

Soils and Crops

Address communications to Agronomist, 78 Adelaide St. West, Toronto

Contagious Abortion.

Every owner of cows, mares, ewes and sows should be deeply interested in the prevention of infectious or contagious abortion.

It is a well known fact that infectious abortion causes greater loss to cattle raisers and dairy farmers than any other single disease, tuberculosis not excepted.

Infectious abortion is a specific inflammation of the mucus membrane of the uterus which in pregnant animals leads to an abortion of the fetus, membranes and often to the premature birth of the fetus. The fetus may be either living or dead, depending upon the degree to which the germs have interfered with nutrition.

Animals which have aborted once or twice may cease to abort, but they remain diseased and are likely to infect others. Accidental causes may and sometimes do bring on miscarriage, however, every abortion in cows should be considered infectious. Contagious abortion of cattle is a specific infectious disease due to the Bact. abortus of Bang, but in mares it is caused by the Bacillus abortus equi. The germs are found in the uterus, fetal membranes, and fetuses or infected mares. This disease has not yet become very common in ewes or sows; however, it is well to keep in mind that they are not exempt from it.

Doubtless the infection is taken up with the food or water, or through the genital organs, which may become infected by stable litter, manure or contact with infected milking or stable utensils, or using syringes, douching hose or instruments which are not always clean.

Treatment—No reliable cure is known for contagious or infectious abortion, but the use of vaccines applied by your veterinarian to herds which are badly affected will prove beneficial, and the treatment is perhaps worth what it costs. However, the use of vaccines for abortion is still in the experimental stage. Preventive measures have given the writer best results. Equip your farm with a separate stall or stable for your cows at calving time.

This maternity barn should be so constructed that it can be fumigated with formaldehyde, easily disinfected and not difficult to keep clean. Keep the cow in this barn and treat her until all vaginal discharge ceases. The aborted fetus and accompanying membranes should be buried as the germs are very numerous in these tissues. The manure and litter should be placed out of reach of your cows. The disease has been spread by the introduction of an infected animal into a healthy herd. Keep the new cow or heifer isolated from balance of herd until after she calves.

Rural Life and Activities for Women

By MISS ABBIE DELURY, DIRECTOR, HOME-MAKERS' DEPARTMENT, UNIVERSITY OF SASKATCHEWAN.

The greatest incentive to agricultural activity on the part of the individual farmer is removed if for any reason the homemaker fails in the performance of her duties or in the creating of a proper home atmosphere. This fact is recognized by the Departments of Agriculture in and the United States, and more recently in England and Wales, Scotland and Belgium.

The Rural Women's Organizations originated with the women as independent organizations depending on their own efforts; their work was recognized as such a great factor in the success of rural life, that now departments of agriculture initiate this work and give it financial aid as part of the work of the State. The Soldier Settlement Board also recognized this fact by the establishment of a Home Branch.

The Rural Homemaker's Drawbacks.

The homemaker fails sometimes:

- (1) Through lack of proper training and experience for her duties;
- (2) In rural life, through discouragement, lack of incentive, monotony, overwork, need of change; hence acquires an unhealthy attitude of mind toward her duties;
- (3) Because of a lack of home-making instincts, misfits.

How the Women's Organizations Can Help.

The Women's Organizations with the aid of the Department of Agriculture can help all these classes as well as the homemaker who has made a greater or less success of her work, and these are in the majority in our province. They can all be helped by the department through:

- (1) Literature supplied from time to time as need arises;
- (2) Extension lectures and demonstrations;
- (3) Correspondence with clubs and with individuals;
- (4) Conferences and conventions.

They can help one another in their organization (and this is the greatest good that arises from organization) by working together for common interests and by each giving the benefit of her knowledge and experience for

Don't knowingly, have your cow or heifer served by a neighbor's bull, unless you are reasonably certain that he has not been serving diseased cows.

It is true that the bull is only a mechanical carrier of the infection, but to make him safe, he should be treated both before and after service, especially if he is serving infected cows. Treatment of the genital tract of aborted animals is essential, especially in cases of retained placenta; however, this is work for the veterinarian or trained dairyman. Infection with the abortion organism often leads to retained placenta and sterility. Suckling calves from infected mothers spread abortion infection, by tramping through the feed, or manure from infected cows. It is a great mistake to feed the milk from infected cows, to sows, unless it has been sterilized.

Cows which have aborted should not be sold but kept in the herd until they become "ceased aborters" unless they fail to conceive when bred. About one in five or six have latent or active infection, and infection probably through test in adults and is situated in udder of non-pregnant, and in womb and vaginal discharge of pregnant cows, but B. abortus disappears from uterus soon after parturition. Or germs enter cow through food and attack fetus in utero through blood. Young animals may be infected by milk, or in utero, but infection does not last long. There are many healthy carriers never showing signs of disease.

Suspicious symptoms in a herd are abortions, retained afterbirth, sterility, nymphomania and mastitis in cows; while B. abortus causes in calves through milk white scours, infectious arthritis and pneumonia.

It is considered good practice to flush vagina of aborting cow until os closes and discharge ceases, the same preparation is suitable for flushing sheath of bull, before and after service; use one part Lysol, Creolin, or Liquor Cresolis Compositus, in 200 parts tepid water. Douching vagina with this preparation every 48 hours, for 30 days before cow calves may prevent white scours and pneumonia; use this same preparation twice as strong to bathe the hind parts of aborting cows. Wash and dry the calf. Sterilize stump of cord with tincture of iodine and dust with one part salicylic acid and three parts boric acid, and don't forget that absolute cleanliness of hind quarters of infected cow will very often prevent mastitis and white scours of calf. In conclusion, let me say, the fundamental principles underlying the control of contagious or infectious abortion are the same as for the eradication of other infectious diseases.

The Work of Woman's Organization in the Community.

When she finds herself working along with other women (1) to procure proper and sanitary school equipment, (2) to establish a hot and wholesome noon luncheon, (3) to have medical inspection of the schools, (4) to establish restrooms for the community, (5) to undertake the establishment of community halls for the use of their people, (6) to start or procure libraries for the public use, (7) to procure nursing help for the district, (8) to establish cottage hospitals and help to maintain them, (9) to hold fairs of different kinds, (10) to have child welfare exhibits and instruction, (11) to assist the less fortunate, (12) to co-operate with and assist other organizations in their works, and (13), best and greatest of all, to create a better and healthier community spirit and to minimize the spirit of hatred, prejudice and intolerance of different kinds that disgrace our community and national life and to further in its stead a spirit of love and open-mindedness and an atmosphere of hospitality—then her work becomes elevated and transfigured in her mind and that is all that is necessary.

Overlapping.

There are so many institutions organized for public welfare that the thought arises in the minds of many people that there must be much overlapping and therefore waste of time and material. Our department co-operates with every possible department in the province:

- The Provincial Department of Health;
- The Education Department in many lines;
- The Agricultural Societies;
- The Grain Growers;
- The Red Cross;
- Teachers;
- Registered Nurses affiliated with the Provincial Council;

Staff of Department of Agriculture; University Staff.

The Press.

In this we have not found yet any danger of overlapping. The field is just beginning to be covered and there is more than enough for each organization to do. We believe that "all our strength lies in our union, all our danger lies in discord."

Education.

It will be sufficient to touch upon two or three of the broader aspects of education as it affects rural life:

- (1) There is the necessity of technical or practical education. There may be a danger of over-emphasizing certain phases of technical education as applied to agriculture and even home-making. We must bear in mind first, last and always that the studies of agriculture and household science are primarily intended to broaden and balance the child's sphere of knowledge and experience and to open for him a wider field in his choice of life-work. It should not be the object of such training to make farmers or mechanics or dressmakers or cooks or homemakers. If so, we are in danger of producing many of the misfits I before referred to.

There is, perhaps, a danger also in this kind of education to place an undue value on the material and economic side of life to the exclusion of what may be called the cultural or spiritual side. It would seem that our civilization has run amuck through this same error.

Undoubtedly we have to give our attention to the material side but there is grave danger of blunting the delicate sensibilities of our children by giving too much prominence to such things. Present-day education calls for more cultivation of the finer sensibilities.

Good Literature in the Home.

It has been felt at all times that our agricultural people are often placed at a disadvantage with the dwellers in cities on account of a lack of a certain kind of culture. This is not so true as it once was but is true to a certain extent. The means of much culture had always lain at their doors and has been ignored, particularly in the last two or three generations. I refer to the reading of good literature in the homes. This is a practice that has gradually been dying out. One great reason for this is, perhaps, that we have been placing the responsibility for such things on our schools and educational institutions, just as parents have gradually been unloading many more of their responsibilities on these same institutions, and therefore neglecting the true and natural source—the home. That is why homes are ceasing to be homes in the true sense of the word and are losing their hold on the youth of our time. Without home education all other forms of education must fail to a large extent because they can be, at best, only helps and extensions of the greater home education. The home is responsible for the time spent on the side of school for education and recreation during this time. There is no greater instrument for culture of heart and mind than a love of and familiarity with good literature.

Our Women's Organizations have been doing much to stimulate love of reading. Many of them have organized local libraries and put their communities in the way of getting circulating libraries. Our university gives a grant of dollar for dollar up to ten dollars spent for library books. This is a step in the right direction but the community library can never take the place of home reading and we are trying to make ourselves active in this direction. We have talked this matter over with our clubs for years, but sometimes some definite action is necessary to get a movement under way. For this reason I should recommend that a yearly grant of ten dollars be given to each club to buy works of good literature for reading in the club and to be used in the homes—a selection could be made from headquarters if thought necessary.

Community Bird Clubs.

We all realize, I believe, that the question of recreation and how time outside of school shall be spent is a bigger problem than ever it was before. The casting-off of the parent of this responsibility has given commercial interests their opportunity and they have seized it with a vengeance—so that now we are finding our people dependent on—not their homes or any inner resources which they themselves may have—but on those commercialized forms of amusement. What can be the outcome but a lowering of ideals and perversion of the

best instincts. Our communities are so threatened now in this way that there is gradually growing up a feeling in our women's organizations that this is a problem that requires the co-operation of the men's organizations and there is a steady tendency towards community clubs. It is felt that we must do something better. It is with this in mind that the idea of the Community Bird Club came, and for these reasons:

- (1) Bird study offers a source of personal happiness and a resource for enjoyment throughout life if begun in childhood.
- (2) It fosters fine qualities of character—kindness, gentleness, sympathy, humaneness and a reverence for life as opposed to present-day tendencies toward selfishness, lack of thought for others, brutality and cruelty and a callousness toward life.
- (3) It affords a healthy form of recreation for mind and body.

(4) It opens up other fields of interest and can be made a sort of anchorage around which can be attached literature, music, scientific knowledge and much else.

(5) It can afford a common meeting-ground for men, women and children.

(6) It is a vital problem in agriculture as evidenced by the efforts put forth by our government, provincial and federal. Their efforts will have to be largely unavailing if the interest and effort of the people is not forthcoming. The effort can be put upon the boys and girls. It will give them a sense of responsibility that will help to prepare them for the lives of citizens.

The Homemakers' Organization.

The Homemakers' Organization can in no way be looked upon as a subsidized organization. True, they receive a money grant from the Department of Agriculture, but it must be pointed out, this is to help in the interests of the Department of Agriculture. More than that, the women through their organizations, every year, return to the province in the form of expenditure for certain provincial community needs, three or four times the amount of any grant received.

Unfinished Stock Depresses Markets.

The Dominion Live Stock branch market reports for the month of July are on the whole somewhat encouraging. While prices for all manner of stock in the East were lower than they were in July, 1920, they were for all, excepting calves, a little higher than in July of last year. The same is true of the market at Winnipeg. At Calgary and Edmonton there was a drop all along the line, excepting for good lambs at the former place and for select hogs at the latter. Once more the complaint is made of the sending of unfinished grass cattle to market, but the most depressing effect at Toronto was the heavy receipts of Western cattle, mostly heavy, rough fat steers. At Winnipeg a volume of unfinished cattle was received which the report says should have been kept on the grass for another sixty days.

At Calgary the uncertainty of feed prospects in some districts led to farmers selling their cattle in, and the report notes that with the run of half-fed grass cattle arriving, the market in the latter part of the month developed a decidedly weaker turn. At Edmonton the market was flooded with a lot of thin grass cattle, many in particular being from the Peace River district. The market for calves everywhere was erratic and tending slightly to a decline. Lamb prices at Toronto fell off a bit towards the end of the month owing to heavy offerings, but at Montreal they averaged from \$1.18 to \$1.42 per hundred over the corresponding month of last year. Hog prices were fairly steady and inclined to strength, but the Montreal report contains a warning which might well be heeded. "Hogs," it says, "are invariably scarce during July and prices keep up, and farmers, hoping to cash in on the high prices, send in their light unfinished spring hogs. These find a limited market until the supply becomes too numerous and then there is either a severe cut on light hogs, or the whole market is lowered, sometimes both. Efforts should be made to have these pigs finished before they are sent to the market."

Your crop is only half taken care of when it is harvested. The other half is marketing. It does not pay to tie yourself so close to your farm that you cannot enjoy the beauties of the surrounding landscape.



TROUBLE AT THE CROSSING-STONES
It may be bad for Fritz, but it doesn't make it better for anybody else
—Lynold's Newspaper, (London).

Parents as Educators

The Desire to Please—By Minerva Hunter.

The telephone gave a sharp ring. Mrs. Kent lifted the receiver and her old schoolmate heard this one-sided conversation. "Yes this is Mrs. Kent."

"All right, Mrs. Kent," "He did!" "We'll have it replaced to-day, Mrs. Kent. I cannot tell you how sorry I am that it happened."

As if in answer to her question the side door opened and Hilman went to his room.

Half an hour later when he had departed for his father's office, Mrs. Kent sat down beside her guest. "I suppose you have a pretty good idea what has happened," she remarked with a rueful smile.

"I should say that Hilman broke a window," "Exactly!" exclaimed his mother. "That is the second he has broken this vacation. We made him pay for the first out of his savings and thought that lesson would be enough, but he has done it again. Why do boys enjoy destroying things? Tell me, Susan."

"I hardly think Hilman enjoyed it. I heard his explanation and it seemed to me he disliked every minute of the rock throwing because his first experience told him he was likely to break a window."

"Yes, I gathered that from what he said," the mother agreed, "but he went on playing just the same. Sometimes I lose all patience with Hilman. If you can think of some explanation that will give me sympathy for him, Susan, please tell me what it is."

"Even if it brings you up for criticism?" Susan's eyes twinkled. "Yes," Mrs. Kent consented. "It may be if I can criticize myself I can understand Hilman better."

"I remember that when you were much older than Hilman you were destructive in a far more serious way than he."

"How?" gasped Mrs. Kent.

"When I knew you at boarding

school we attended many mid-night feasts together. Salmon salad—"

"Uh!" shuddered Mrs. Kent.

"As I was saying, salmon salad was the chief dish at all these revels. You knew it would make you sick, but still you never refused to eat it."

"Pray, wise friend, what has salmon salad to do with broken windows?" "Salmon salad injured your digestion; a broken window injures a house. I had rather break a window than ruin my digestion."

"It is more sensible," Mrs. Kent agreed, "but you see I almost had to eat salmon salad. The girls' never would have understood if I hadn't. Why, I believe they would have hated me."

"I gathered from what Hilman said that was the trouble in his case."

"What?"

"A desire to please and be understood."

"Yes?" questioned the mother.

"When all the other boys threw rocks at the tin sign on Mrs. Drake's garage, Hilman could not endure being different and risking being misunderstood. He wanted to be pleasant and friendly and agreeable."

"You are right," Mrs. Kent nodded, "and now that you have discovered the cause, can you prescribe a cure?" "Of course Hilman should not break windows. Make him pay for every destructive act, just as you are now doing, but remember he is a human being and dislikes being different and for that reason he is likely to follow the crowd even when he knows better. He is going through a trying time in his effort to adjust himself to the ways of the world. The desire to please is commendable; not for anything would you have him rude or unpleasant. Grown people cannot always tell where the line is drawn between politeness and destructiveness. Deal firmly with Hilman, but always remember that this sin is really an overworked virtue."

neglect any one of these factors is to invite failure.

By strong colonies we mean populous colonies. A colony cannot be too strong in bees for the winter. These bees must be comparatively young in order to live through the winter until brood rearing is safely commenced the following spring. To get the hives filled with young bees every colony must be headed with a young, vigorous queen during August and September; therefore, all colonies containing old or failing queens should be requeened not later than the last week in July. Colonies with bees covering less than eight full-sized Langstroth frames at the beginning of October should be united.

A colony of bees should not have less than forty pounds of stores to carry it through the winter until new honey is coming in in the spring. The honey stored in the brood chamber is usually of uncertain quality and deficient in quantity; it should, therefore, be supplemented with either good clover or buckwheat honey, or better still, with a syrup made of two parts of pure, granulated sugar to one part water. The colony should be given enough honey or sugar made into syrup to bring the stores up to the required weight. Even if a colony has enough natural stores in the brood chamber it is advisable to give it at least ten pounds of sugar made into syrup in order to postpone or minimize the consumption of poor honey and thus delay a possible attack of dysentery.

There are two methods of protecting the bees during the winter: either to place them in a cellar or to pack them in cases outside. For outside wintering the bees should be placed in the cases during the latter part of September or early in October and the packing placed on the bottom and all four sides. The bees should be fed the required amount of stores as rapidly as possible, then the top packing is put in place. These bees will require no further attention until the following spring.

Bulletin No. 43, on "Wintering Bees in Canada," can be had free upon application to the Publications Branch, Department of Agriculture, Ottawa. C. B. Gooderham, Dominion Apiarist.

Demand for Draft Horses.

An unusually busy season in the lumber woods is expected next winter. The activity of the building trades is greater than it has been for years and is using lumber at a rapid rate. In the city of Ottawa, for example, it is estimated that the construction this year will equal that of the entire five preceding years. Building construction work is being done on a similar scale not only in other cities, but in many towns and villages. To replenish stocks of lumber an unusual draft will be made upon the timbered areas, which will provide work for many men as well as draught horses. To be ready for this demand, farmers who have surplus horse stock would do well to get the animals fitted for sale. Even a plain horse, if sound and carrying a little fat, will fill the horse buyer's eye and will this autumn bring a good price if up to draught weight.

Keep on just as long as you can—then keep on a little longer. Persistence wins.

It doesn't take a son of a prophet to tell that there's no profit in a cow that costs more to keep than her milk sells for.

THE CARELESSNESS OF PLENTY

It seems to be a trait of human nature that when we are surrounded with plenty, the prevailing thought is, "Sufficient unto the day thereof," but when "hunger begins to gnaw at our vitals," we have great fear for the future.

This trait has been greatly in evidence during the past ten years. During the affluent times of the war, wash women donned sealskin coats and the common laborer bought silk shirts by the dozen. But when we entered the valley of depression these same laborers were sleeping in the city parks with one of the remaining silk shirts on their backs as one of their very few possessions.

In agriculture this same trait has been in evidence but through a longer period. The virgin richness of Canadian soil made us careless farmers, but as the soils became sterile we came to the same realization as we the silk shirted tramp, that we ought to have put something aside to provide fertility for a future day. We are fast learning our lesson in this respect, which is a strong indication that Canadian agriculture will survive.

But there is one crop with which we are still careless, and that is timber. This slow-maturing crop is fast becoming the victim of the carelessness of plenty because the impression seems to be that the supply is inexhaustible.

It would be well for all of us to learn a lesson from the squirrel, who does not eat all the nuts in fall, but puts some away for the time when winter comes. Winter comes in most all activities of life, so for our well-being we must be far-sighted enough to prepare for it in times of plenty.

A New Bulletin on Fertilizers for Field Crops.

There has recently been issued from the Division of Chemistry of the Experimental Farms System a comprehensive bulletin on the subject of Fertilizers for Field Crops. It is the work of the Dominion Chemist and the Soil Fertility Specialist, both of whom have had a large and long experience with fertilizers in the laboratory and field and who have conducted experiments with fertilizers for a number of years in every province of the Dominion.

The bulletin is, as has been said, comprehensive in its nature; the endeavor has been to treat not only of fertilizers—their nature, function as plant foods and application—but to discuss the position of fertilizers in a rational method of soil management towards increasing crop yields. Further, it takes up from the practical as well as the scientific standpoint the nature and value of farm manures, of green manuring, of liming, etc., and considers how all of these may be used in the upkeep and increase of soil fertility.

It is eminently practical throughout, being intended as a guide for the man on the land who is considering the use of fertilizers and will be found instructive and of interest to all who are looking for definite, concise information on the all-important matter of increased crop yields and the economic improvement of their soils.

An important feature of the bulletin is that the conclusions and advice given are the direct outcome of investigation work carried on in the Dominion; in this respect it is the first publication of its kind in Canada and marks a distinct advance on all previous bulletins dealing with the subject—Frank T. Shatt, Dominion Chemist.

Make the Fair Pay.

It is wrong to think that the fair management and the exhibitors are the only ones whose ingenuity and activity make a fair valuable. The patron who slips his coin to the ticket man at the gates has not discharged his full duty toward the institution when he passes the turnstiles.

To get what he has paid for in money and time he needs a clear mind—one not befogged by lack of sleep, and through the ravensome eating of hush, kickshaws, pastry, and both not of mother's cooking. The fair patron owes it to himself, to the exhibitor and to the management to be mentally alert when he enters their grounds.

If there are special things which he desires to see he should plan definitely to spend time in studying these specialties. Otherwise it is best to make a hasty survey of all the exhibits and then go back over the ones which interests most, and examine these in detail. If the memory is like those which the majority of us carry around, it is well to make a note book and pencil to make records of important things observed and to jot down addresses which may be useful later.

Ask questions, be polite, hold fast to that which is good, and what may otherwise be judged a poor exhibition is likely to return much that will be of profit to the thoughtful, wide-awake fair patron.

A lesson well learned is more valuable than a dollar earned. The only motto some people seem to have is, "If something isn't wrong, 'tisn't right."

Persistently pursuing an ideal, even at snail's pace, is better than the frequent changing of ideals. This applies to farming as well as to the other activities of life.