

Soils and Crops

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Liberal Feeding Pays.

The fall freshening cows are coming in and will continue to come in for several months up into the winter. Good liberal feeding methods, practiced before and continued after freshening, will increase the efficiency of milk production of Ontario cows.

What constitutes good feeding practices? Follow nature closely and we will find the cow doing her best during the autumn and winter if summer conditions regarding feed are applied. These conditions are an abundance of palatable, bulky, succulent feed made up into a balanced ration.

Nature herself points the way. In the springtime access to pasture grasses allows the cow to have an abundance of succulent, bulky, palatable feed, balanced to meet the needs of the cow for maintenance and furnish nourishment for her calf for a time.

A manufacturing plant or any machine is most efficient and economical when running near its full capacity. The cow is a manufacturing plant taking the raw materials produced on the farm, the silage, the hay and grain and converting them into milk. In order to allow the cow to manufacture milk a certain amount of the feed goes to maintain her body. Ordinarily this amount of feed used for maintenance is about fifty to sixty per cent. of the ration fed. But the milk production occurs after the needs for maintaining the cow have been supplied. Hence it is short-sighted economy not to feed additionally to the limit of capacity production of the cow. On too many farms is this a common mistake made in feeding not alone the cows, but all live stock. Be a good liberal feeder.

Many Ontario cows are fed a ration that will maintain their bodies but which will not allow them to produce a full flow of milk. Others are fed half a ration and the milk flow is reduced to a minimum. What happens when fed as last mentioned? Can the cow automatically stop giving milk? No, she gives milk and will continue to give milk for some time at her own body expense, losing in flesh in order that the mother instinct to nourish her calf is satisfied. However, she will gradually adjust herself and give the milk corresponding to the amount of feed. Heavy milking cows, several weeks after freshening, even when quite well fed, continue to lose weight and flesh because of this mother function.

On the other hand, what happens when the cow is overfed? The excess food is simply used for body fat. Hence over-feeding or feeding a full ration is not harmful before calving when nearly dry because the excess feed is used to supply nourishment for the unborn offspring or to repair muscles and tissue and even to put on a body weight.

Feed a balanced full ration for the greatest economy and efficiency. Too often the cow capable of milking sixty pounds is getting the feed of her twenty-pound sister, and often the twenty-pound sister is getting the ration that her sixty-pound sister should have. Feed individually and weigh your milk and feed always. First, feed all the roughness a cow will clean up. Second, feed one pound of grain daily for each three to three and one-half pounds of milk, or one pound of grain daily for each pound of butterfat produced per week, and third, feed all the cow will take without gaining in weight. For greatest economy for autumn and winter and even year around feeding silage or beets are almost indispensable, a legume hay, alfalfa or clovers, and grain mixtures to balance with the roughage material.

and hogs at Calgary and Edmonton, where there was a deficiency in tops but a sameness in averages. The Branch reported an improvement in the consignment of wools from the West, especially as regards the amount of seedy and reject wools, not more than one per cent. having graded seedy this year, while the percentage of bright and semi-bright wools in all the grades was well up to the average. On the whole the western grades this year are considered a particularly attractive offering. Cable reports as regards bacon show steadiness in demand but little change in prices, best Canadian selling at 140 shillings the hundredweight, United States at 122, Irish at 162, and Danish at 152 shillings.

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If there is plenty of assistance at hand it may be advisable to have the animal's head held securely, and then with the aid of a mouth gag, to hold the animal's mouth open, the hand being passed over the base of the tongue in an effort to grasp the object and remove it. If the choke is too deep for that, it might be well to use something to lubricate the gullet, and for this the following may be used with good results: Olive oil, glycerine, slippery elm tea. Any of these can be given in small doses of four to six ounces. Of all these, slippery elm is possibly the best lubricant of all. This may make it possible for the animal to pass the object into the stomach.

If the object can be felt, a gentle pressure may be exerted upon it and it. Under no conditions should two hard objects be cracked together with the region of the choke between them, with the intention of crushing the mass; neither should a whipcord be passed down the animal's throat, as many farmers do in such conditions. If a veterinarian is to be had, he can give the animal a dose of amorphous hydrochloride, which may remove the choke. Do not give the animal large quantities of a drench.

If the animal is in such condition that it is not likely to be relieved, it is best to have it slaughtered at once, not only putting it out of its misery, but also saving the carcass for meat purposes.

Live Stock, Wool, and Bacon Markets.

The noticeable feature of the market, as reported by the Dominion Live Stock Branch, is the steadyness and strength displayed for sheep, top prices at all the principal centres ranging from a dollar to three dollars up compared with the same time last year. At Toronto the top prices on August 24 were \$12.50 against \$10 last year, Montreal \$10 against \$8, Winnipeg, \$11 against \$10.50, Calgary \$10.25 against \$7.75, and Edmonton \$9 against \$8. All other top prices for live stock were either about the same as last year excepting for tops of calves at Toronto, which were \$2.50.

DOBBIN AT THE FAIR

Poor old Dobbin at the fair, Shining, sleek, in every hair, Neatly groomed from head to tail Yet how little the avail!

Once he entered head on high, Admiration of each eye, Now he comes with drooping ears At the laughter, jests and jeers, As the dashing autos go Through the gates of county show.

And a'w! what has he done That he should be the butt of fun? Fat and "bomfy," good to see, As of yore, yet somehow, he Doesn't feel just quite at home Where the whirling autos come, Like cat in strange garret three, Poor old Dobbin at the fair.

Once he held proud reputation Of best family horse around, And he felt in all the nation Not the equal could be found, Of his pretty, gracious lady, Who held the reins just as she should, By each neat manipulation Showing gentleman's blood.

Now a hot tide through him courses To his brain, for well-bred horses Feel the stigma and the shame, When low-bred people make them game;

And he hears a "female" say In yonder auto coarsely say, "See, oh see, that 'one-hoss shay'! Like a fossil Dobbin feels When the boisterous laughter peals, And he sees her pointing there To his turnout at the fair.

Yes, indeed, like a back number, Poor heart-broken Dobbin feels, And he knows he ne'er can lumber Past those flashing, dashing wheels; Worst of all to see his lady, Laughing-stock of latter day, And he hopes he may not cumber This old earth long, anyway.

But presto, change! New "pep" and courage Breaks in on his doleful dream, They are passing—famous judges—Gentlemen of old regime.

They lift their hats high to his mistress; Pat his flanks as on they go, Saying, "Yes, a true fine lady, Debts all paid and nothing shady In her life, as all well know." And so with head high in the air, Proudly Dobbin leaves the fair.

Be sure that sheep are clean and healthy when taken into winter quarters, because under housing conditions infection and parasites have far better opportunities of coming into existence and of spreading than they have in the open. This is the lesson sought to be inculcated by Pamphlet No. 6 of the Sheep and Swine Division of the Dominion Live Stock Branch. Mites, lice, and ticks are the pests most to be feared, their activities being frequently accompanied by serious disorders. The ravages of these unwelcome invaders can be greatly lessened and even warded off entirely by dipping. If any sheep should be infected by scab, which is contagious, the Branch should be notified, and the animal at once isolated, the wool clipped from the part affected, the sheep dipped at intervals of ten days until entirely freed of the trouble. For the prevention of ticks, sheep should be dipped twice a year, once in the spring and again in the fall. The material required for the process can easily be purchased, and it is suggested that small farmers might club together so that it can be obtained in large quantity, which would ensure lower cost and better quality. Instructions are given in the pamphlet—which can be had free on application to the Publications Branch, Ottawa—as to the methods to pursue and the equipment required.

Churning troubles are not always due to the same thing. If the right temperatures have been observed and still there is trouble, try using commercial starters to ripen the cream.

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Storage of Vegetables.

Winter storage of vegetables is an old question often discussed, but apparently not yet well understood. To store the crop seems a comparatively easy task, but to guard against heavy loss while in storage is sometimes quite a problem even for the most experienced growers.

Some of the first and most important factors influencing the keeping of vegetables in storage are to see that the vegetables are free from disease, well grown, fully matured and free from injuries such as bruises caused by careless handling at harvest time. If these important points are kept in mind and carefully attended to at the time of selecting the material for storage, much worry and subsequent loss in dollars and cents will be avoided by the grower later on.

For the storage of such crops as beets, carrots, potatoes, cabbage, celery, parsnips and turnips, a properly constructed, frost-proof cellar should be available, with adequate ventilation to keep the temperature as constant as possible around 56 deg. F. at all times during the storage period. By no means should a storage cellar become excessively damp, because excessive moisture favors the development of many of the common diseases attacking vegetables in storage, and more especially when in warm, ill-ventilated cellars. Moderate-sized, slatted bins or crates should be used for the storage of roots and potatoes, while cabbage can be stored on slatted shelves or in bins. Celery is usually stored in the root cellar. The plants are stripped of all rough leaves and placed in an upright position on moist sand, more sand being placed around the roots. However, where only small quantities of vegetables are to be stored for household use, and a basement is available, a compartment or room should be provided therein, of such construction as to exclude the heat from the furnace and with suitable vents in the wall to provide good ventilation. It is not advisable to store a great quantity of cabbage or turnips in the cellar of a dwelling house. A good earthen floor in the storage room is to be preferred to cement. Where an earthen floor can be had in a well constructed vegetable room, it is seldom necessary to store the carrots, beets, parsnips and potatoes in sand, because, as a rule, sufficient moisture will escape from the floor to keep the air moist enough to prevent the vegetables from withering up.

Onions require quite different conditions, while in storage, to the varieties of vegetables. A dry, cool, dark room is best suited for this crop, where the temperature can be kept around 34 deg. F. By no means should onions be stored in a cellar, except where it is possible to maintain a dry, cool atmosphere.

Squash and pumpkins should be stored in a dry, moderately warm room, where a temperature of 50 deg. F. can be maintained. Particularly careful handling is necessary at harvest time if this crop is to be kept for any length of time. Place the squash or pumpkins on shelves or on a table, in a single layer.

Agricultural Education.

In his latest annual report the Dominion Minister of Agriculture makes special mention of the work that has been done as regards agricultural education directly with the help of the grant made under the Agricultural Instruction Act. After briefly reviewing the development that has resulted in the agricultural representative system, in the promotion of co-operation and marketing, in instruction in practically every line of farming, in the growth of Women's Institutes, in the formation of boys' and girls' clubs and school fairs, the report points out how the efficiency of the agricultural colleges in each of the provinces has been promoted and the establishment of vocational agricultural schools encouraged. In the last ten years, that is since 1912, no less than two million dollars have been devoted in the form of grants under the Act to these colleges and schools, enabling them to enlarge their capacity, to strengthen their staffs, to add to their equipment, and to greatly extend their sphere of influence by short courses and general extension work, by these means bringing the college and the school nearer and nearer to the farm.

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Is Your Schoolhouse Clean?

The modern mother is beginning to question the right of the state to make her children go to school in buildings where they are subject to unnecessary risks of danger by fire, from insanitary surroundings, and from the dangers of contracting serious communicable diseases. And the mother who is unwilling to expose her children to such dangers should ask about the buildings in which they attend school this fall, making sure that the fall cleaning of the school buildings has been attended to and that both buildings and surroundings are in a safe and sanitary condition.

The school board officials are responsible only to the people who have elected them. So, after all, the responsibility for insanitary school building and lack of proper protection of the health of school children rests squarely on the parents.

In rural districts, the principal dangers to the health of school children are to be looked for in the school well, the common drinking cup and bowl, the crowded and poorly ventilated schoolroom, badly fitting seats, crowded cloak-rooms, and open or insanitary toilets. In villages and cities having buildings more than one story high, there is additional danger through fire.

If the school water-supply comes from a well on the school premises, it should have special attention before opening day. A properly constructed well has waterproof walls lined with stone, brick, or cement, and which extend for not less than six inches above the surface of the ground. It is fitted with a pump and has a waterproof top, so that waste water runs away from the well instead of back into it; and surface water, after rains, cannot carry pollution into the source of the drinking supply. Where a well is thus properly constructed, all that is necessary is to pump it dry and to allow the fresh water to collect before school opens.

If the well is of the common open variety, several things may have happened during the summer vacation. Rains may have washed dirt, manure and other surface material into the water. In hunting for water, turtles, rabbits, mice, rats, snakes and other living creatures have either jumped or fallen into the well and have been unable to get out. To drink water containing their decaying bodies is not only extremely unpleasant, but it may be very dangerous as well. An open well should, therefore, be pumped dry and thoroughly cleaned before school opens. The top should be made entirely safe for little folks, and constructed so that surface and waste water can not carry with it into the drinking water the washings of many dirty little feet.

With a safe and clean water-supply assured, it is next necessary to know that the water is distributed in a clean manner. Every mother knows that if one child at school develops a cold, or a case of measles, whooping cough, diphtheria, or other communicable disease, that it is likely to run through the entire school. What the mother may not know, is that these communicable diseases are spread mainly by the secretions of the nose and throat, and that one of the commonest sources of spreading these infections is by the use of the common water pail and common drinking-cup. Sanitary water containers supplied with an approved type of faucet, can be obtained from almost any hardware store. In the absence of this convenience, the school water pail should be

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supplied with a cover and a dipper which is not used for drinking. Each child should be required to bring his own cup and be taught never to use one belonging to another. If, in addition to this, the teacher is instructed how to look for the suspiciously reddened eyes, the discharges from the nose and throat and other signs of the first stage of a disease, and to exclude children showing these symptoms from school until the danger of infecting others is past, it will be possible for the school to go through the winter without an epidemic. Mothers must, however, co-operate with the teachers in order to make this possible.

Quite as dangerous as the unclean water supply is the open or insanitary toilet. There is almost nothing so dangerous to human beings as to take their own excreta in their food and drinking water. It is most unpleasant to think about, but typhoid fever and diarrhoeal diseases are contracted in that way.

To be safe, a toilet needs to be fly-proof. Flies breed and thrive in an open privy. They fly into the schoolhouse, take a bath in the water pail and wipe their feet on the children's lunch or on whatever food may be exposed to them. The result is, that infections present in the excreta can be and are spread by flies.

Another danger from the insanitary toilet is pollution of the water supply by surface washing or through the ground. The presence of toilet sewage in drinking water has been discovered by throwing powerful dyes in the toilet. Several days afterward these colors have been found in wells miles away, showing conclusively that the rains have washed the toilet sewage into the ground from which the wells drew their water-supply. In order to avoid this possibility, the toilet must be constructed in such manner that the sewage will be rendered harmless, and can be safely disposed of in plowed ground. These toilets are not expensive to build.

For temporary purposes, a barrel of earth or lime should be placed in every open toilet and each child taught the necessity of throwing in a shovelful each time the toilet is used. The open toilet should also be screened or boarded up carefully so as to prevent flies from breeding in it or carrying pollution from it. Another source of danger from the dirty open toilet is the moral contagion. It is next to impossible to teach a child cleanliness and decency in the schoolroom and from books when he gets a daily lesson in filth and indecency from the outbuildings.

Dangers to the health of school children, in the schoolroom itself, are the possibilities of accident by fire due to leaky stoves and improperly constructed furnaces or exits of buildings; lack of proper ventilation causing a predisposition to disease, and favoring the spread of contagion; badly-fitting seats resulting in crooked spines and cramped lungs; crowded cloak-rooms with the possibility of easy transference of bedbugs, lice and other pests by the contact of clothing; and the dust from dry sweeping. Each of these insanitary conditions and practices suggests its own remedy.

Every child should go to school this fall in a building which is safe from danger by fire and which is clean and sanitary in every respect. His parents and the community owe him at least that much, and the responsibility for the protection of the health of the school children of their own district is squarely up to them.

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Encouraging Pupils to Study Instrumental Music

A consistent effort is being made in some of the larger centres across the border—and the scheme is well worth adopting in our Canadian communities—to encourage pupils to undertake the study of either a vocational or an avocational activity.

The old-fashioned idea of after-school rehearsals is fast disappearing, and the more progressive idea of recognizing the orchestra rehearsal as a regular classroom period is taking hold. Credit is given to this study exactly the same as it is given for the so-called important subjects. Because of this fact a new interest has arisen, and pupils are not only willing but anxious to become members of the orchestral class. In some districts the school systems provide musical instruments and instruction, but in the great majority pupils still provide their own, and parents pay for the instruction. The ensemble instruction is given by the regular High School teachers, and each year there is a strong tendency to select for this work teachers who have had a special training in instrumental work.

The question arises: How much of a student's time should be given to the school orchestra? In nearly every community the orchestra performs not only at school functions, but also at civic functions as well. In addition to the annual concert, school assemblies, rehearsals, pageants, etc., the average player gives many hours not required of other students. Is it not unfair when school authorities fail to recognize this type of service? It is a fact that where recognition is not given, orchestras do not develop. How important it becomes for musicians who are interested in the development of music instruction to be unceasing in their efforts to force a proper recognition of this service.

The possibilities of the work under proper supervision are unlimited. There are some who predict that before another generation has passed instruction in instrumental music will be a regular part of the High School curriculum. Elementary schools have encouraged the organization of after-school violin and piano classes, with a view to determining the child's natural tendencies. After a short period of study, if the pupil shows talent, he is encouraged to study privately. This system cannot be operated as successfully in High School as it is in the Elementary school, because more demands are made on the time of the student. Hence the necessity for forming elective classes in instrument playing and giving the proper credit recognition for this study.

What, then, is the most effective method of accomplishing this result? First, the study must be made so attractive that pupils will elect music in preference to some other subject. Second, upon proper recognition of the status of music. Third, public opinion must be aroused to the point where active effort instead of idle talk becomes the motto of the great populace. The results accomplished in the past warrant the effort which should be made in behalf of the students to accord them a richer and broader education.

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