

Soils and Crops

Address communications to Agronomist, 73 Adelaide St. West, Toronto.

J. S. B. Esser Co.—I should like to be advised how to treat my collie dog which has fleas.

Answer:—Fleas multiply in the dust and dirt of kennels and even in hen houses when conditions are favorable. It is therefore important that all loose dust and dirt be removed from the box or stall in which the dog is housed. It is well then to thoroughly disinfect the space with a one per cent. solution of creolin. Unless the quarters are thus disinfected it will be useless to treat the infested dog. Bulletin No. 12 of the Dominion Department of Agriculture entitled "Fox Ranching in Canada" describes the treatment for ridding foxes of fleas. The instructions are equally applicable to dogs. After the premises have been cleaned up, it is recommended that the animal be dipped in a one per cent. solution of creolin, which should be immediately washed out. Other treatments recommended in the bulletin are as follows:

One pound of soap, two gallons of kerosene, one gallon of water; make into an emulsion by heating and stirring. The strength of the mixture is reduced by adding nine parts of water to one part of the mixture.

When it is impossible to dip the animals, much benefit may be derived by spraying the fur with spirits of camphor, and rubbing it in well, especially in the vicinity of the long fur around the neck.

Several kinds of insect powders are also used, but some of these only stun the fleas and do not kill them. While in some cases pyrethrum or dalmatian insect powder may be used to advantage, it must be employed only on healthy animals, and should be dusted off within ten or fifteen minutes after its use.

Cattle Raiser, Bruce Co.—In dehorning two-year-old or three-year-old cattle, do losses ever occur?

Answer:—Cattle have been known to die as a result of dehorning, but only in very exceptional cases. In the experience of the Dominion Experimental Farms, where thousands of head have been dehorned, two steers died in the dehorning chute. In both cases the steers were very wild and died of shock. The animals were promptly bled, dressed and disposed of as beef without loss. An occasional animal, with very strong horns, will suffer for a few days from infection. In cases of this sort where inflammation and pus formation results, the horn cavities should be sprayed out daily with hydrogen peroxide and water. In treating cases of this sort the Experimental Farms also used iodine as a dressing. The soreness does not, however, seriously affect the animals. In one case a steer put in at 1,250 pounds finished at 1,550. Another, which suffered for nearly a week after dehorning, gained from 1,130 to 1,452 pounds during the winter feeding.

R. H.—Please tell me how much hay it requires to feed one two-year-old sheep three months in winter, at a time when it cannot get any other feed?

Answer:—Much depends on the heartiness of the sheep and the character and quality of the hay. A vigorous, two-year-old sheep will consume

from five to six pounds of hay daily. When no other feed is used it is preferable that this be more than fifty per cent. clover. In feeding hay to sheep it is very important to give not more than is eaten up in an hour. If given three times a day at this rate, in a rack, the amount of 500 pounds of such hay as described should be ample.

B. T. M.—I have on hand a quantity of bran and middlings mixed, carrying 15.50 protein. I feed silage containing a good supply of dented corn, and cut stover from which the corn has been husked in the morning, and silage and alfalfa or clover at night. Can I get as good results by using the bran and middlings in place of oats?

Answer:—It is inferred that cattle are to be fed. The bran and middlings mixture named should make very satisfactory concentrated feed. Oats, which are about equal in nutritive qualities, by some mysterious process have a greater feeding value inasmuch as they seem to give greater thrift in the animals being fed. If the feeds are the same price, oats, if crushed, are preferable to the bran and middlings mixture.

R. H.—What are the characteristics of the Ruby variety of wheat, which I understand ripens along with six-rowed barley; that is to say, earlier than most other varieties of wheat?

Answer:—Ruby wheat, otherwise designated as Ottawa 623, comes from a cross made at the Experimental Farm, Ottawa, in 1905, between Downy Riga G and a selection of Red Fife. The heads of Ruby are rather short and carry a few short awns toward the tip. The kernels are hard and red and rather below average size. It is a heavy wheat, the measured kernel weighing usually more than sixty pounds. The kernels of Ruby are not tightly held in the chaff and are liable to shell unless the crop is cut on the green side. Compared with Marquis, Ruby ripens about a week earlier, but gives a lower yield. The straw is of moderate length and stands well in the field. The milling and baking qualities of Ruby are of a high order.

Enquirer, Lennox Co.—What temperature should be maintained in a cellar where bees are being wintered?

Answer:—The range of temperature in the bee cellar should be fairly constant. It should not fall below 45 nor go above 50 degrees. Forty-six or forty-seven degrees in fairly dry quarters seems to ensure the bees coming through with little wasted energy and without undue consumption of stores. To secure these conditions two important principles in cellar construction should be observed. The cellar should be so low in the ground that it is very little affected by changes in the outside temperature, and the ground should be well drained. In a large house cellar the bee storage may be better controlled by boarding off a portion of the space, which should be as far from the furnace, if such is used, as possible. It is well to keep a thermometer in the room and to observe it from time to time. Towards spring, as the temperature rises, it is well to carefully admit air by opening the window a little.

The Dairy

One hundred pounds of normal milk contains on the average .75 pounds of mineral matter, so that a cow gives upwards of 40 pounds of mineral matter daily. In addition to the mineral matter necessary for milk production, a considerable quantity is needed for the proper development of the fetus, especially during the last few months of pregnancy. The ordinary winter or stable ration which a cow receives during the flush of the milk flow may not provide minerals in sufficient quantity to supply the above demand, and consequently, a call is made upon that stored in the body, mainly in the bones. If the supply stored up in the body becomes depleted, the milk flow will be adversely affected, for nature will not alter the composition of the milk nor interrupt the bodily functions of the mother or the development of the fetus. Arguing on this basis, it may be said that the supply of mineral matter might well be a limiting factor in milk production.

As a general rule, especially in summer dairying, the ration supplies all the minerals necessary, but in cases of extra heavy production, combined with advanced pregnancy, of winter rations and on soils the crops from which are deficient in mineral matter, a supplementary mineral ration may be necessary. Grass supplies mineral matter in good quantity and in readily available form, so that as long as good pasture is available a supply of mineral matter is guaranteed. It is when the grass gets short or when winter feeding commences that substitutes for natural minerals must be provided. Feeds rich in minerals may well be considered first since there are some which are also good dairy feeds, the outstanding ones being bran and legumes, such as

alfalfa and red and alsike clover. Liberal allowances of these feeds will go a long way towards supplying the demand. Where an extra supply of mineral matter is considered necessary, this may take the form of steamed, edible bone meal and ground rock phosphate, one pound of each to every 100 pounds of meal. At the same time, in fact, at all times, a liberal allowance of common salt must be given, as it is from this that a good portion of the mineral requirement comes.

As indicated, supplementary mineral feeding is to be recommended during the final stages of the lactation period and during the rest period following, so that lime and phosphorus may be stored up for the heavy call which is made upon them during the subsequent heavy flow of milk. It may well be continued throughout the whole lactation period where production is abnormally heavy.

Dairy Product Values.

A table appearing in the Agricultural Gazette of Canada for November and December, dealing with the yearly production of dairy factories, shows that while there was an increase in the production of creamery butter in this country of nearly eleven million pounds in 1921 over 1920, there was a decrease in the total value of between seventeen and eighteen million dollars. The cheese manufactured increased upwards of eleven million pounds while the total value decreased more than ten million dollars. Nevertheless, the total value of dairy products in the whole country in 1921, although considerably less than for the two preceding years, was about sixteen million dollars greater than in 1917. Ontario and the Western provinces were the chief contributors to the increase.

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Parents as Educators

Imagination and Untruth—By Mary E. Underwood

One day last winter my six-year-old boy ran to me and said, "Come out and see a bird's nest with four blue eggs in it."

In surprise I took his hand and walked beside him through the garden to a leafless wintry rosebush to which he pointed triumphantly. "But where is the nest?" I asked.

"Right there," he insisted, indicating a bleak branch with not so much as a straw on it.

"But there is no nest," I insisted. Then he withdrew his hand and looked up into my face with utmost scorn. "Can't you make believe anything?" he said.

What was my response? What should have been my response do you think? Well, I believe the words that rushed to my lips were the right and true words. "Why, darling, I beg your pardon for being so stupid. Of course I can make believe and I'll never be so dull again."

The next week, however, there occurred in my household a very different kind of falsehood. A little girl of whom I had temporary charge had found a purse with a good deal of money in it. We had talked about this among our neighbors and in the child's presence until she felt very proud of herself. One day she came to me with a dollar bill in her hand.

"I certainly will make you rich sometime," she exclaimed quoting a remark which we had frequently made among ourselves. "Here is a dollar I found under a rock."

"I can not tell just why I did not believe her, but after accepting the dollar of which she made me a present, I went to my purse. It had been taken out of that. I called her in from her play and very quietly told her I felt sure she had taken the dollar from me and asked her why she had done so.

She denied it—she even protested proudly that she could not be so base as to steal from one to whom she owed so much kindness. I did not argue or raise my voice; I simply kept saying, "Why did you take it?" "I

feel sure you took it." "Tell me why you took it?"

Suddenly she broke down and admitted her guilt. Of course her reason was clear: She wanted to be talked about more, to hear people say, "Mabel has found more money." She had no desire for the money itself; she had given it back to me.

The first of these cases, that of the bird's nest story, was an act of harmless and beautiful imagination; the second was a lie. The spirit of the first should be encouraged, the second required a punishment which would make clear to the child's conscience the baseness of her deed.

It is seldom hard to know the difference between flights of a child's imagination and his untruths. To sympathize with the former, however, we must pause for a few minutes and try really to understand children's natures.

It is very unjust to confuse this beautiful gift of childhood with the spirit of cowardice and vanity which is at the root of most lying. To be good mothers we must realize that our little children up to ten years of age are like poets and artists and musicians—to a great extent they live in their busy imaginations.

The Care of Farm Implements

The annual loss due to ignorance or negligence in the care of farm implements is appalling. Figures have been published from time to time showing depreciation on implements from lack of shelter and care; still many farmers winter their implements in the field where they were last used, or scattered about the farm yard. A manufacturer, if he is to prosper, must keep his production cost at the lowest possible figure. The same applies to the farmer, who is no less a manufacturer, and one of the ways in which he can materially cut down his expenses is in the proper care of his implements and tools.

All implements when not in use should be under cover, and not left exposed to the influence of the weather.

A machine or implement shed need not be an elaborate affair. If it can be wholly closed, so much the better. It should be conveniently situated, and the front should consist largely of roller doors, so that any implement can readily be obtained. As to the arranging of the various implements, a binder being used practically at one season of the year, may be stored in a far corner, leaving space nearer the door for mowers, plows and other implements used at various times throughout the season.

A stitch in time saves nine, and many an expensive repair item might be saved by repairing a machine at the first appearance of trouble. When implements are taken out they should be looked over carefully; nuts tightened, adjustments and trivial repairs made, which if left might develop no end of trouble. Far too little machine oil is used, causing excessive wearing on bearings and castings, and working untold injury on the machine. A coat of paint not only adds to the appearance, but greatly prolongs the life of both wood and iron. Polished surfaces, such as plow shares and mould boards, should be smeared with grease or painted with kerosene and lamp black when not in use.

A good farmer must be a good mechanic, more especially if he operates tractors and other large machinery, otherwise his repair items will be high, and the usefulness of the tractor or machine greatly impaired. If possible avail yourself of some course at a tractor school, and become familiar with the intricacies of your motor. In this way you will obtain better service, and the repair items and mechanics' bills will be reduced to a minimum.

A work shop, with a small forge and grill, and some good tools for both wood and iron, is a great convenience, and indeed a necessity on many farms. Having this, many repairs and adjustments can be made, plow shares pointed and sharpened, and a host of other things done that would necessitate a trip to the local blacksmith or machine shop.

No one takes more pride than the owner of a well-ordered and cared-for farm where there is a place for everything and everything is in its place.

October's Live Stock Trade.

Dominion Live Stock branch comments regarding trade in October are to the effect that at Toronto the cattle market was depressed by Western consignments and by a surplus of unfinished local cattle, which even a strong store cattle movement could not absorb, and that October had been the best month of the year to date for store cattle with 10,700 head, or almost a third of the total run, reshipped to the country. The veal calf trade suffered from increased beef consumption, and heavy calves, which were numerous, generally found an outlet as stockers. Although the run of lambs at times was liberal, prices had an upward trend. Hog prices were down at first, but were moving up at the close of the month.

Regarding the Montreal market, prices for cattle were generally steady during the month, although a remark among the comments is that, due to heavy shipments of Western cattle direct to packers' sidings, packer buyers were not keen bidders for butcher cattle and trading was slow. Although ready good veal calves were scarce, prices for that kind were firm, but heavies were weak. The lamb market was rather erratic but the tendency was upward. Hogs were generally lower, although hogs of select weights brought \$12 to \$12.25.

At Winnipeg heavy liquidation of cattle and poorness of general quality had a depressing effect and the market in October tended to dullness. Calves were down a bit, but the sheep and lamb market as a whole continued generally active, with prices maintaining a steady tone. Hogs were a trifle lower in the middle of the month, but at the close, with the new grad-

ing regulations at hand, showed an improvement. At Calgary the stocker trade was well sustained by the activity of United States buyers, who absorbed 2,633 head, while easterners took 533. Calves were weak, but prices for sheep and lambs were well maintained. At the end of the month hog grading was in effect and the market felt the benefit. At Edmonton trading in cattle was steady, United States and eastern buyers being in evidence. Dehorned cattle were most in demand. Shipments out were made under both the Dominion Live Stock car lot policy and free freight policy. Sheep sold steadily throughout the month. Hog prices varied, but at the end prices were advancing.

The total sales of cattle, calves and hogs in the Dominion were greater last October than in the corresponding month of 1921, and of sheep considerably less.

There is more in life than work, but there would not be much life without work.

Most anyone can get along on the level, but it takes extra determination and energy to climb hills.

Hospital for Sick Children

COLLEGE ST., TORONTO.

Mr. Editor,

Allying that the trend of public opinion is swinging more and more towards the equalization of the burdens which each citizen of Canada must bear, that the helping of those who are unable to help themselves occupies a much larger place in our minds, may I draw your attention to the fact that this Hospital is accomplishing great things in a field that is untouched by any other organization.

Little children from all parts of the Province, irrespective of class or creed, children who are sickly and maimed, come here and are made strong and healthy. Is not this in itself a wonderful work?

The service and the duty of the Hospital is far-reaching. As well as personal attention, both surgical and medical, for all the tiny patients, doctors and nurses are also trained to extend the mission of healing to the uttermost parts of the Province.

The entire function of the Hospital must commend itself to you and your readers. It is a CHILD WELFARE work well deserving of the support of your subscribers.

Of late a new and unfortunate factor has added to the responsibilities which the Hospital must assume. You have noticed, no doubt, the alarming increase in the number of motor accidents throughout the Province. In the majority of which little children are the chief sufferers. Many of them are little waifs of the poorer sections where the streets are the only playgrounds.

Here are the average day's figures for 1922 attendance:

Col. patients 255

Out-patients 193

The carrying out of this great work is your responsibility as well as that of the people of all Ontario. Every contributor to the Hospital is a friend, indeed to these little mites of humanity, and has the satisfaction of knowing that the results of his individual contribution is bringing joy into at least one home by assisting to care for somebody's child.

The service of the Hospital depends on the continued support of the public and the conversion of dollars into health for strength will be an "sure" meet with your approval. Each minute of mercy costs over fifty cents, so you will see that much money is needed to carry on the GREAT MOTHER CHARITY. Every day sees a large number of additional patients on the Hospital's register. Owing to the advanced costs of urgent and medical appliances maintenance is mounting until now nearly twice the usual amount of money is essential for the fulfilling of our duty. With the approach of Christmas, may I place these facts before your readers in connection with the 47th Christmas appeal of the Hospital for Sick Children?

Faithfully yours,
M. J. ROBERTSON,
Chairman of the Appeal Committee.



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