

# Soils and Crops

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

## Retained Afterbirth.

This is a matter which many stockmen do not regard with due seriousness, possibly because they have not had an opportunity of observing the various evils resulting from the failure of a cow to clean properly.

When any great portion of the placenta, or afterbirth, is retained in the uterus for any length of time after the cow has given birth to the calf, there usually develops a varied chain of symptoms, which are very noticeable and likewise often serious and many times fatal. There may occur a simple catarrh of the uterus in which the discharge is of a mucous consistency or it may be a thick, heavy pus sometimes containing streaks of blood. There may be a cachexia or unthriftiness, or a wasting away, or there may be an absorption of the septic or poisonous matter, which is known as septic metritis, which often results in death and there also many times results a sterility or barrenness of the cow following a retention or any of these symptoms that we have enumerated here.

A portion of the afterbirth may remain after the cow has apparently cleaned normally and we sometimes find shreds or portions remaining after it has been removed by inexperienced men, or sometimes when the veterinarian has removed it.

When the simple catarrhal condition of the uterus follows this retention, the tail and scutcheon are soiled with a mass of filth which is composed of pus and dirt and when the cow is in the recumbent position a quantity of pus is usually noticed to flow from the vagina. Such cows in a herd are usually detected from the odor of this discharge alone. Milk from a cow in this condition should not be used for human consumption. Now, as a matter of fact, a veterinarian can do little in the way of treating this condition, unless he is called early, as the mouth of the uterus will contract so that it is impossible to use mild antiseptic irrigations, as it is unsafe to use such irrigations unless it is possible to syphon off all the solution, because if any is allowed to remain it may produce such irritation and straining that an eversion of the vagina may take place and this would be a very serious condition under the circumstances.

With the resulting cachexia that we spoke of, the cow gradually loses flesh, her hair is rough, she gives very little or no milk, there is a loss of appetite and she will not respond to any agent to feed or tonics. She gradually grows weaker and becomes a living skeleton. Sometimes after a year or so she regains some of her former health but this is unusual and she generally wastes away and dies in a few weeks.

In other cases the cow absorbs these septic or poisonous products and this condition is known as septic metritis or pyometra, and is, commonly speaking, an inflammation of the uterus due to the absorption of the

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poisonous material within it. After several days, the cow loses her appetite, respiration becomes labored, the temperature may reach 105 or 106 degrees Fahrenheit. With early and persistent treatment some of these cases recover, but when they do recover they usually leave the cow sterile and this is a great loss to the cow owner.

With any of the above conditions, it is not unusual to have a sterile cow after recovery. Sometimes, after the catarrhal symptoms of which we just spoke, the cow may be gotten with calf with persistent service, or at other times after the lapse of several months up to a couple of years. If it is not possible to get her with calf within two years after the above condition, very little hopes should be entertained.

The practice of tying heavy objects to that part of the afterbirth that is usually found protruding, in an effort to bring it away, should not be allowed, as it usually tears the afterbirth so that a part of it remains. The inexperienced can often do more harm than good in these cases, and it is poor policy to allow them to attempt this unless a veterinarian cannot be had.

In my experience it is usually best to wait for about forty-eight hours in most breeds of cattle before removing the afterbirth, and in many cases it is good policy to wait many times for about seventy-two hours. It is practically safe to wait in any cow for at least twenty-four hours.

Many people are of the opinion that there is some way of preventing their retention, and that there is also some remedial agents that can be given that will cause the cow to pass them, but there is none as far as I have ever been able to learn.

### Black Heart of Potatoes.

Shippers of potatoes, rushing potatoes to markets, often in poorly equipped cars or under conditions when excessive firing of stoves in the cars exhausts the air and generates a high temperature in the tightly sealed cars, are sometimes sorely disappointed in the appearance of black heart in the tubers close to the stove. In this disease the potatoes become inky black in the hearts and are worthless for food or planting.

Pits which are opened late in the spring, and in tight cellars where the temperature is high, often show this same disease in the potatoes stored under the unfavorable conditions.

The disease is of the nature of an asphyxiation of the cells of the tuber. Due to shortage of oxygen brought about by the lack of ventilation plus the increased call for oxygen brought about by the warmth, conditions are set up leading to the death of the cells at the heart. These inner parts to which oxygen is not available, die and subsequently blacken.

The disease is a serious one and every effort should be made to prevent shipments and of storage conditions. It is now fairly generally known under what conditions the breakdown occurs. If potatoes are put at ninety-eight degrees F., blood temperature, over night, under conditions where oxygen is scanty in supply, black heart follows.

Lower temperatures such as sixty to seventy degrees F. will also lead to black heart if the ventilation is poor, but the reaction is much slower in taking place.

To prevent loss it is necessary to follow this rule for potato storage, keep the tubers cool, well ventilated, and dry.

Black heart potatoes make poor seed stock since they tend to rot quickly.

## Horse Sense

I remember when I took the halters off my horse by unbuckling the strap that went over the head. It is still done this way on many farms, so I want to tell you a much easier way that I and dozens of other farmers use.

Have a big snap on the end of the throat latch, and snap it in the big ring that is sewn into most halters. Then slip the head strap off over the horse's ears. It is much quicker and easier to do it this way, and works in the dark in half the time. Furthermore, when the halter is adjusted for a certain horse the snap keeps that adjustment, while if you unbuckle it every time you may use one hole to-day and another one the next time.

I have also saved much bother when letting horses out in the yard to exercise by having a snap on the end of the rope or strap that the horse is tied with. There are many different kinds of snaps, and I like the ordinary bolt snap the least of all. A snap with a spring like a harness snap is much better, and the twisted wire snap is best of all, because it is almost impossible to lose it.

Plan for more than you can do, then do it.

Bite off more than you can chew, then chew it.

Hitch your wagon to a star.

Keep your seat, and there you are.

## Poultry

The leg weakness in poultry is usually caused by heavy feeding which has caused them to grow more rapidly in weight than they have increased in strength. This seems to be a form of paralysis and the mild cases rapidly recover, while the others show an increase of weakness and emaciation until the bird dies. The sick birds should be isolated where they can be fed away from the flock. This is not because it seems to be contagious, but the bird will not be able to eat when crowded by the healthy fowls. Rheumatism might cause similar symptoms but in such cases the joints will be swelled and hot. In leg weakness there seems to be no other symptoms but the weakness and inability of the bird to stand. As far as we can learn, no germ that causes this disease has ever been isolated. But usually it causes little trouble in flocks that have plenty of range and green food and have been grown from vigorous breeding stock.

### When Auction Day Comes.

When the stock and tools on a farm are to be sold at auction it pays to put them in the best possible condition. Many farm implements are sold for much less than they are worth because their unkempt appearance puts them in the junk class where they do not belong. Clean up the tools and oil them. A coat of paint may give a tool such an improved appearance that many bidders will think almost as much of it as a new implement.

The cattle deserve attention before the auction sale. On some farms the very fact that the cattle are soon to be sold causes the owner to lose interest in them. It pays to keep them well fed and groom them for the sale. It is not deceiving a prospective buyer to present goods at their best. It is only good business and should not be neglected.

Flocks of poultry are sometimes displayed at an auction cooped in slatted boxes where the buyer has no chance to examine them. No effort is made to grade the birds, and so all of them are apt to sell at the same price as the poorest are worth. Why not cull the flock? Place the year-old hens in one lot and the pullets in another. Sort out the young cockerels and have them sold as broiler stock. If some of the birds are purebred and others are mongrels it will pay to classify them. It may bring a high bid for the purebreds while such a bid will be missing if all of the birds are lumped together.

When cattle are sold the owner should be at hand at all times to explain their age and condition and answer all questions demanded by the crowd. At a recent auction of purebred live stock at a consignment sale several of the cows sold for much less than they were worth because

## Making the School Grounds Attractive

The school is one of the most vital problems that confront an aroused rural population. In many provinces particularly throughout the eastern sections of the country, rural communities have said their say and begun to take action. In other words, farmers are going to see to it that their boys and girls get the best possible training adapted to their needs and equal to the best attainable in cities. They themselves are no longer willing to be the economic scapegoats for the nation, and now they are determined that their children shall not take the leaveings from the educational table. Briefly the rural public will no longer stand for the old methods and standards.

These progressive and intelligent farmers, who are now demanding changes in courses of study, in methods of teaching and in teachers, are not at all inclined to overlook the building itself, its location, and the extent and nature of the school grounds. Perhaps some of you who are interested in carrying out the new ideas do not know how school sites used to be picked out. But many of us are ashamed to remember that the land used to be chosen because it was of little value for anything else, and that regard was not had for elevation or extent.

Proper elevation is absolutely necessary to insure good drainage and good health; sufficient acreage is necessary to establish happiness and efficiency in school life, and to create a pleasing appearance. No wonder that our modern country districts have revolted against the mistaken methods of the past! We are all of a mind to give "three cheers" for the clear-sighted, self-respecting men and women who now insist upon a choice location for the school building, and at least three or four acres for the school grounds.

Merely to secure enough well-situated land is just the first step toward better conditions. The same thoughtful public that has secured this wants to see it put into and kept in good order. In one small, rural town the children tramped over the school lawn and broke down the pivot hedges, until gradually the lawn disappeared and the hedges shriveled away. But a strong, practical principle was elected to the school board—and this is important—he had the school board behind him. When more land had been acquired, and when a base-ball diamond, a running track, separate play-

## THE CHEERFUL CHERUB

When gazing in a looking glass I sometimes think I see A stranger I shall never know Who gazes back at me.



The owner did not get to the sale on time and the auctioneer was not provided with sufficient information concerning the time that the cows freshened or when they had been bred. The lack of this information caused some of the bidders to lose interest as they did not wish to risk placing bids without knowing the whole history of the animal. At the ordinary farm auction the farmer should be posted on all points concerning the date of freshening and breeding so that he can answer promptly all questions of the bidders. It is a question if some farmers do not lose money at an auction by trying to sell every broken pitchfork and leaky pail on the farm. These worthless articles are sold so cheap that it is almost a waste of time for the auctioneer to talk about them, and sometimes I feel that the buyers hear the prices bid on the junk and think that everything on the farm should sell proportionately at the same rate. The sum total derived from the sale might be larger if only the good and useful articles are included.

Plenty of help should be available at an auction so that the animals can be brought promptly into the ring in their turn. The crowd does not like to wait, and many buyers will lose interest if they have to remain all day to witness a sale that should be finished in four or five hours or less.

What helps to climb the steepest hill, What cheers us up when we are ill, What helps to pay the doctor's bill? Gumption.

It helps the pantry shelves to fill, The blues and aches it helps to kill, 'Tis better than old Sawbones' pill—Gumption.

"There are two good rules that ought to be written on every heart. Never believe anything bad about anybody unless you positively know it to be true. Never tell even that, unless you feel that it is absolutely necessary, and that God is listening while you tell it."—Henry Von Dyke.

## The Welfare of the Home

Nearly All Children Have Adenoids.

Babies are not born with adenoids. There is still in existence the foolish superstition that a baby must have whooping-cough, measles, mumps and other common diseases of childhood, and that the sooner he gets them over with, the better. The truth of the matter is just the other way round. The child is much better off without these diseases, and the longer he can put them off, the less damage they are likely to do to him. But even with the most careful mothers, the young child is likely to be exposed to these diseases and be caught by some of them.

Every time a child is effected by one of these diseases, his glands are overworked. They swell up to take care of the germs and the poison in order that they do not get the upper hand, as unfortunately they often do. By the time the child has suffered a number of attacks of colds and diseases common to children, the glands begin to show permanent effects of the hard struggle. Sooner or later they become permanently enlarged and diseased, so as to be unfit to do their work. In fact, they really endanger the child's life.

Decayed teeth are another common source of enlarged glands of the throat and nose; in fact, exposure to any kind of infection will enlarge these glands. When the tonsils and adenoids get so large that the child can not sleep with his mouth closed and is unable to breathe with tightly closed lips, or the glands become so diseased that they are interfering with his health, they should be taken out, and the sooner the better. If the enlarged tonsils and adenoids are allowed to remain and the child continues to breathe through his mouth, many things can happen. Instead of appearing bright, alert and attractive, he begins to look dull, stupid and unattractive, and he becomes in some cases just as he appears—stupid.

The enlarged tonsils and adenoids interfere with the child's hearing; his voice takes on a disagreeable nasal sound, he takes cold easily and has more or less constant catarrh. As a result of the partial stopping of the free passage of air to his lungs, the child does not get enough fresh air. Hence a child with adenoids is likely to be hollow-chested, round-shouldered, pale, thin, with poor quality of blood, and susceptible to disease.

Knowing what causes adenoids and enlarged tonsils makes it easier to prevent them. Keep babies and young children away from persons suffering from colds or other diseases. Avoid taking them into crowds or crowded places where one can not tell to what they may be exposed; and during an epidemic, keep young children safely at home. Parents who are not sure that their children are free from enlarged tonsils and adenoids should have them examined by their doctor.

Children are our most valued possessions and it is our duty to send them out into the world in the best possible condition—physically, morally and mentally.

## Growing Potatoes Under Straw.

The practice of growing Irish potatoes under a straw mulch is excellent for small areas. The potatoes are planted at the usual time in shallow rows two inches deep. The mulch of straw, leaves, or strawy manure is spread over the ground to a depth of five inches, about the time the

plants come through the soil. The tubers are formed partly in the soil and partly in the straw. They are easily harvested, are clean, and keep well in storage.

The mulch protects the roots and tubers and holds the soil moisture. No cultivation is necessary after planting, and therefore the rows may be placed as close as two feet.

Men who would not carry dirt in their pockets are sometimes not so particular about their minds.

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## The Changing Order of Education.

Many changes are impressive in our day, but none more so than the great change that is taking place in our schools and in our whole attitude toward education. It is a hundred years since Froebel began to labor in the interest of free education, but we are only beginning to apply his principles.

The interest of children cannot be held if they are taught in a cut and dried way. From early childhood they should be led into joyous activity. At first, only the parents stand by to help and sympathize, later teachers, friends and society assist. The early home influence is of great importance. Comenius, Froebel and Rousseau studied mothers. They knew that the mother should be the first educator, they emphasized the importance of her sympathy and care, which though it faltered and halted and fell pitifully short in many places was necessary for right start. Pestolozzi expressed this fact in the words, "Maternal love is the first agent in education."

In the ideal school of to-day we find the children choosing their own material, directing their own studies, learning indirectly rather than directly, getting their studies linked up with life, looking to the teacher for guidance, sympathy and help as well as for actual instruction.

The school should be a sort of miniature world in which the child is prepared for life in the real world. In a kindergarten worthy of the name the child moves freely, though in obedience to law. In old-time schools of which there are still far too many, he is confined by a sort of prison-like rigidity.

The hatred of the average child for school is a real misfortune. For the child's natural instinct is to learn and know, that is why he is always asking questions, questions that we in our arrogance and impatience too often set aside.

But the school doesn't always answer the child's questions, doesn't always prepare him for life's work, doesn't usually make things interesting to him, although there is much more vocational training than formerly. The unknown must be linked with the known. Arithmetic in the abstract is uninteresting to any child, but having five cents to spend and knowing how to spend it is a matter of practical experience.

The reason why the kindergarten method of education is superior is because it teaches the child through actual experience. As a parent, then, you wisely send your child to kindergarten. But you are not equally wise when, later on you say, "Oh, Mary's school is all right—a school's a school anyway!"

We have not all the advantages of schools where sympathy and imagination are used, and we know that most classes are overcrowded and that a teacher gets the best results when she works with small groups and in the right environment. But we all assist in moulding the public opinion that shapes the schools, and in paying the taxes that underpay teachers for the most important work in the world.

And until we carry the spirit of Froebel right up from the kindergarten through the grades and high school and college, we cannot expect to have the fine flowering of manhood and womanhood that is potential in our civilization.

## Work of Live Stock Branch

Poultry culling demonstrations that have been carried on by the federal Live Stock Branch have clearly proved that it is possible to take out from forty to sixty per cent. of the stock in the average farm flock and still leave the farmer with as many eggs per day as he was getting before. The value of this knowledge to the farmers of Canada can hardly be overestimated.

An equally valuable service of the federal Live Stock Branch is the grading of market wool. According to the Report of the Minister for the fiscal year ending 1918-19, approximately 4,550,000 pounds of wool were systematically graded and sold co-operatively.

These are only examples of the services of the federal Department of Agriculture, which has branches and divisions for the advancement of practically every phase of farming and gardening. The report, which is obtainable from The Publications Branch, Ottawa, covers concisely the work of the whole Department for the twelve-month period.

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