the hill called down to the valley all the things it could see afar off; that a storm was coming, or a company of traveling players, or that presently the wind would change, the valley would nod its trees condescendingly.

"Ah, but you should hear the news that the river has just brought, and you should see the lovely polished stones it has carried back to me from the deep sea!" it would call. It really was jealous of the hill, because it was above her. Then it seemed to the valley that when folk wanted to be particularly happy they left her for the green hill.

"I am only for everyday work, and she is for holidays!" she thought to herself bitterly. "They cut my trees for houses and plant gardens on my lovely meadows and let their flocks trample upon me. Then, away they go as soon as they have an hour off to the hill to frolic and picnic, with never a thought for me who holds and nourishes them."

Do not suppose the valley told any of this to the hill. Indeed no. She had much to say of the joys of associating with so travelled a person as the river, and in the summer she would brag a lot about being out of the sun, and in winter she would pity the poor hill for having to stand up against all the winds and storm.

"Now I am protected and I am never lonely!" she would observe proudly.

"It must be very slow up there without any people!" In the winter the villagers did not go to the hill as often as in the summer, but the hill had never thought of being lonely till the valley mentioned it.

Poor little green hill, it soon began to feel terribly sorry for itself, for it was not, like the valley, smart enough to brag.

On hot days the valley would call up pityingly.

"You poor creature! I should think you would be blistered. It is so cool down here, and when I feel warm I have but to dip my edges in the river. How terrible to never be able to bathe in his waters!" Now the truth was that the valley was secretly longing for the cool breezes that stirred the trees on the hill-top, but the hill never guessed this, and felt sorrier for itself than ever.

"If I could be a valley I would be happy!" it sighed over and over. And down below it the valley sighed and sorrowed because it was not a hill. Pshaw! Now they are quite as silly as us humans, always wishing to be short or tall or what we are not!

Then came the terrible war. And the wishes of both were granted. In the path of the angry red guns and relentless gray Huns lay the valley and the little green hill. Mined and shelled and tortured, the valley, the houses and trees lay tumbled in heaps, higher than the hill had ever been; and the little hill, with its garland of green stones and lacy headdress of trees, was a level black mass of ruin. Many years it will be before they will be happy again. The poor hill is choked and stifled for the free winds, and the valley, heaped up upon itself, with its homes and houses shattered to bits, weeps for the industrious villagers who have been driven away and longs for its easy and comfortable level.

Sometimes wishes are granted in terrible ways, and though the little valley and the little hill were not to blame, still it is dangerous to wish, especially when the wish is inspired by envy.

For everything some one has that you have not there is something that you have, and the happy folk are those who find this out before they are grown up.

HOT LUNCHES IN THE RURAL SCHOOLS

A chance visitor entering some of our rural schools just before noon is very likely to get a whiff of savory vegetable stews, or spicy hot puddings which are being prepared for the noon lunch; or if he comes ten minutes past twelve o'clock, he is likely to hear the busy scraping of spoons on dishes, combined with lively demands for another helping, for usually the supply made up by the amateur cooks is sufficient to satisfy the appetite of the hungriest boy or girl in the school. Scattered all over the country you will find city or village high schools as well as rural schools serving some hot dish at noon, supplementing the sandwiches brought from home.

A winter's experience has proved to many teachers the value of this warm dish, offsetting as it does many a lunch frozen on the way to school, or a hasty breakfast, eaten with an anxious eye on the clock.

Because of their appreciation of the benefit to the children from this source, in many cases the mothers' clubs of the school have undertaken to help the children to raise the money for the necessary equipment by means of socials and entertainments In other districts the school boards or individuals have contributed the funds necessary for the beginning of the project. Oil stoves have been loaned in some cases, by women who were using their kitchen ranges for winter cooking, and "kitchen showers" have, many times, been the source of the small utensils needed.

Approximately sixteen dollars and a half is the amount needed for the work. The principal articles needed are: A two-burner oil stove, dish pan, one large and one small kettle, two paring knives, a fork, two large spoons, asbestos mat, dish towels, and perhaps a dripping pan and oven. Each child brings a cup, spoon and deep oatmeal dish.

Each night the materials needed for the following day's cooking are apportioned to different children, convenience being the deciding factor for each individual. Each child contributing is credited by the bookkeepers with the amount brought, retail prices being the basis of credit. At the end of the week when the total cost per child is estimated, it is usually found that the article brought from home is equivalent to the charge for the week. If this is not the case the extra amount is made up the following week by another contribution. Thus, very little money, if any, changes hands. Reports from the clubs of last winter, show that the average cost of serving each child daily with one hot dish was two and one-half cents. One high school served the entire meal daily at an average of five cents per member.

The general procedure in forming a Hot Lunch Club is as follows: The teacher either talks over the proposition with the children, who consult with their parents concerning it, or she may call a meeting of the patrons of the district, at which the project is discussed. The home demonstration agent, if there is one in the county, can be of valuable assistance in presenting the subject. If a favorable conclusion is reached, the children proceed to form a club, electing a president, vice-president, secretary and treasurer, and ways and means of securing equipment are discussed. The teacher usually acts as the leader of the club. Two or three women in the district, who are particularly interested in the school are elected as an advisory committee, their function being to co-operate socially with the leader and the club members.

Each week two girls or boys act as cooks; two as house keepers, and two as book-keepers. The work is rotated so that each member who is old enough (ten to eighteen years are the ages for active membership), may get practice in each line of work. After writing up a brief report and story of the three weeks' work, the member is said to have completed the project. The award is then made upon the variety of menus, cost per member, the report and story.

Having the children perform the actual work of the club, leaves the teacher free to follow her class-room work, and takes but little of the children's time, since most of the food can be started at recess, and finished up in the five minutes allowed after dismissal for the children to wash their hands and get their lunch boxes. This lunch box, by the way, need contain only sandwiches, fruit and a piece of cake or cooky, the hot dish being the major part of the meal.

Primarily the object of the hot school lunch is to preserve the health of the children. As was hinted above, a hasty breakfast, a cold and sometimes unappetizing lunch, usually compels the child to over-eat at supper, and this, as a rule, impairs the child's digestive and nervous system to such an extent that his work in school falls below standard. Teachers unanimously declare that the increased vigor with which the children attack their work after dinner more than repays for the small amount of supervision necessary at noon. Further than this, the vitality of the children in general is raised rather than lowered at the end of the winter's work in school. This explains why many of the teachers who have the interests of the community genuinely at heart continue serving soups and other hot foods year after year.

But there are many other benefits to be derived from the hot school lunch in the rural school. Chief among them is the business side of housekeeping. Keeping the club accounts teaches the value of money and the cost of foods as no other teaching can. It is the domestic science training of the rural school in which the girls learn to balance their diet so that they may be well fed for very little money and a small amount of work. They learn the preparation of simple, wholesome dishes, and from these they get a truer appreciation of the work their mothers perform in getting the family meals. As one mother remarked in this connection: "You have no idea how much easier Viola is to live with."

Best of all, they learn to take responsibility, to work harmoniously in groups, and they are being trained for a future broader service to the community in which they live.

Moving Out.

The rooms are cold and emnty,
The floors are bare and chill,
Gone are the red geraniums,
From shelf and window-sill,
Uncurtained stare the windows,
All naked, blank and grey,
Pale eyes of desolation—
We're moving out to-day!

O home of happy memories,
Though now bleak and forlorn,
You hold the little bedroom,
Wherein my son was born!
'Twas here his baby whispers,
Essayed the first brief prayer,
Clasped to his mother's bosom,
Hand hidden in her hair.

Here is the vacant kitchen,
Where many a task was met,
And oft the body wearied,
With toil and grief and fret,
Yet through the westward window,
The slowly dropping sun,
Shed promise of the guerdon,
For battles fairly won.

No more the ticking time-piece,
Calls out the passing hours,
The doors henceforth shall open
To other hands than ours,
And here some stranger-mother,
Shall teach her child to pray—
O home of smiles and shadows,
We're moving out to-day!

—Nina Moore Jamieson

For paroxysms of coughing, a tablespoonful of glycerine in a glass of hot milk is excellent.

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