

Soils and Crops

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

How to Succeed With Geese

Geese for breeding purposes should be selected in the fall or early winter. In their natural state, geese mate in pairs and the best results will follow if the plan of nature is adhered to. There are some breeders who claim to have had good results by breeding one gander to several geese, but it is a quite general opinion that not over three females should be allowed to one male.

The age of the breeding stock is a big factor in securing both quality and quantity of eggs. The eggs of yearling geese seldom hatch well and it does not pay to bother with them. If they hatch at all, the goslings, as a rule, are small and weak. Two-year-olds may be used but they reach their best at three years of age. The females retain their breeding qualities throughout their lives, but it is best not to keep them for this purpose over eight or ten years.

Monogrel birds should never be purchased for breeding purposes as the majority lay only from ten to twenty-five eggs per season, while the pure-breds lay from forty to fifty.

The breeding birds selected should be strong and healthy. They should not be allowed to get too fat or there will be a low percentage of fertility in the eggs. During the winter give them as great a variety of food as possible. They require a great deal of green food and will do well on corn fodder or clover or alfalfa hay, with cooked potatoes or other vegetables, oats, corn, oyster shells and grit. They also require considerable exercise and should have some place in which to run.

The laying season can be controlled to a large extent by the plan of feeding. The opening of the season can be hastened materially by heavy feeding during the winter or it can be delayed by allowing only a small diet. From November to February the fowls should be given just enough to keep them in good health. After that date, the ration may be gradually increased.

Goose eggs are hatched in three different ways—by the mother goose, by hens, and by incubator. Those set under mother geese have natural incubation. A nest in a quiet place where the mother is not likely to be disturbed should be provided and from ten to fifteen eggs placed under her. While sitting she should be provided with plenty of green food, grain, and clean water, placed where she may

easily reach it. Goose eggs are extremely sensitive to chill—therefore the mother should not be taken from the nest to feed. If she is allowed to choose her own time to leave the nest, she will cover the eggs with either down or feathers.

On account of the close, downy feathers of the goose, the eggs have less ventilation, thus preserving more moisture, than when set under hens. Therefore, if hens are used, some moisture must be supplied. This may be done to some extent by placing the nests on an earth floor and covering them lightly with straw. The last week or two of incubation, however, more moisture than this plan supplies must be needed. The additional amount required may be provided by placing a sod three or four inches thick under the nest, covering it lightly with straw and moistening it with warm water as needed. A good plan is to pour a half-pint of the warm water directly over the eggs, which will be quickly absorbed by the sod. From five to seven eggs are all that should be given to a hen.

The ordinary incubator is not the most successful way to hatch goose eggs, owing to the size of the eggs and the thickness of the shells. Experienced breeders, however, get good results from the incubator, but it takes much care and attention. One of the most practical methods is to set the eggs in an incubator about seven days, test out the fertile eggs, and set the balance under hens, supplying the moisture as before stated.

When artificially incubated, goose eggs should be turned three times a day. Alternate days of the last week a damp woollen cloth should be laid over them to soften the shells. The goslings will not leave the shells for some time after pipping and it may be necessary to help some of them out. Great care must be used in this, however, as the membranes are easily torn, causing them to bleed to death.

As soon as dried, they should be removed from the incubator and placed in a brooder at a temperature of ninety degrees, heat being gradually reduced until at the end of the second week it has dropped to seventy degrees. The brooders must be kept very clean as young goslings are much more sensitive to unsanitary conditions than are young chicks. They are also very sensitive to dampness when young, but when a month old they are the most hardy of domesticated fowls.

The Care of Traps

Should traps be boiled, and if so, in what? Should they be oiled? Is rust harmful? There are many other similar questions confronting the trapper. Even old hands at the game differ on these points.

A man who never boils new traps usually explains his position by saying that new steel in itself has no odor; there is no scent until the trap is used.

We have good reason to believe that steel and iron do have an odor; the fact that we can not detect it proves nothing, except that our smelling sense is weak compared to that of wild animals. But even granted that they do not, there is another reason for boiling the new trap—to get rid of the varnish and oil with which some traps are coated. Many a new trap, perfect in make and action, fails to attract for that one reason—it still carries the odor, no matter how faint, of varnish or oil.

"But," you say, "I must oil my traps; if not at the beginning, surely later, after long use and exposure to the weather." Once in a long while, yes. The oiling business is overdone; I prefer a rusty trap to one loaded up with kerosene. The former may at least get a chance at the animal, but the latter; you may think you have killed the coal-oil smell by airing and rubbing, but the keen-nosed furbearer knows better. Oil the traps when the joints really require it, but use some lubricant as nearly as odorless you can get. Never use a strong smelling substance like kerosene.

Aside from the matter of odor, a trap freshly oiled or greased does not have so secure a grip as when dry; and this apparently slight matter may make just the difference between a catch and an escape if you have caught some "No. 3 animal," an otter for instance, in a No. 2 trap.

I am not advocating rust, but I think it is less objectionable than a repellent smell of oil. A rusty surface is far more persistent in retaining odors than a smooth one. While gloves should always be used in making dry-land sets, they become doubly essential if your trap is coated with rust.

Traps are generally covered, but it is desirable to dull their brightness anyway. A trap may become exposed after you leave it; the wind, a heavy snowfall, or an unexpected thaw, the passing of some animal or person—many things may displace your set; and if bright steel is exposed that trap will do no business.

Many kinds of boiling preparations have been used for the coloring, and for destruction of the steel odor, but I doubt there being anything better than the old reliable solution of evergreen boughs. This gives the steel a blue-black finish, and repeating the boiling

occasionally retains the darkness and helps to keep off rust. Oak or willow bark is good; also, walnut hulls.

The weather is hard on traps, but they will, with care, last surprisingly long. Placing a small bag of salt under the stillwater trap will prevent freezing.

The wise trapper gets his paraphernalia in condition before the season opens. See that the traps spring readily; put in a tiny bit of oil if necessary, though a "too fast" action is not desirable. Be sure to adjust the trigger, if required to make the pan sit level, and see if your chains, pins, etc., are all in working order.

Carry your traps in a basket or sack. The fewer times you have to handle them the better.

All considered, there is no better preliminary preparation of a trap than to submerge it for twenty-four hours or longer in a running stream. This, if anything, will make it odorless. Of course, exposure to cold air in itself a good odor killer, and will be effective when dealing with no more persistent scent than that of human hands.

Buy Thrift Stamps.

The Welfare of the Home

How Can Rural Women Best Get Together on Their Health Problems?

By IDA M. ALEXANDER, M.D.

I want to speak on the old, old topic of HEALTH. I know by experience that doctors often say to themselves—and sometimes to the patients—"If I had had this case before it became so serious I could have prevented most of the suffering." Many a baby dies because its parents do not know when it is sick or ignorantly think it will "get better," or worse still, give it some remedies they happen to have on hand or that someone tells them to use. Many a mother dies from simple overwork or lack of care when she should have had it.

It is because more and more of us are waking up to the importance of these things that men and women are getting together in organizations whose sole object is to teach the mother how to keep herself and her baby well. We are finding out the importance of preventing sickness; this is better than to cure it after it has come upon us.

When I was in my teens, I used to hear the older folks say, "What is the use of giving the girl an education? She will get married and then what use will her education be to her?" Strange that people never thought there was anything wrong with the education that did not teach a girl one single thing about her greatest work in the world, namely, the raising of a family. To-day we realize that the girl was not to blame for her ignorance—it was the system of education that was wrong. You and I, dear readers, must work together to help set these things right.

To-day our country is willing to listen to what we women ask for; it is more ready to help solve the problems of the home—which are the problems of the nation—than it has ever been in the past. And for this reason I wish that the farm women who read these words, would think out, together with me, what you as farm women need to prevent you from losing your health. On your health depends very largely the health of the children you bear. On the children's health depends the health of coming generations.

Please do this: sit still for a few minutes, with Baby in your arms, and look at her as a mother, then as a grandmother, then as a great grandmother and so on through the coming generations. When you look far into the future in this way you will see

how serious is the responsibility laid upon you by the fact of that little child in your arms—you will see how your mother-work in life blesses or punishes those that are to come through this little child to whom you have given birth. Do not you see how much your baby belongs to your country?

And yet this same good country of ours has not yet taught mothers what they should know about this relationship of the mother to her country. Your country has not taught you and your neighbor what you should know in order to do the best for your country, have given birth. Do not you see how much your baby belongs to your country?

First, we can help our country and ourselves by taking advantage of the knowledge which is provided by well-prepared pamphlets and bulletins and by asking for them. Every mother who reads this paper should write to her Provincial Public Health Department and ask them to send her all the material published by the Department on baby health and public health.

Those of you who visited the Health exhibit at the National Fair noted the big, grey traveling clinic ready to travel the province in charge of a doctor and a nurse. You can find out when the clinic will take place in your neighborhood. Take Baby to the clinic and find out all you can about her needs and the needs of your neighbors' babies.

Second, we can help our country and ourselves by thinking of the needs of farmers' wives as a class and not just your need as an individual farm woman. Think in what ways your life is like that of every other farm woman and see if you can discover the reasons why farm women suffer in certain ways and have physical ills and sorrows peculiar to rural life. Then ask yourself this question: "What can we as farmers' wives do to help ourselves? Who should the nation do for us upon whom depends the health of the next generation?"

Whenever enough people seriously get together and demand the same thing for the good of the country and of themselves then they get it sooner or later. The farm woman is no exception to this rule.



Lantic Sugar

THERE is yet time to preserve the autumn fruit for winter enjoyment. LANTIC "Fine" retains all the bouquet of sun-ripened Pears and Peaches. How your folks will enjoy the clear, white delicately-flavoured pears, the rich peaches whole and luscious! LANTIC goodness is more melting, it dissolves at once in the hot syrup without over-cooking.

ATLANTIC SUGAR REFINERIES, LIMITED, MONTREAL



you will like it

fine!

Farm Help That Runs by Electricity

Shortage of man-power and the high wages demanded by such hands as are available are causing progressive farmers to seek other more reliable and less expensive means of help in operating their farms. And in electricity for power and lighting many already have found the ideal form of service that they were looking for. Others in ever-increasing numbers are making that same discovery daily; eventually all will do so.

Silent, tireless and always willing and ready, in addition to being capable of performing many tasks at one time (and doing them all well), the electrical farmhand is fast becoming the mainstay and support in all progressive farming communities. De-servedly so, too. Electricity has won to that place by sheer merit—service.

It might be added, too, that the electrical farmhand found many obstacles to be overcome in his progress toward his rightful place on the farmer's pay-roll. A bit partial to the old-fashioned ways at the outset, the farming community gave but scant attention to the electrical farmhand when first he went plying for a job. But that now is all a thing of the past; the farmers have tried electric service and found it good.

One farmer making use of electric milking-machines, reports that the cost of current for milking fifty cows twice daily is fifty cents; the time required for the milking is one hour, and only two men are required to handle the operation.

Another farmer reporting on the merits of his electrical hired man supplies the following examples:

Feed grinding, six and one-half cents a hundred pounds; ensilage-cutting, six and one-half cents a ton; corn husking, one cent a bushel; wood-sawing, fourteen and one-half cents a cord; pumping water, three cents a hundred gallons.

Other such examples in abundance can easily be had, but those two should suffice to show why farmers are turning to electricity to operate their farms. And a clearer understanding of the electrical farmhand is supplied by the imposing array of jobs he now performs.

Electricity vs. Horse-Power. Horse-power or man-power loses when multiplied. One man working alone is proportionately more efficient than any number working together.

In fact, experiments have shown that with a four-horse team the efficiency of each horse is but eighty per cent. And with an eight-horse team the efficiency of each horse is only about forty-nine per cent. Whereas, with electric horse-power no loss whatever is occasioned by multiplying the units of power. Best of all, electricity never tires; it works at full pitch twenty-four hours daily, if required.

Most people are familiar with the term "horse-power," but only the technically informed understand that it signifies the power to lift 33,000 pounds one foot in one minute. And just as that term represents capacity for performing a certain amount of work, so too does the electrical unit of power measurement, the kilowatt. The kilowatt is the equivalent of 1,000 watts; and, by the way, 746 watts is the equivalent of the standard horse-power. That fact attains added significance when it is realized that in actual test it has been shown that the horse is only equal in lifting 26,000 pounds one foot in one minute.

In other words, only a little more than half as much energy can be gotten from the horse as is supplied by one kilowatt of electrical energy. And by way of suggesting that man's greatest opportunity is in the field of mental effort, it should only be necessary to add that man is capable of doing only about one-seventh as much work as the horse. And it should be

noted, too, that neither man nor horse can sustain for long, even that ratio of accomplishment; they both tire quickly. Electricity is steadfast and tireless. In tests of endurance and strength man's effort compares ill; indeed with the performance of the tractor or the gasoline engine, or the silent, steadfast force of electrical energy.

Lighting the Farm by Wire. No farmer need now be told the advantages of electricity for lighting—it's self-evident. Between the even-
radianance of the electric lamp and other forms of lighting—candles, oil lamps, and so on—there is no comparison. Still less is there any ground for comparison between the mussy, daily labor of filling lamps, and the annoyance of hunting and striking a match; still less is there ground for comparing such burdensome preliminaries and the delightfully simple operation of commanding light by pressing a button or turning a switch.

The question rather is how to command the facilities that will provide electricity for farming operations and for lighting. And those means are now fortunately available in every instance—no farm need longer be without the benefits of electrical service. For those farms located beyond the zone that it is practicable for the central station to serve, there are the individual farm lighting and power plants. The assortment of such plants is very complete and offers a very good solution of the farm power and lighting problem, no matter how large or small it may be. There is a plant that will be suitable.

The man who can look onto the central station's lines for current to drive his motors and light his house and buildings has practically no responsibility beyond that of paying his bills. It is the duty of the central station to see that the necessary current is always on tap when needed, as much or as little as that may be. And to the credit of the central station be it said that the cost and work of supplying that service are not by any means trifling matters.

The line on the central station's chart showing the hourly, daily and seasonal demands for current is one of hills and valleys. The higher the hills and the deeper the valleys, the greater the range between the maximum and the minimum demands for current. That means that during the periods when the demand for current is smallest, much of the central station's expensive generating equipment is idle. Nevertheless, that equipment must be always on hand and ready against the hours of need. Also, there is the cost of erecting and installing the necessary feed lines, transformers, and other equipment.

Obviously enough that expense can not be undertaken in order to serve one or two farms; but when the farmers of the countryside generally decide to make use of the services of the electrical hired man, and to light their houses and buildings in the best and most convenient way, the central station can usually be depended upon to meet such a request for service more than halfway.

If the central station has current to sell, there is every reason why the farmer should have it; and the central station wants him to have it. The expense of conveying central station power to the farmer's threshing, silage-cutter, milk churn, or what-not else, has always been satisfactorily adjusted in the many communities where electricity is being used.

Phillips Brooks said: "He who helps a child helps humanity with a distinctness, with an immediateness, which no other help given to human creatures in any other stage of their human life can possibly give again."

THE TWITCH OF LOVE

A young farmer boy stopped in front of the blacksmith shop to get his horse shod. He unharnessed the mare that he was driving and started to lead her into the shop. The mare was young, and the glowing furnace and the flying sparks from the anvil frightened her; setting her front feet down firmly and throwing back her head, she refused to enter the dark room that was full of strange noises and mysterious sights.

The blacksmith came up, took hold of the rope and gave two or three sharp pulls. Then, finding that the horse did not intend to come in, he grew angry and, swearing loudly, jerked with all his might. This only frightened the horse more.

Handing the rope to the boy again, the blacksmith turned to the wall and took down a stick, perhaps two feet long, with a small loop of rope on one end. Then he ordered the boy to hold the horse tightly while he put on the twitch.

"I'll teach her not to balk. I know all about taming mean horses. Just wait till I twist her lip for her and she'll walk in here as meek as a lamb!"

With that he put the twitch on her upper lip and began to twist until the little mare quivered with pain. When the farmer boy realized what the blacksmith was doing to his pet, he dropped the rope and, seizing the stick, exclaimed, "She does not need to be treated that way! If you force her into the shop when she is so frightened, she will always be afraid when she comes here. I can bring her in without the twitch, and then she will not be afraid to enter the next time."

As he talked he untwisted the cruel twitch and, rubbing the tender lip with his hand, spoke to her and petted her. The muscles relaxed, the frightened expression left her eyes, and, with her friend's arm round her neck, she followed him into the fearful darkness of the blacksmith shop.

Soldiers are sometimes driven into battle at the points of revolvers in the hands of their officers. It is the theory of some employers that workmen will not do good work without a tongue-lashing now and then. School lessons a generation or two ago were "learned to the tune of a hickory stick." Men can be driven and they can be bound and dragged, and sometimes they must be when they will not respond to more kindly leading. But we have a Master who knows the better way, and who will not use the twitch of compulsion unless we refuse to respond to the twitch of love.

How many times He brings His servants to the fearsome, blacksmith shop of life and asks them to enter there. Dark and mysterious and dreadful it has looked, but with His arm round them they go within. Love led the martyrs to the stake and the cross and the torture room. They carried white faces and shining eyes, but their faces were turned upward, and their eyes saw the Master, not the dagger. Love led Livingstone into the heart of Africa and Paton to the New Hebrides. Love led the soldiers across the sea and into the battle line in France. Love leads millions into daily sacrifice and service for men and God.

It is possible to drive by force and to bind by fear, but it is far better to lead by love.

Fresh Rhubarb Through the Winter.

We started with one 135-foot row across our garden. The plants were given to us by a farmer, who raised acres and acres of it.

For fifteen years those roots have been a source of enjoyment and profit. Each fall when cold weather comes a few roots are dug out of the ground in square chunks and left in the open until the ground freezes, when they are taken to the heater cellar and placed in a box. These roots are watered occasionally, and in a short time they are sending up the most beautiful pink stalks, furnishing our table with delicious freshness even in the coldest weather.

Our plants grow so rapidly that the stalks are very tender. The darkness of the cellar prevents very much leaf growth. This is as we want it, for the stalks are the only part we eat. The roots we use for forcing are quite exhausted, so we do not force them again soon, but put them out in the ground again and allow them a year for regaining strength.

The roots out of doors need a good covering of horse manure to keep them warm and to give strength, for rhubarb is a rank feeder. In the spring the manure is raked off, and our rhubarb is usually the first on the market.

It is natural to kick about taxes. Still, we wouldn't want to give up the good roads, or the toll bridges, or the new town hall, would we? And what is the use of finding fault with the men that do the town's business for us. Didn't they help to elect them? Then stand by them.

The poultryman's camera can be used to advantage in selling stock. A few small photos of the prize-winning birds or high egg producers are attractive to a prospective buyer. Such photos can be made up at a moderate expense and frequently one additional order will pay for enough photos to last a year.

The Dairy

Every breeding farm should have a solitary milk room, where milk and cream can be kept clean and cool. The inside walls should be plastered and the floor made of concrete or tile. Ample room for the cream separator, for washing and cleaning the pails, cans and other utensils used in milking and handling the products. Space for weighing, testing and keeping individual records should also be given consideration in planning the milk room. By having a suitable room and conveniences for weighing and testing the milk and keeping milk and butter-fat records, the task will be greatly simplified and the milkers will look after the work more efficiently. It is also a good plan to keep on hand a supply of medicines and materials for treating and disinfecting sores and wounds and giving first-aid to sick cattle and young stock. An outfit for treating milk-fever is also necessary on the farm where valuable dairy cows are kept for breeding purposes. It costs but very little to keep these remedies and instruments at hand and it may be the means of saving a valuable animal when one has trouble in getting veterinary aid at the proper time. Hot and cold water are needed at the dairy barn and a supply should be at hand without running to the house when it is needed. Unless the water is sufficiently cool to preserve the milk and cream during warm weather one should provide means for keeping a supply of ice where it can be used in the milk room. On the average dairy farm the cost of an ice house and putting up sufficient ice to last through the summer will not be large and the investment will prove one of the best that the breeder of dairy cattle can make. Cleanliness and refrigeration are the secrets of producing pure milk and cream.

Ontario and Peace River Oil and Gas Producing Co., Ltd.

300 wells in Ontario in actual operation, pumping at a good rate, our own pipeline, to our own tanks, 100,000 barrels of Petrolia, capacity 100,000 barrels. Earning Government bonus of 524 cents per barrel, on our present monthly output of 2,000 barrels, equals \$1,050 per month. Valuable leases owned in Peace River District.

High prices paid for Gasoline, Lubricating and Fuel Oils, give us large demand and big profits. Shares, par value, One Dollar. Price, One Dollar.

Directors: Mr. B. MacCormack, Manager, Canada Foundries and Forging, Ltd., Welland; Mr. John More, Manager, International Nickel Co., Port Colborne; Mr. J. C. Stewart, Managing Director, P. L. Robertson Manufacturing Co., Ltd., Milton.

Send your orders to E. NORMAN & CO., 33 Richmond St. W., Toronto