OF INTEREST TO FARMERS

THE FARM USES OF IODINE FOR HORSES.

(Maritime Farmer)

Growths Due to Skinning. Apply a mixture of equal part flowers of sulphur and slaked lime daily for ten days then apply with cotton a mixture of 1 oz. tincture of iodine, 1 oz. glycerine, 1-2 oz. tannic acid. For a gristle formation on the skin use 1 part tinctuer of iodine, 1 part spirits of camphor twice daily. Next try blistering with 2 oz. vaseline, 2 drams red iodide if mercury, 2 drams powdered cantharides. In 24 hours wash the part with warm water and soap. Tie the horse so he cannot gnaw the part.

New Splints. The growth of new splints may be stopped by applying a mixture of equal parts tincture of iodine, turpentine and either once daily for several days.

Soft and Hard Lumps on the Leg. Rub tincture of idoine over the swelling daily with a toothbrush. This must be done for several weeks. Iodex is an excellent ointment for use in these cases.

Bone Spavin. The horse should have absolute rest. Clip off hair and apply 1 part red iodine of mercury and 4 parts lard every two weeks. Iodine is sometimes mixed with Mercuric Biniodide for this treatment.

Chronic Brain Inflammation. (Encepthalitis, Meningitis, Cerebitis.) Give potassium iodine in 2 dram doses three times a day. Give tonics, such as iodide of iron 1 dram with 2 drams powdered hydratis every 6-8 hours as soon as the acute fever has gone down. This treatment is recommended by the U. S. Dept. Agricultre in "Diseases of Horse."

Apoplexy (Cerebral Hemmorhage.) Place the animal in a cool, quiet place. Give 2 drams potassium iodide in the feed or the drinking water twice a day for several weeks.

St Vitus' Dance (Chorea.) In a few cases, if given early 1 dram iodide or iron, 1 dram pulverized nux vomica, 1 oz. pulverized scutellaria given in feed once a day for two weeks may be of benefit.

Lead Poisoning. Give 2 drams potassium iodide three times a day.

Inflammation of Eyelids. Due to Erysipelas.—Paint the skin with a solution of 20 grains iodine in 1 cb. 3 per cent. carbolic acid; give 1-2 oz. tincture of muriate of iron three times a day in a bottle of water. Due to Anthrax.— Paint the swelling with tincture of iodine. If very angry inject the tincture into the swelling with a hypodermic needle. Give potassium iodine 2 drams three times a day.

Diseases of Sidebones. Soak the feet frequently in water at first. Later paint with the tincture of iodine several times a day, or an ointment made of 1 dram iodine crystals in 2 oz. vaseline rubbed in once a day.

Sprains. When the lameness keeps up for more than ten days, after rest and cold water applications fail, apply by rubbing in a blister composed of 1 dram powdered cantharides, 1 dram biniodide of mercury, 1 oz. vaseline. Keep it on 3 days, then smear with lard or vaseline every other day till the scabs fall off. Iodex may be used to advantage here in place of the lard or vaseline. Repeat if necessary in 3 weeks or a month.

Capped Hock. Massage the swelling three times a day. At night wab it with a mixture of 1 oz. incture of iodine, 1 oz. turpentine nd 2 parts alchohol. Do not rub his in.

Capped Knee. Apply iodine ointment as above.

Running Large Sore on Hock. Clip the hair; paint every other day with tincture of iodine. Inject once daily into discharging places a little of a mixture of 1 dram odoform in 1 oz. sulphuric ther. Keep this bottle tightly corked and away from an open light, as it is very explosive.

Swelling on Belly. Give 1 dram pottissium iodide twice a day in solution rub the skin once a day with iodine ointment.

Strangels. Give hypodermic injections. Paint the abscess once daily with tincture of iodine. Inject tincture into the discharging places. Give soft feed only.

Curb. The horse should have continued rest; should be shod with a high-heeled shoe. Use an absorbent liniment composed of 4 drams iodine, 4 drams potassium iodide, 4 oz. alchohol, 4 oz. glycerine. Apply daily and rub in with smart fgriction.

Distemper Apply equal parts tincture of iodine and camphorated oil to the throat three times a week.

Chronic Cough. Incipient Heaves, Feed on clover, or musty feed. Feed mostly grain and silage or vegetables. Rub the throat with one part tincture of iodine and two parts camphorated oil daily. Give 1-2 dram fluid extract of lobelia, 3 drams Fowler's Solution in feed or water three times a day.

Grease Heel. This occurs just below the hock, the hair comes off, and the place discharges water and is swollen and sore. Wash the sore place with soap solution. When dry, swab with a mixture of 1 part tincture of iodine and 3 parts carbolated oil. Give a tablespoonful of saltpeter in the feed three or four times a week. Dry leg off well when coming in from wrok. Treatment to be given at night. In addition, a mixture of equal parts powdered alum, flowers of sulphur and calomel may be used.

Ringbone. Apply a blister composed of 2 oz. vaseline, 2 drams powdered cantharides and 2 drams red iodie of mercury. Allow this to remain 24 to 30 hours, then wash it off with warm water and soap. Make a second application in 4 to 5 days.

Anthritis in Colts. Paint the umbilical cord on birth of the colt. Ane application should be sufficient.

Rndging Castration. The parts should be painted after the operation with tincture of idoine.

Erysipelas. A case has been effected recently on a horse with erysipelas of the prepuce. The treatment with iodine is said to have been satisfactory.

Mange (Acariasis—from an animal parasite.) Apply 1 part of iodine and 15 parts fresh lard 3 times a week. Another mixture that is good is 2 parts iodine, 1 part potassium iodide, 4 parts wood-tar oil, 32 parts lard or oil.

ABOUT CAKE MAKING.

Of course the old housekeeper knows all the tricks of the trade, but it's the young new hom-maker who requires assistance from "home pages' which the older housewife seldom reads anyway, so it is to the young beginner in the field of home that we will need to talk to. Will you let me whisper a secret or two about cake making? To obtain delicate texture mix the batter with water instead of milk, this also helps in keeping the cake moist, to acquire the tenderness which so many cakes lack, be sure that shortening is rich. To produce a color as snowy as angel food, be certain before you begin that the shortening is white and use a light colored flavoring. Chocolate frosting: One cupful granulated sugar, 1 cupful boiling water, 6 squares chocolate, confectioners sugar as needed. 1 teaspoonful vanilla extract.

Melt the sugar in the boiling water, cover and let boil three or four minutes, add the chocolate broken in pieces and let melt over boiling water then beat in the sugar, sifted, and the extract. Use sugar to make the frosting of a consistency to spread and not run from the cake. If it becomes too stiff before it is spread, add boiling water or syrup, a few drops at a time.

HORSES ABLE TO TELL TIME

A rider needs a strong hand and a firm seat to ride the hired horses of a certain suburban riding academy when he attempts to go beyond an hour's distance from the stable, according to the New York Sun. The rates are $5 for two hours, and the horses have become so accustomed to going one hour out and one back that when the first hour is reached and the rider does not turn back toward the stable his horse insists upon doing it for him.

Beyond this first hour, if the rider still wishes mistakenly or extravaganily to ride still farther away from the stable, he will have to fight his horse every twenty-five or thirty yards as the horse attempts to turn back, and there will be no further joy in the ride. If he complains to the manager of the stable, the manager will be politely regretful if the rider is a stranger, or he will tell him the honest truth if the rider is an old acquaintance.

"I get so many inexperienced riders," the manager will tell you, "and they have no sense of direction and keep no track of the time, and if it were not for the good sense of the horses the riders would either lose themselves in the countryside, or would perhaps realize at some point that their limit was nearly up and then would come thundering in with winded and steaming horses.

"These horses manage the ride themselves and the riders have very little to do with it," said the stable manager, "and in that way they protect the riders ,they protect themselves and they protect me."

ADJUST HARNESS TO HELP HORSE

Passing along a country road the other day the writer was disappointed to find that many teamsters have yet to learn that without proper fitting harness the very best power. One teamster, passed, was making frantic efforts to make his team back up a loaded wagon without having the breeching type of harness. When asked the reason why he preferred the buggy style of harness for a heavy team with a heavy load he said he thought it looked neater than any other. A light, buggy style set of harness may look a little neater, but handiness and efficiency cannot be sacrificed for neatness in the farmer's everyday tasks. A good heavy set of brass mounted well kept breeching harness on a matched draft team is a possession to be envied by anyone. Many undue loads are taken from an animal's neck in going down hill if correct hold-back straps are kept on harness. The writer always used the breeching style; they have no back rest to cause a sore or scarred butt, as is usually the case with the other kind. They make the task of holding back or backing up easier for the team than any other kind. In addition, they hold the tugs off the ground, thus keeping the horse from stepping on them in turning at corners whilst plowing or the like.

It is unfortunate for many horses that find their way into city service that they are placed under the care of men whose principal aim is to see to it that they draw their weekly wage whether they earn it as horsemen or not. The horse suffers from the cruelty they get at the hands of the average driver, and the owner is very much the loser who employs that driver. The way some so-called horsemen try to force an animal to back up a load of coal squarely over a curb in a city street, with the breeching straps right up at the root of the animal's tail, is a type of extreme cruelty which the perpetrator should find time for reflection on his actions by a period of jail confinement.

The back end of the harness is not as often used by a horse as the front end, but it spoils many a good horse when not properly fitted. The breeching should fit snug, and yet not chafe the animal. It should be so adjusted that when a horse is required to back a heavy load that he fairly sits in the breeching, throwing his weight into the harness to hove the load backwards. Breeching adjustments are made with back straps and the quarter straps. All of these should fit the animal's body.

With well fitted harness and a careful driver one seldom finds horses with sores. Anyone can properly fit harness and everyone should be a careful driver. Uneven traces are a source of sore shoulders, so make sure that the draft is even on both shoulders. Then hook the horse up to his work so that he fits into the traces and breast straps without two much play. Next, so arrange the reins that the horses drive with their heads straight ahead. The horses that come through the summer's work without galling shoulder sores or back spots, are luckier than a good many, and the owner is marked as a humane and intelligent man, or at least one blessed with good fortune in having a horseman who knows his business.

The team that is not tortured with ill arranged, poor fitting harness during its hard working season, will repay the owner many times in increased efficiency for the effort he has put into making the animals comfortable. If the team is covered with sore spots from rasping straps and buckles at the close of the field working season, it is a serious reflection on the man who owns and drives it, both on his humanity and on his intelligence, for a little care early in the season will prevent the distress to the animals, and will add greatly to the service they can give the owner. Fitting the harness properly is usually only a question of adjustment, so the owner has not even the excuse of economy for permitting his team to labor unler conditions that prevent the animals from giving anything like their full share of work. The wise and the human farmer will make up his mind right now to let his work horses go through another season without the very best equipment at his command.

A Woman's Rheumatic Lameness

Relieved by Hood's Sarsaparilla

I have taken Hood's Sarsaparilla and it has done me so much good in relieving my lameness I am very thankful to you for it. I can walk well now and go almost everywhere. Before taking your medicine I was confined to the house for aycar and a half. It strengthened my limbs.

I advise my friends that are lame from rheumatism to take it.

My husband and son have also taken Hood's Sarsaparilla, and it has given all of us a good appetite. Mrs. Mary A. Wall, 21 Florence Street, Rockland, Me.

If you need a laxative or cathartic take Hood's Pills.

FAILURE OF SWINE TO REPRODUCE

Failure in the ability or desire of swine to reproduce may be caused by any of several conditions. It may result from a disease or injury that seriously affects or destroys the secretory reproductive organs. It may be caused by improper functioning of the system, which in turn is often brought about by unsuitable feed or faulty elimination of waste products, or it may be due to a general lowering of body vitality.

Failure to breed quite frequently occurs in boars and cows which have been fitted and kept in high condition for show purposes. In some instances the sow fails to come in heat, or perhaps indicates that she is in heat and is successfully served by the boar without resulting conception. In other cases the boar shows no desire to mate, or acts ineffectively.

Make a thorough examination. This should include a search for physical defects, the presence of disease, the results of injuries, or lowered vitality from any cause.

When, from such examination, it appears that proper treatment will prove successful, remedies should be administered promptly. But if the cause is obscure, or if there is little likelihood of correcting the defect successfuly, it is best to remove the animal from the breeding herd. Boars may be castrated and fitted for slaughter as market hogs. Similarly, sows should be discarded when they become uncertain breeders.

SAVE BEST OF GARDEN SEED

Seeds which have been grown and carefully saved should be well labeled and stored or all the previous labor goes for nothing. Cloth bags are the best containers for large seeds, such as grass, beans, and corn. They should be used also for larger quantities of small seeds, but for smaller lots, paper envelopes, made at home or purchased are most suitable. Ordinary letter envelopes are fairly satisfactory, but usually are not gummed so as to close completely, and if handled carelessly small seeds may shift out of them.

Correct labeling is of paramount importance. Every envelope or container should show the kind and variety of seed; the date, including month and year when harvested, and the place where grown. For the cloth bags, a slip of paper bearing all this information should be inserted with the seed. It is very convenient also to have a tag on the outside of the bag, but on no account should the inner label be omitted, because of the liability of loss of the outside tag.

Gardening on Ocean Liners

Most Atlantic liners carry several gardeners. Modern liners carry an enormous number of plants. Hundreds of these are used to decorate the saloons and corridors. Then there is a pleasant place like a veranda which is called the tea garden, where one sits amongst bay trees and other shrubs planted in little tubs. Many ships have trellis work, with ivy and other creepers trained over it. Cut flowers for table decoration have to be provided by the ship's gardeners. On both sides of the Atlantic a great quantity of cut flowers are taken on board at the beginning of the voyage. They are placed in cold storage, whence a supply for the tables is taken as it is wanted.

Several tons of fresh vegetables are stored away in a chilled room, and these also are taken out, as they are required.

PADS PREVENT BRUISING OF BARRELLED APPLES

In barreling apples for market, many growers use corrugated pads to reduce the amount of bruising caused by pressing the head of the barrel into place. If two pads are used, one is placed under the face and the other over the bottom of the barrel; if only one is used, it may be placed on either end, although the single pad will best serve if placed on the bottom, especially when the apples are jumbled and uneven pieces of the head, which cut and bruise the fruit when the pressure is applied. Excelsior cushions are seldom used because they are more expensive and have no particular advantage over the corrugated pads in ordinary packing operations. If, however, a delicate and easily bruised variety is being packed for show purposes this kind of pad, it has been found, may be used to advantage.

Each year more and more farmers are realizing that no matter how they improve the methods of production they are still far from the head of the procession if they do not give a great deal of attention to the matter of markets.

Would Not Be Without Baby's Own Tablets

Mrs. W. Beesley, Mille Roche, Ont., writes: "I have used Baby's Own Tablets for the past eight months and would not be without them. I used them for indigestion and teething and my baby is cutting his teeth without any trouble whatever. I can highly recommend the Tablets to other mothers.' What Mrs. Beesley says thousands of other mothers say. The Tablets are a mild but thorough laxative which regulate the bowels and sweeten the stomach, thus driving out constipation and indigestion and making teething easy. They are sold by medicine dealers or by mail at 25 cents a box from The Dr. Williams' Medicine Co., Brockville, Ont.

PROTECTION OF PLANTS FOR WINTER

(Experimental Farms Note.)

A little protection will often bring plants safely through the winter, when, if they are left exposed, they may either be killed outright or badly injured and, in the case of fruit, the crop may be much reduced. Plants are also The plants usually protected from the weather are strawberry, raspberries, grapes and roses.

It has been found by experience, that although strawberries will often go safely through the winter without being mulched, there are winters when it pays well to have the plants protected by a light mulch as in such winters if the mulch is not there the plants will be killed. In mulching strawberries the plan is to wait until hard frost or just before winter sets in, and then spread a light covering of loose straw over the plants. All that is necessary in most places is enough to prevent sudden thawing and freezing, or just enough to cover the plants. A thick mulch may do more harm than good. The cleaner the straw the less work there will be in eradicating weeds next summer. Marsh hay, where it can be obtained, is good as it is comparatively free of weed seeds, and it will not lie too compactly over the plants.

Where raspberries are injured in the winter, they will be much protected and will, taking one year with another, come through much better if the canes are bent over just before winter sets in and the tips held down. Where there is little snow and the winters are very cold it has been found desirable entirely to cover the canes with soil.

Expect in districts where the grape can be grown commercially, it is necessary to protect the vines to ensure a crop. A few days before the ground is expected to freeze up, the vines, having been previously pruned, are bent down and covered with soil, which is left on until the following May as it is spring frosts which may cause the loss of the crop.

Roses must be protected in most places in Canada to help ensure their coming through the winter alive, and protection is not always successful. The most reliable method of protection is to cover the plant with soil. Where this is not easy or possible, the base of the plant can be mounded up with soil to a height of twelve inches or more, and the top then bent over the top to help collect the snow and give greater protection it is desirable. In the case of climbing roses, a good plan is to cover them with a box filled with dry leaves, making the top water tight so the leaves will keep dry.

Each winter many trees are injured beyond recovery in Canada by mice. This can be prevented by wrapping the trunks of the trees with building paper just before winter sets in, having the paper come close to the ground and putting a little earth about the lower end of the paper so they will not get at the tree from below. Mice will not usually eat through the paper and, as in most cases they are close to the ground, the paper need not be more than eighteen inches to two feet high. The paper should be tied after wrapping so that it will not come off.

W. T. MACOUN,
Dominion Horticulturist.

HULLED VS. UNHULLED SEED OF TIMOTHY.

(Experimental Farms Note.)

Practically every sample of timothy seed contains more or less of so-called hulled seed, that is to say naked grains which have lost their silvery-white hull. There are several causes which are responsible for the loss of the hull. In timothy seed, the most common ones perhaps being unfavourable weather conditions during harvesting time and delay in cutting until the seed is too ripe. Over-ripe seed is apt to hull easily in threshing, the result, of course, being the appearance of a certain percentage of hulled grains in the threshed seed. In other instances the presence of hulled seed is due to the fact that the timothy crop contains a number of plant types which are characterized by hulling easily. It has been shown that there exist timothy forms, representing distinct varietal types, which lose the hull in threshing much more easily than others.

Whatever the causes of the hulling may be, the presence of hulled seed in large quantities in a sample is lowering to its trade value, it being generally conceded that hulled seed is apt to show a poorer germination than unhulled seed. While this is hardly true of freshly harvested seed, it certainly does apply to old seed, as has been repeatedly demonstrated long ago. As a result of the impaired germination, lower-yielding crops are likely to be obtained from seed which contains much hulled grain.

In the spring of 1917, the Central Experimental Farm, Ottawa, received from the Seed Branch, Dominion Department of Agriculture, two lots of timothy seed, viz one sample of hulled seed and another lot of unhulled seed both picked out from a seed sample harvested in 1916. Small portions of the two lots have been sown yearly in comparative test plots at the Central Experimental Farm, care being taken that the plots were as identical as possible in respect to condition of the soil.

The two yields per acre from the hulled and the unhulled seed harvested 1916 and sown 1919 and 1920 respectively, have been as follows:

Unhulled Seed: Sown 2 ton 840 lb.

Unhulled Seed Sown 1920 2 ton 1354 lb.

Hulled Seed, 1 ton 1375 lb.

Hulled Seed 2 ton 53 lb.

From these figures the deduction may be made that hulled seed, 3 or 4 years old, is likely to produce a much smaller hay crop than unhulled seed of the same age. Under the circumstances it is obvious that timothy seed holding only a small percentage of hulled seed is always preferable to seed containing a larger percentage and that, if badly hulled seed is the only one available, it is good policy to have a sample tested for germination before sowing and to increase the rate of seeding in proportion to the percentage of lack of germination.

M. O. MALTE,
Dominion Agrostologist.

If Stomach is Bad Let Diapepsin End Gas, Indigestion

"Pape Dispepsin" has proven itself the surest relief for indigestion. Gases, Flatulence, Heartburn Sourness, Fermentation or Stomach Distress caused by acidity. A few tablets give almost immediate stomach relief and shortly the stomach is corrected so you can eat favorite foods without fear. Large case costs only few cents at drug store. Millions helped annually.

Farmers Mistaken Independence

E. S. McKenzie

The experience of the past has shown that there is a need of a working together spirit among farmers. Alone, the farmers can accomplish little in the way of a better market for his produce and more favorable terms in purchase and loans.

On the other hand, organized properly farmers can improve marketing conditions, increase demand get higher returns for his products without raising the price to the consumer, and could if necessary, buy in bulk at no loss to the manufacturers but at considerable saving to themselves.

The idea that the life of the farmer is an independent one, and as some one has said "he is as free as he thinks he is" is to the writer's mind a grave mistake, and hitherto we have prided ourselves on our independence to too great an extent and to a loss to ourselves. I fully agree that the farmer finds all too much of his time spent alone in hand work which tends to make him more individualistic as time goes on. The more a man works and thinks apart from his fellows, in his own particular grove, the less confidence he has in his neighbors and the business men around him. The longer a man lives to himself and for himself and his family, the harder it is to induce him to co-operate. He spends all his energy of body and mind in an endeavor to produce, failing to pay sufficient attention to the marketing and sale of his crops and in this way looses a greater part of profit therefrom, which find their way into the pockets of the all too great army of middle men.

From statistics we find that the average percentage of profit to the farmer in this country in less that 20 per cent; if we are to take working cost and depreciation from this it leaves very little to encourage the farmer. The farmer has the power to change all this in his own hands, but owing to this mistaken independence he does not exercise this power.

Why have so many of our boys and girls left the farm for lives of servitude? To a larger extent on account of the mistaken indepence in rural communities.

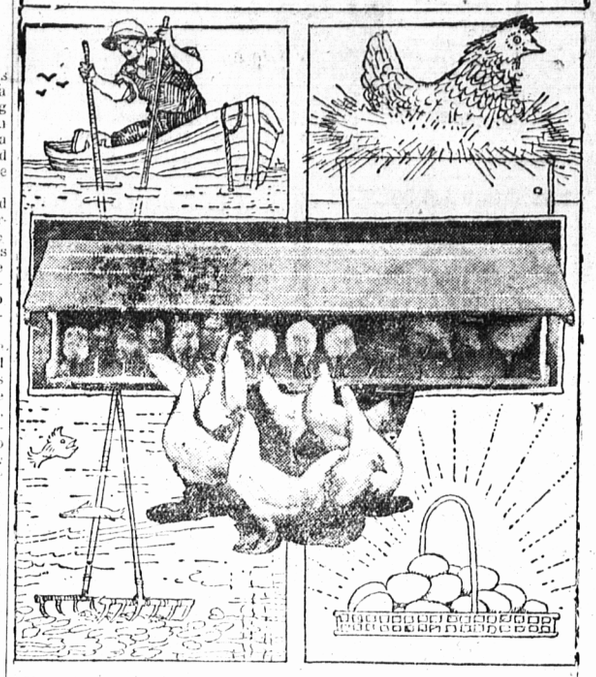
The idea that each one trying to promote his or her own individual welfare has and is killing the seeds of social intercourse and community spirit in many districts.

Acting on the independent idea we farmers are too inexpendent in thought and action. In place of asking ourselves if our ideas would be the best for the community we put them into practice without even giving a thought to others.

As an illustration, communities co-operating along branding lines and all the farmers going into one class of stock, are sure to make larger profits from the sale of such stock, as it takes less time for securing and shipping a car load of this stock which if uniform and of a good quality brings a higher price on the market than a car of mixed grades of every known and unknown brand. The same idea carries in all classes of crops and live stock. Then improving the standing of the community promotes the individual prospecity which in turn lifts our profession to a higher plans.

Is there a need of co-operative effort in agriculture? Rural census returns show that there is. Farm independence has been the means of agriculture, our chief industry losing prestige financially and socially. Give the farmer a fair field and let him foster the co-operative spirit of the hour, and agriculture will maintain its pride of place in our province. He will never get a fair field by acting individually or by distressing his neighbor. Then when distrust and jealousy are wiped out by personal contact of man with man we will realize what co-operation means than and only then will we see a real coming back to the land and the farmers coming in to his own.

Science Finds That Oyster Shells Make Hens Lay More Eggs



"Hens do not like oyster shell when dirty, resulting from throwing it on the ground of the feeding pen. Keep the shell in a clean hopper where the hens may feed on it as they like."

HOW many people who keep a few hens think of supplying their table with eggs, ever stop to think, while sitting before a plate of oysters on the half shell, that the shells consist of one of Nature's best foods for poultry? The oyster shell is composed of from 90 to 95 per cent pure carbonate of lime or calcium carbonate and when properly dried and crushed into flakes about half the size of the finger nail and fed to the laying hen, makes possible the greater production of eggs. Poultry, like human beings, require some form of calcium in their diet.

An interesting bulletin, just issued by the Oyster Shell Products Bureau at Washington, makes public the results of recent scientific experiments conducted at various State institutions of agriculture. These studies have demonstrated that proper results are not fed crushed oyster shells for the best calcium (lime) ingredient of a laying hen's diet; that a prominent cause of low egg production, particularly during the late winter months may be due to a lack of sufficient calcium in the poultry ration; that the average cost of feeding shell amounts to less from 3 to 5 cents per hen a year; and that oyster shell, when placed in the feeding pen for the hens to [illegible]

Some poultry raisers have the idea that if a hen does not get enough lime (oyster shell) in her ration, she will lay soft-shell eggs, but this popular theory has been upset somewhat by experimental evidence. What does happen, however, is that the hen will continue to lay a hard egg, but cuts down on her production of eggs until she accumulates a supply of calcium (shell) material. Poultry science is now of the opinion that the laying of soft eggs is due to some pathological condition rather than to the lack of calcium in the feed. So, then, the farmer or the poultry raiser, with this thought, is lucky if the hen accidently lays a soft egg and thus arrives at the fact that it is time to begin feeding shell.

The proper preparation of shell feed is also to be important. This is done by manufacturers who put the shells through a process of drying, crushing and sizing, resulting in a loss in weight between the crude oyster shell and the finished poultry product of 34 per cent. Practical tests of the feeding habits of poultry have greatly improved the quality of their foods and the favorable effect their use in egg production.

TIMOTHY VARIETIES.

(Experimental Farms Note.)

Timothy is, like all other cultivated grasses, a very variable plant; that is to say, a very large number of different forms exist. As an illustration it may be mentioned that the writer, some 10 years ago, collected several hundred different forms in two days in one single locality. These forms differ from each other in respect to mode of growth, leafiness, and other characters upon which their relative agricultural value might depend, as well as in tremendous variation it is obvious that it is possible to develop varieties, it is equally obvious however, that the development of such varieties must be a slow process, taking many years to accomplish, particularly in view of the fact that timothy plants representing different varietal types freely intercross. It is generally conceded that it will take at least eight or ten years to bring out reasonably uniform varieties. A few varieties, fairly uniform and breeding tolerably true to type, are on the market in Europe at present.

In the United States, timothy breeding has commanded considerable attention during the last twenty years on a few plant breeding stations, the result being the development of a number of distinct varietal types. At the Central Experimental Farm, Ottawa, Ont., timothy breeding was started in 1912, with the result that several high-yielding varieties, breeding fairly true to type, have been developed.

In 1920, the Central Experimental Farm received, for comparative tests, two of the best varieties produced at the Plant Breeding Station of Svalof, Sweden, and one from the United States Timothy Breeding Station at North Ridgeville, Ohio. These were sown, together with seed representating a mixture of the best varieties developed at Ottawa, with the following result:

	Yield per acre.
Ottawa seed	2 tons 313 lb.
Primus (Sweden)	1 ton 1825 lb.
N. Ridgeville, U. S. A.	1 ton 1800 lb.
Gloria (Sweden)	1 ton 1505 lb.

It should be explained that the experiment was placed on a rather poor piece of land, with the Ottawa seed at a slight disadvantage as far as fertility of the land is concerned, and yet the Ottawa timothy proved by far the best. Under the circumstances experiments are being made to propagate on a large scale, a few of the best varieties developed at Ottawa, especially as it has been ascertained that these breed true to type, or even improve upon the foreign varieties tested.

M. O. MALTE,
Dominion Agrostologist.

HINTS ON TURKEY REARING.

(Experimental Farms Note).

It is a regrettable fact that the turkeys raised during the last few years have rather deteriorated both in quality and numbers. The greater part of all failures that occur in the business is due to inbreeding and careless selections of turkeys for breeding purposes, which includes the practice of killing the largest and best specimens for market, and keeping the culls for breeders. The result is lack of vitality in the young turkeys which means the failure of a large proportion to grow to maturity. There are two general methods of maintaining and increasing vitality in a flock of turkeys. One is by the continual introduction of new blood into the flock and the other is by the selection of the best results are obtained by a combination of these two methods. Too much new blood cannot be introduced into the flock, provided it is of good quality and from the same variety. Above all things, immature turkeys hens should never be selected for the production of eggs for hatching. Hens two years old or older, of good average size for the variety to which they belong, will lay eggs that will hatch out much stronger, better poults than can be obtained from hens, but as a general ruel the poults do better if brooded by the turkey hens. Poults will thrive well if given the same care and when old enough they should have almost unlimited range of pasture or woodland. They should be fed in the morning before they are allowed to wander away, and a liberal supply in the evening given to teach them to return regularly to their roosting quarters. Turkeys require a plentiful luppsy of fresh water at all times.

The feeding of turkeys for market should commence as soon as which will usually be in October, the cold weather brings in the fall. They will take on flesh then more rapidly if the range can be limited somewhat more than during the growing period.

A ration consisting of equal part of finely ground oats, cornmeal and middlings mixed into a crumbly mass with boiling hot water or milk and fed while a little warm, is excellent for fattening for market. All turkeys intended for breeding purposes should have been selected and separated from the fattening birds before commencing the fattening ration for the latter.

The advantage of keeping but one variety of turkeys on a farm is that a more uniform grade will always be produced for market.

J. D. LANG,
Poultryman,
Experimental Station
Lennoxville, Q.

HORSE AILMENT
of many kinds
quickly remedied wit
DOUGLAS'
EGYPT
LINIM
ST S BLEED
PR ENTS BI
CURES TH
SPRAINS
best all a
stable as
KEEP
A