THE CARE OF THE DAIRY CALF

By W. F. Taylor

The dairy calf should be developed for the purpose for which she was born into the world. It is highly important that this purpose should be in the mind of the man who cares for her. One reason why so many men fail in the proper growing of their calves is that they do not realize their possibilities. Many calves are not worth feeding; the best feeder in the world could not make profitable cows of them. The first demand on behalf of the dairy calf is that it should be well born, but if the breeding is right, then it is deserving of good care, and the higher appreciation its owner has of its possibilities the better he is prepared to do justice by it along all possible lines of development.

Whole Milk Essentrial

The calf should first have whole milk. It has been proven beyond any question that no other fat in the world except that found in eggs will take the place of the fat in milk. If the milk is very rich, however, a little skim-milk may be added from the first and in any event after two or three weeks the new milk may be gradually substituted with skim-milk. It is best, however, to give a little new milk in the ration until the calf is six or eight weeks old. Many men are inclined to give too much skim-milk. There is a great difference in the amount of milk that different calves will consume with profit, but the Jersey or Guernsey calf should receive no more than eight or ten pounds per day for the first six weeks and after that the allowance should be very slowly increased with the eye of the feeder always on the calf to see that it does not get too much. Now bear in mind that the allowance of milk herein suggested is for the average calf. There may be one found now and then that will consume a good deal more and pay for it in rapid growth, but these are the exceptions. It is good practice to feed the calf three times daily until it is three weeks old. The daily allowance of milk divided into three feeds will give better results than when the little animal is fed but twice.

Starting With Hay and Grain

As soon as the calf shows a desire for roughage it should be given a little good hay, preferably clover or alfalfa. Soon after a little dry grain may be placed in a box where the calf can eat it. Sometimes calves manifest a desire for grain at first, that will lead them to eat too much of it, in which case they are apt to refuse it entirely and to give the feeder a good deal of trouble. Only a very little grain should be given the calf at first and the allowance should be increased very slowly, always being sure not to give the calf too much. Care should be used also not to feed more hay than the animal will consume in from one to two hours. The hay the calf does not eat does it no good and while it is not so bad to feed hay to excess as to feed too much grain, it is entirely useless to do so and should be avoided.

Feed Grain Dry

It is important that the calf should eat its grain dry. It is not bad practice to scald a little linseed meal and put it into the milk, providing we let it settle to the bottom of the pail and allow the calf time to eat it after drinking the milk, but it is not necessary and it consumes time that may just as well be employed in some other way. Allow the calf to drink its milk straight and eat its grain at its leisure, taking plenty of time to masticate it and the saliva will be mixed thoroughly with the grain, insuring much better digestion. When the calf becomes accustomed to the grain there is no harm in giving it all it will clean up with a relish, but until that time comes constant care should be exercised. Almost any of the grains grown on the farm are good for a calf. There is nothing better than corn and the calf will eat it whole quite as well as in any other way. Indeed, I have seen calves shell corn from the ear, eat it and thrive as well as any calves could. If we wish to feed it in that way, there can be no objection to it whatever. Experiments demonstrated that there is great loss in the feeding of whole corn to older cattle, but the loss was very slight when the calves consumed the grain. Whole oats, too, are excellent, wheat bran and middlings are both good. In fact, as we have said, nearly all the grains grown on the farm are adapted to this purpose.

Best Roughage For Calf

By the time the calf is six weeks old, we may begin to feed ensilage, very gradually at first, using care to see that it is free from mold. In a little while the calf will be able to consume quite a quantity of ensilage and the amount will increase as time advances. The grain fed to the calf should always depend in some degree upon the kind of roughage consumed. There is no better roughage than alfalfa hay. It is easily digested. The leaves of the alfalfa seem to contain a principle indispensable in the development of the young animals and not present in other roughage, but alfalfa hay alone is not good for a calf. Taken in connection with skim-milk the ration is too narrow, that is to say, the amount of protein as related to the carbohydrates and fat is in excess of the demands of the animal. This condition is corrected by the feeding of ensilage and grain like corn, rich in carbohydrates.

Keep Claves Growing

Now these calves should be kept growing all the time. They should not be crowded like calves designed for baby beef, but they should be kept growing. They should be fed plenty of good feed in which the nutritive ration is right. If calves come in the fail, the grain may be omitted in the fore part of the summer after they are accustomed to grass pasture, but the time in which a calf changes from a winter ration composed of skim-milk, grain and excellent roughage eaten in the shelter of a comfortable stable, to pasture grass consumed too often in wind and rain, is a critical time and the change should be made gradually. The calves should be turned out daytimes at first and sheltered nights and some grain should be fed until they are accustomed to the out-of-doors, then if the pasture is good, the grain may be omitted as we have said. The Jersey or Guernsey heifer may freshen at two years or a little older. The Holstein may well postpone the beginning of the milking period until two years and a half old.

Watch the Individual Cow

If freshening is to occur during the winter, a substantial grain ration should have been fed for some time previous. Remember, the thing we want to do is to develop this young cow so that she can yield milk in a profitable quantity. If we have fed her liberally the second winter and she has been on good pasture during the second summer, she is a beautiful animal. Now, if we begin to feed her grain about three months before she freshens and gradually increase the ration until she is consuming four or five pounds of grain per day, with ensilage and good clover, the machinery for the production of milk will have been fully developed. For a few days after freshening, we are going to be very careful with her. For three days we will give her no grain at all and then only a little, very gradually increasing the amount as the days go by. Now the quantity of grain that she will consume after the first three weeks have passed, will depend upon the amount of milk she gives. A pound of grain per day to every three or four pounds of milk produced, according to the richness of the milk, is a very good rule. Still there are many exceptions to this rule. When roughage is very cheap, and grain is expensive, it is profitable to feed an excess of roughage and a smaller ration of grain. Always watching the individual cow to see that she is not over-fed. At the same time weigh and test the milk that we may know what she is actually doing and thus be able to feed her enough to produce the milk and maintain her body.

Now, this is the theory, the success in its application will depend upon the man. The longer I live, and the more I see of dairies, the more do I value the individual man in the success of any program of development. It is a great thing to be able to develop a dairy. The man who can do it is worthy of confidence and respect.

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The Great National Highway

By Frederick Wright, Editor of The Canadian Municipal Journal

We have for some time past been urging the building of a national highway across Canada, and we are pleased to note that our efforts are encouraged by many of our contemporaries. The special reasons we give why such a trans-continental road should be built are: First, it would find employment for our returned soldiers at a time when our industries will be dislocated and consequently the communities not able to assimilate three or four hundred thousand men. Second, it would be another practical link between one municipality and another, and one province and another. Third, it would create a tourist traffic that cannot help but be a boom to those municipalities through which the road would pass. Fourth, it would tap many of our natural resources that now lie dormant, but waiting to be developed. Fifth, it would be the best incentive to those parts of the Dominion, where a road is only a name. The Sixth, though not the last reason; for we could give many more, is that such a highway would be the best monument that the people of Canada could build in memory of those splendid sons who have given up their lives in her cause on the fields of Flanders. Such a road would be a real peace monument. The mile stones would bear witness to many thousands who came after us that Canada had done her duty at this time of democracy's trial.

But such a national road would cost money. Our experts consider that it would take 3,500 miles of new road to link up the Pacific and the Atlantic Oceans, and would cost in round figures $75,000,000. A huge sum, but none too large for such a purpose. We have already suggested that the cost be divided into four parts, and borne by the Federal authorities; the Provincial authorities; those municipalities through which the road would pass; and by public subscriptions in the following proportions—one-half by Federal money, one-quarter by the Provinces and the municipalities, and one-quarter by public subscription. The whole of the work to be under a commission, made up principally of engineers, who should have the absolute control of the route and the manner in which the road should be built—materials, etc.—with one exception and that is that the whole of the work be done by returned soldiers under military discipline, but civilian pay.

This is a great task that we suggest to the people of Canada, and one that some might think inopportune at this time, when every dollar is required to finish the war, but we believe that we would be remiss in our duty, if we failed to remind our fellow citizens that there is the aftermath. One thing is certain, the larger part of our present industries, which are munitions, will stop. And what then? Tens of thousands of family bread-winners will be thrown out of employment, and surely it would be suicidal to increase this large army of out-of-works by another large army of out-of-works, which would really be a fact if the returned soldiers are disbanded on their arrival in Canada. What then can we do with the returned soldiers to whom we as a nation are under special moral obligation? One of the answers to our mind is to put the men in the building of such a national road as we have urged, and thus use them in a great work at once healthy and profitable to themselves and the nation.

The Sunday School

INTERNATIONAL LESSON
NOVEMBER 4.

Lesson V.—Defeat Through Drunkenness (World's Temperance Sunday)—1 Kings 20. 1-21
Golden Text, 1 Kings 20. 11.

Verses 1-11. Benhadad proposed terms of surrender. Ahab was ready to accept the first proposal (verses 2-4), but the second was so humiliating (verses 5, 6) that the king, with the full endorsement of elders and people, rejected it (verses 7-9). Whereupon Benhadad threatened the complete destruction of the city, to which Ahab replied: "Let not him that girdeth on his armor, boast himself as he that putteth it off" (verses 10, 11).

12. At this point of the story the lesson text begins. The defiant message of Ahab infuriated Benhadad, who gave orders for an immediate attack upon the city. Drinking—Here, as in verse 16, the implication is that the drinking incapacitated the king for intelligent action. In his drunken condition the king would be more easily stirred up by the irritating words of Ahab. Kings—The thirty-two vassal kings aiding Benhadad against Israel (see verses 1, 16); they were the chiefs of cities or small districts subject to Damascus. Pavilions—Literally, "tents;" probably the group of tents, or, the camp. Set—A technical military term, meaning, to prepare for an attack, either by the formation of storming parties or by the placing of battering engines (see margin), or both.

13-15. Measures of defense. Prophet—Like Isaiah, Jeremiah, and other later prophets, this unnamed messenger of Jehovah acts as an adviser of royalty. It is worthy of note that the prophet Elijah, the outstanding figure during the reign of Ahab, does not appear. Ahab—The son of Ormi, and the most prominent member of his dynasty; he was king of Israel from about B. C. 875 to about B. C. 853. It is not clear to what period of his reign the events here described belong. Jehovah—The deliverance will prove that Jehovah is in truth the God of Israel; he is the saviour of his people now as he has been in the past. Young men—The personal attondants, picked men, of the district leaders. The districts are the divisions of the kingdoms referred to in 1 Kings 4. 7ff. Begin—That is, marshal the forces for the attack.

16-21. Defeat of the Aramaeans. Noon—That is, during the intensely hot period of the day. In the Orient the middle of the day is a time of rest; hence an attack at that hour would be unexpected and, consequently, throw the enemy into confusion. Drinking—In their drunken stuper the leaders were in no condition to devise adequate plans to meet the attack. Benhadad—This name, meaning "Son of (the god) Hadad," is borne by three kings of Damascus named in the Old Testament (compare 1 Kings 15. 18 and 2 Kings 13. 24). Since Hadad was a popular deity, personal names containing his name as an element are not uncommon. Sent—The text should be changed so as to read: "And they sent and told Benhadad." The initiative was taken by the observers near the city wall. Take them alive—The arrogant boast of a drunken man who could not understand why he should not have his own way. The thought expressed in verses 19-21 seems to be that the Aramaeans gave their attention to the small band of picked men who went out of the city first. When the main army appeared, the attackers were taken by surprise and utterly defeated. Syrians—Or, "Aramaeans;" a group of Semitic tribes which settled near the upper Euphrates as early as the middle of the second millennium B. C. The Old Testament is concerned chiefly with the western Aramaeans, who had their political center in Damascus. The conflicts of the Israelites were chiefly with this western group. The modern name, "Syrians" is derived from "Syria," which has been the name of the country for centuries and millenniums.

Poultry

Market Calendar.

Roasters (crate fed), young ducks, young geese, and some young turkeys should be marketed in November.

By systematic fattening is meant the periodic selection of those birds which are most mature and the apportionment of the fattening periods to meet the market requirements.

Bran and rolled oats, well soaked in milk, provide one of the cheapest of poultry feeds.

A supply of gravel for grit and sand for dusting should be secured now for use by the poultry in winter.

The flock will be in better health and more eggs will be secured if the hens are provided with some sort of green feed in winter.

Plenty of fresh table scraps, liberal amounts of bran and shorts, and green feeds, should make up a large part of the diet of poultry this fall in consideration of the high cost of grains, but the scraps should not contain an excess of salt.

"Send me a ton of coal." "What size?" "Well, a two-thousand-pound ton would suit me, if that's not asking too much."

How To Have Good Teeth.

If parents desire their children to have sound and strong teeth, they must begin to take precautions long before it is time for any teeth to appear. Babies, like the rest of us, can only build up their bodies from such material as is given them. If a baby's food is deficient in quantity or quality, that deficiency will cause defects in teeth and hair and nails, as well as a lack of bodily vigor.

The breast-fed baby has by far the best chance of having the right sort of bone substance, and therefore of having good teeth. The disease known as rickets is a form of malnutrition that interferes with the proper growth of the bones, and the presence of rickets sometimes first manifests itself by delay in the appearance of the teeth. If, therefore, a child that otherwise seems to be fairly well, does not begin to cut his teeth at the usual age, he should be taken to a physician, for probably he is not getting the proper diet.

Scurvy rickets is allied to ordinary rickets, but is less common. It is also a disease of wrong feeding, and means that the child does not have enough fresh vegetable food. It also affects the formation of the teeth by making the gums spongy and inclined to ulcerate. Fresh fruit juice, such as that of oranges, and a little mashed potato in the child's milk will work wonders with this disorder.

Absolute cleanliness of the baby's mouth and gums and of everything that he is permitted to put into his mouth is very important. Until a child is old enough to be taught to cleanse the mouth by rolling a mouth wash round in it, his mother or his nurse should make a small, clean pledget of cotton and gently but thoroughly wash the gums with a mild antiseptic tooth wash. As soon as the child can be taught to hold and to use a small toothbrush, give him one and teach him to use it every night and morning and, if possible, after each meal. The night brushing is most important of all, for germs and particles of food lodge between the teeth and have time to do much mischief during the long hours of sleep.

Sugar is bad for the teeth because sugar turns to an acid in the mouth, and that acid works on and injures the enamel coating of the teeth. It would be an excellent thing if all people, adults and children alike, were careful always to brush their teeth thoroughly and to use a mouth wash after eating candy.

Children should be taken regularly to the dentist, and a decayed temporary tooth should never be permitted to remain by the side of a permanent one, lest it infect the sound tooth.

Vegetables properly prepared tempt the appetite. When they are soggily cooked or poorly seasoned, much of them will be left on the table.

Your Problems

Conducted by Mrs Helen Law

Mothers and daughters of all ages are cordially invited to write to this department. Initials only will be published with each question and its answer as a means of identification, but full name and address must be given in each letter. Write on one side of paper only. Answers will be mailed direct if stamped and addressed envelope is enclosed.

Address all correspondence for this department to Mrs. Helen Law, 235 Woodbine Ave., Toronto.

Florence:—1. Florence Nightingale was an English nurse who won nation-wide fame for her unparalleled work among the soldiers in the Crimean War. She was in general superintendence of all the hospitals in Bosphorus, and had at one time 10,000 wounded under her charge. When she returned to London a fund of $250,000 was raised for her benefit. This was spent in founding a home for training nurses. Miss Nightingale was decorated by King Edward VII. and immortalized by poets. She died in 1910, at the age of ninety. 2. The population of the earth is about 1,691,751,000.

Housekeeper:—1. A little over 20 per cent. of the food matter in a can of salmon is protein or tissue-building. More than 23 per cent. of the food matter in a can of sardines is protein. Both of these fish canned contain 12 per cent. fat. 2. Probably the following table will be of value to you. It might be pasted on a card and hung in the kitchen.

4 quarts make a gallon.

8 quarts make a peck.

4 saltspoonfuls of liquid make one teaspoonful.

4 teaspoonfuls of liquid make one tablespoonful.

4 tablespoonfuls of liquid make a quarter of a cup.

3 teaspoonfuls of dry material make a tablespoonful.

16 level teaspoonfuls of dry material make a cupful.

8 heaping tablespoonfuls of dry material make a cupful.

2 cups or 4 gills make a pint.

4 cups of liquid make a pound.

4 cups of flour make a pound or a quart.

2 cups of solid butter make a pound.

Butter the size of an egg equals 2 ounces or ¼ cupful. One heaping tablespoonful the same.

2 cups of granulated sugar make a pound.

2½ cups of powdered sugar make a pound.

3 cups of meal make a pound.

1 pint of milk or water equals a pound.

16 ounces make a pound.

Soldier's Sister:—1. There are many things to choose for your brother besides the knitted things or the comfort bag. For instance, an electric flashlight, a khaki air pillow, a pair of military hairbrushes or a trench mirror for shaving. 2. The best remedy for sore throat is hot water. It should be applied outside and inside; outside, by means of fomentations for fifteen minutes or half an hour twice a day; inside, by a gargle of hot water, as hot as can be used, from fifteen minutes to half an hour until relieved. Drink plenty of hot water, in order to induce profuse perspiration. If there is fever cool the skin with sponge baths. Keeps the feet warm. If the symptoms are severe apply ice in a bag to the outside of the neck and give the patient little pieces of ice to swallow. A few hours of this treatment will effect a cure in simple cases. The inhaling of steam is a most efficient means of relieving pain and inflammation. The application of oils and grease of all kinds to the throat is useless notwithstanding the popular opinion.

Bedtime Stories

Dannie's Gum.

The afternoon session was nearly over when Miss Stuart, the teacher, saw that Dannie Luce was chewing gum again.

"Dannie Luce!" she exclaimed. "Take out that gum this instant!"

Dannie promptly obeyed. He looked and felt very sheepish as he did so, for all the other pupils smiled, and some of them giggled aloud. But he did not throw the gum into the waste-basket. He tucked it carefully into a pocket for use after school.

When the closing bell finally rang, most of the pupils promptly hurried homeward. Three or four boys—Dannie among them—were slower in starting than the others, and they were lingering near the door when Miss Stuart came out. She had an errand to do and was in a hurry to catch a car on the avenue near by. As she came down the steps she took a coin from her purse; but she was in such a hurry that the coin slipped from her hand and rolled through a grating in the sidewalk.

Miss Stuart gave a little cry. "That was all the money I had with me," she said, "and I must go downtown! Will one of you boys lend me five cents till to-morrow?"

All the boys felt eagerly in their pockets. Their hands brought out almost everything except money.

While the others were hunting for money, Dannie had run to the grating and was on his knees, peering down through it. Then he jumped up, and his eyes were shining.

"I see it, Miss Stuart," he cried, "and I can get it, too! I've thought of a way!"

He ran back into the schoolhouse and brought out a long pointer from one of the blackboards. And what do you suppose he did next? Miss Stuart opened her eyes wide as she watched him. He took from his pocket the forbidden piece of gum, wet it in his mouth and stuck it on the small end of the pointer. Then he lay flat on the iron grating and pushed the pointer, with the gum on the end of it, far down into the hole below. An instant later he pulled the pointer carefully back again—and there was Miss Stuarts' coin sticking to the gum.

How they all applauded, and laughed, too, and Miss Stuart loudest of all, as she thanked Dannie and praised him for his quick wit.

But Dannie could not help saying, "And now you see, Miss Stuart, how lucky it is for you that I chew gum!"

"Yes," laughed the teacher as she started toward the avenue, "but in school hours keep it in your pocket where it will be handy for such uses as this."

Horse Sense

More Veterinary Notes.

"Quidding" of hay, or pain (toothache), shown by holding the head to one side when drinking cold water or chewing feed, slobbering, or foul smell from the mouth, usually indicates a split or decayed back tooth. It should be pulled with forceps, or punched down into the mouth through a hole made in the bone of the face above the root of the tooth by means of a bone augur (trephine). Persistent discharge from one nostril, with or without bulging of the bones of the face below the eyes, often is due to a diseased molar tooth which must be removed.

When the front teeth greatly overlap the lower teeth, causing "parrot mouth," the horse can not graze properly. Correct this, in curable cases, by notching deeply with a sharp triangle file across the front of the upper teeth at the proper height ; then nip off the over-lapping portions by means of strong, sharp pinchers, and file smooth.

The lower jaw, on the floor of the mouth (bar) between the first incisor and the first molar tooth, may be injured by the bit in young or hard-mouthed horses. The jaw-bone may be chipped or splintered by the bit. A raw sore forms and gathers feed and decaying saliva, which soon give off a foul odor. Probing of the wound discovers exposed diseased bone which flakes off (exfoliates) and should be removed. This is best done by means of a bone scoop or bone forceps in ten to fourteen days from the time of discovery.

A discharging sore (fistula) may form under the jaw on the edge of the bone. The diseased bone, due to fracture, must be removed, else healing will not take place. Cleanse the sore in the mouth and the external sore and pipe (sinus) by syringing with a two per cent, solution of permanganate of potash twice daily, and swab with tincture of iodine on alternate days until healed. Allow soft feed. Use a rubber or leather-covered straight bar bit. Do not use an overhead check. Similar discharging sinuses, farther back, are often due to diseased lower molar teeth which must be extracted. Fistula of the salivary duct is located near by.