OTHER PEOPLES' EXPERIENCE

WHAT ONE EXPERIMENTAL FARM FOUND OUT ABOUT POULTRY

(BY RAYMOND PEARLE, Ph. D.)

[Note.—Under this caption, and in the space following this notice, arrangements have been made to publish each week a series of articles which will be of extreme interest to the farming community, because they are the accounts of actual experiences which experts on the various subjects treated have been thorough. The correspondents who contribute these articles are all of them authorities of the highest grade in Canada and the United States. The first of these articles was "The Art of Canning Vegetables in the Home," by Mr. Brazeal, of the United States Department of Agriculture. The present article by Mr. Raymond Pearle gives information of the greatest value to all poultry breeders. The second instalment will appear next week.]

Many years' practical experience in raising and keeping poultry, and investigations in poultry breeding at the Maine Experiment Station, have resulted in the accumulation of a considerable fund of information on poultry management. It is the purpose of the following articles to outline this experience for the benefit of poultry keepers, and thereby help them to discriminate between some of the wrong theories which have underlain much of the common practice of the past, and the better theories which underlies other and newer methods that are now yielding more satisfactory results. It may be that these methods are no better than those practiced by others, but the attempt is made to state concisely the methods which have been or are now being successfully employed at the station.

RAISING CHICKENS BY NATURAL PROCESSES.

While even the small grower of chickens in many cases uses an incubator for hatching, circumstances sometimes make it necessary to hatch and raise chickens by aid of the mother hen. To persons so situated an outline of the method practised at the station before incubators had reached their present development may be helpful. An unused tie-up in a barn was taken for the incubating room, and a platform was made along the inner side. The platform was three feet above the floor and was 2 1-2 feet wide and was 50 feet long. It was divided into fifty little stalls or nests, each 1 foot wide 2 feet long and 1 foot high. This left a six inch walk along the front of the nests for the hens to light on when flying up from the floor. Each nest had a door made of lathes at the front so as to give ventilation. The door was hinged at the bottom and turned outward. Across the centre of each nest a low partition was placed so that the nesting material would be kept in the back end—the nest proper. For early spring work paper was put in the bottom of the nest, then an inch or two of dry earth, and on that the nest of soft hay.

Whenever half a dozen hens became broody they were taken in from the hen house and put on the nests, each nest having a dummy egg in it; the covers were then shut up and nearly every hen seemed contented. In a day or two thirteen eggs were placed under each hen. Every morning the hens were liberated as soon as it was light, when they would come down of their own accord and burrow in the dry dust on the floor, eat, drink and exercise, and in twelve or fifteen minutes they would nearly all go onto the nests voluntarily. In the afternoons one would occasionally be found off the eggs looking through the slatted door. If she persisted in coming off she was exchanged for a better sitter. The double nest is necessary, otherwise the discontented hen would have no room to stand up except on her nest full of eggs, and she would very likely ruin them. There was no danger of this with the double nest, as she would step off the nest, go to the door and try to get out.

The advantages of a closed room in which to confine the sitters are many, as the hens are easily controlled and do not need watching as they do when selecting nests for themselves, or when sitting in the same room with laying hens. A room 12 foot square could be arranged so as easily to accommodate fifty sitters.

The most satisfactory arrangement used for the accommodation of a hen with her brood of young chicks consists of a closed coop about thirty inches square, with a hinged roof and a movable floor in two parts which would be lifted out each day for cleaning. This little coop has a wire covered yard attached to it on the south side. The yard was 4 by 5 feet in size and 1 1-2 high. Its frame was of 1 inch by 3 inch strips and was fastened securely to the coop.

The wire on the sides was of 1 inch mesh, but on the top 2 inch mesh was sufficient. Such a coop is easily kept clean, and the coop and yard can be set over onto clean grass by one person.

The small run will be sufficient for the first few weeks, but soon the chicks need greater range, and then the fence at the farther end of the run can be lifted up three or four inches, and they can pass in and out at will, while the mother will be secure at home, and they will know where to find her when they get cold or damp or need brooding. Such a coop accommodates 15 or 20 chicks until they no longer require brooding, after which several flocks could be combined in one and put into a portable house on a grassy range.

Whenever the hen is allowed to hatch or to mother chicks, much care must be exercised to prevent lice from getting a foothold and ruining the birds. The free and frequent use of fresh insect powder upon the hen, working it through the feathers to the skin, is one of the best methods for destroying these pests. Grease or oil is effective when applied to the heads and under the wings of young chicks, but care must be taken not to get too much on them, especially during damp weather.

RAISING CHICKENS BY ARTIFICIAL PROCESSES.

Incubators have been so much improved that there are several kinds on the market that will hatch as many chicks from a given lot of eggs as can be done from selected broody hens. They require little care, maintain even temperature, and are easily adjusted to meet the increase in temperature arising from the developments going on in the eggs. In some machines the moisture supply is automatic and adapted to the requirements; in others it has to be supplied, and skill is necessary in determining the quantity needed. The economy of the incubator is very great. A 360 egg machine will do the work of nearly thirty broody hens, and can be kept at work continually if desired.

There are many kinds of incubators on the market, most of which will give fairly satisfactory results, but whatever make of incubator is used, pains should be taken to become thoroughly acquainted with the machine before the eggs are put into it. It is advisable for a person not familiar with the use of an incubator to run the machine empty for several days before filling it. After the eggs are put in, changes and adjustments should be made with the greatest care for fear of extreme results. By the use of an incubator it is possible to determine exactly the time when the chickens shall be hatched. With the strain of Barred Plymouth Rocks bred it was formerly necessary to hatch the chickens in March in order to have them ready for November laying. By better methods of feeding, breeding and treatment, it is now possible to delay the hatching until April and the first of May, and have the pullets in good laying condition the last of October and early in November. Chickens hatched in March under the present method of breeding and feeding would all come through laying in August.

THE INCUBATOR ROOM.

It is important that the incubator room be so situated that it can be kept at a fairly constant temperature. On this account an underground room is usually selected. For many years the well-lighted cellar under the wing of the farm-house was used. A cold or badly ventilated cellar would, however, be poorly adapted for incubators. Ventilation is very important, and where several incubators are in use artificial ventilation must be provided, in order that the machines may be furnished with clean, fresh air at all times.

In the directions which accompany the hot-air incubators of the type used at the station it is stated that an artificial source of moisture is not needed in operating these incubators except in very arid parts of the country. It is said that in other places the normal moisture of the atmosphere is sufficient to insure the necessary moisture in the incubator. The experience of the station indicates that except in a rather wet season this is not the case. It has been found here that in ordinary season if no artificial moisture is supplied to the incubators there is too great an evaporation from the eggs. It is demonstrable that many eggs fail to hatch because of this dryness of the air in the incubator. The most satisfactory way to supply the extra moisture has been found to be by wetting the cement floor of the incubator cellar thoroughly two or three times a day, depending on the degree to which evaporation is taking place. During the hatching season the aim is to keep the floor of the incubator cellar moist at all times.

A permanent brooder house would be indispensable for the raising of winter chickens, and a house piped for hot water would have some advantages. The advantages are especially great when raising chickens if April or May prove to be cold or wet, for then the small houses are apt to be cold outside of the brooders. In ordinary seasons little or no difficulty is experienced in raising chicks hatched in April and May in the small houses. The expenditure would be greater for the piped house for the reason that colony houses should be provided, in which the chickens may be sheltered, after they leave the brooder house. The Maine station uses small portable brooder houses. (See Fig. 1). The small brooder houses built on runners are easily run about, and for the work with spring-hatched chickens are preferred to the large permanent brooder house. Several styles and sizes have been used, but the following meets the needs of the station better than any other that has been tried. The houses are built on two 16-foot pieces of 4 x 6-inch timber, which serves as runners. The ends of the timbers project beyond the house, are chambered on the underside to facilitate moving. The houses are 12 feet long; some of them are six feet and others seven feet wide; seven feet is the better width. They are six feet high in front and four feet high at the back. The frame is of two by three lumber; the floor is double boarded, and the building is boarded and covered with a good quality of heavy roofing paper. Formerly, shingles were used for the outside covering, but paper is preferred and is now used exclusively. This kind of covering for the wall is not so likely to be injured in moving as shingles. A door two feet wide is in the centre of the front and a six-light window, hinged at the top, is on each side of it. Two brooders are placed in each of these houses and 50 to 60 chicks are put with each brooder. A low partition separates the flocks while they are young, but later it has to be made higher. The houses are large enough so that a person can go in and do the work comfortably, and each one accommodates 100 chicks until the cockerels are large enough to be removed. One of these houses is shown in Fig. 1.

(To be Continued Next Week.)

DAIRYING

COWS GUARANTEE THE FERTILITY OF THE COUNTRY

Some Pointed Remarks as to Dairy Feeds.

GILT-EDGED BUTTER.

(BY E. C. BENNETT).

Cows are the key to our country's fertility. Nothing helps make the land rich like a cow. She consumes all kinds of forage products and send them back in the form of manure to fertilize the fields. The fertility that is carried away in butter is almost a negligible quantity. In milk it is a little more, but very small.

The old way of getting fertile lands was to clear up new ones. When all were cleared up and exhausted at home the farmer moved out to the Western frontier and entered new lands for a song. He had little or no system of improving his soil.

But now the West is filling up and prices of land there are often greater than at home. We must find a new way to conserve fertility. Rather we must learn again the old way, for many of the old countries now have land richer than it was a thousand years ago; yes, richer than it was 5,000 years ago, as for instance in Egypt.

Fortunately conditions usually work out for good if we manage to adjust ourselves to them properly. In pioneer days when fresh and fertile lands were plentiful milk and butter were in little demand. Nobody then thought of keeping cows to improve his land. It was not practicable. Clearing new land was the easier way.

Now conditions are changed. With the increase of population has come a great demand for products of the dairy. The cow is a more important factor than formerly. With proper management she not only enriches the soil, but makes rich her owner also from sale of her milk, cream and butter.

Bran is one of the dairy cow's best foods. It contains bulk to make it digestible, and protein and ash to form milk. Bran and cornmeal form one of the best combination dairy feeds.

Rape is growing in favor with the farmer as a feed for sheep and hogs, and as a general fall feed for cattle in preparing for winter, but care must be taken with dairy cows lest it should taint the milk.

Cabbage is another succulent food that is apt to taint the cow's milk. Its succulence is valuable, but corn is more conveniently grown and can be stored to better advantage.

As a calf feed there is no advantage in gravity skim milk. The little gain in flesh is more than offset by loss of fat in your butter which would accrue by use of a separator.

Be gentle with all young stock. Do not allow it to be beaten or even frightened. "As ye sow, so shall ye reap" in this matter.

Keep a sharp lookout among your neighbors, and save every thoroughbred and extra fine heifer by buying it to raise. Even if it fails to make good at the milk pail, you have the chance of selling it for prime beef at three years old. It is surprising how many herds of fine cows are lost by "dying young."

A shed with a tight roof is better than a barn with tight sides as a summer night shelter. Fresh air does not cost anything, if it did perhaps we should try harder to utilize it.

Growing animals are merely machines to turn proper food into profit, the more food they can take care of without undue stimulating the sooner they will make returns.

Gilt-edged butter needs cream that has been ripened so far as possible away from contact with anything which lowers its qualities. That is, it must be kept away from smells of any kind, no matter how good they may seem to your nostrils. They will surely have a bad effect on butter. This rule applies from start to finish in the process of butter-making. Clean, pure, free from odors that will work trouble.

The churning must be done at the right time, which is when the cream is just sour enough to churn well. If you watch this a little you will see that too many people make churning a matter of convenience. They know they ought to churn to-day, but they let it go till to-morrow, because there are other things to attend to now. It is not right. You are building your reputation now for making blue ribbon butter.

Fancy churns that knock the butter out of cream in five minutes are enemies to good butter-making. It takes time to do the job just right. Churn slowly and steadily and quit before the particles have begun to gather into very big lumps. About like small peas suits me best. Get the buttermilk pretty well out, using the very purest water possible. Salt in the churn, never touch the butter with your hands, and pack in a good tight tub or other package. Keep cool and win the prize.

SWINE

SOMETHING ABOUT THE BREEDING OF GOOD PIGS

One Man's Experience With This Branch of Work.

CAREFUL FEEDING ESSENTIAL.

(BY. H. A. EMMONS, VIRDEN, ILL.)

The sow is given good treatment after breeding, care being taken to give her as great a variety of feed as possible. Slop made of bran or middlings and not too much corn, I consider excellent. A short time before farrowing she is put into a separate pen that is warm and dry, and we do not allow her to be disturbed. After farrowing she is given some water and a little slop, say the first day, then after that I gradually increase the quantity. Our aim is to have the sow bring two litters of pigs in the year, the first in March or April, and the second in August or September. If pigs come in April they escape all the cold weather and will be strong enough to go on grass as soon as it is ready for them. Ground feed is fed as much as possible, as it is more easily digested, thus giving greater gains. If plenty of milk is not at hand, slop is made of bran or middlings. They are not forced to drink from mud wallows, but have plenty of clean water, and are fed on a floor free from lice. At no time can too much hygienic care be given them. The aim is to keep them growing as fast as possible. The quicker they can be got ready for market the less risk there is of cholera and swine plague.

Pure-bred hogs are best, of course, giving larger returns from less feed. Have found that some hogs can be matured on at least one-third less feed than others. Poland-China are preferred, as they have fine fattening qualities at all ages. April pigs are sold by December 1, and should weigh from 200 to 225 pounds each. Pigs coming the latter part of August or September are strong enough to stand cold weather by the time it is upon them, and if properly cared for will make a good gain during the winter and be ready for the market by the following June. They should have a greater variety of feed than when on grass, and need more care than summer pigs; besides, their bed must be warm, clean and dry, the straw being changed at least twice a week. Too many pigs should not be kept in one pen, as they will injure one another by piling up in cold weather. They should be fed very regular, in the evening and morning; hogs fed in this way are the healthiest and thrive the best.

A QUARTET OF HANDSOME AYRSHIRE COWS.

These pure-bred Ayrshire cattle are owned by Adam Seitz of Waukesha County, Wis., and have attracted much favorable attention. They secured first prize in 1907 for Ayrshire herd at Wisconsin State Fair. The cow shown at the left of the picture is Alta Cook 2d, having secured first prize and championship for three years, together with other substantial awards. Her yearly record is 11,500 pounds milk, yielding 420 pounds butter fat. In this herd are anumbe rf good cows yielding 8,000 pounds of milk annually and upward.

AMERICAN BREEDERS' MEETING.

The sixth annual meeting of the American Breeders' Association is called for December 8, 9, and 10, at Omaha, Nebraska, in association with the National Corn Show held at that place December 6 to 18. A programme of addresses by prominent breeders of live stock, prominent breeders of plants and scientists prominent in the study of the heredity of plants, animals and men is being prepared.

Arrangements are being made to have many of the addresses illustrated with stereopticon views and moving pictures.

MR. JOHN DRYDEN.

The death of Mr. John Dryden, for many years Minister of Agriculture of Ontario, has called forth an unusual number of tributes, both to his personal character and to the efficiency of the work he did for the advancement of agriculture in his province, and, incidentally in others. He was a farmer who understood his business and applied the knowledge gained in it to his duties as a member of the administration, working to spread what had been learned everywhere of the best ways to realize for man's good the riches of the soil. He left a good tradition for his successors to follow.

APPLE MEN AT LA TRAPPE.

What promises to be one of the most instructive summer meetings of the Pomological and Fruit Growing Society will take place at the monastery of the Trappist Fathers, La Trappe, Oka, on Tuesday, and Wednesday, August 24th and 26th.

Amongst others who will take part are Prof. W. T. Macoun, horticulturist, of the Experimental Farm, Ottawa; Robt. Brodie, Westmount; J. C. Chapais, St. Denis; R. W. Shepherd, Como; Auguste Dupuis, Village des Aulnaies; Prof. W. Lochhead, Macdonald College; Dr. Beaudry, St. Jacques de l'Achigan; Prof. J. W. Swaine, Macdonald College; R. A. Rosseau, La Trappe; and J. M. Fisk, Abbotsford.

The Rev. Fathers have undertaken the accommodation of all attending the convention at a reasonable tariff to cover expenses.

THE CROPS

ALBERTA'S WINTER WHEAT CROP AND ITS CULTIVATION

Dry Culture Wheat Farming in Southern Prairie Province.

HARVESTING BIG PROBLEM.

(BY C. W. PETERSON.)

The prairie provinces of Western Canada are chiefly devoted to the production of spring wheat. The area where winter wheat is produced is confined to a portion of southern Alberta, containing an area of 245 miles in length and 200 in width, immediately north of the international boundary. Southern Alberta was literally discovered by winter wheat growers from the Western States, who quickly saw the vast possibilities of the industry there.

To arrive at a proper appreciation of the agricultural situation in southern Alberta it should be understood that two distinct systems of farming are followed, namely: Farming under irrigation and dry land culture. Winter wheat is regarded as a distinctly non-irrigated crop. It is invariably put in on summer-fallowed land, and the rainfall is sufficiently heavy to produce enormous crops of this cereal without fail. Very considerable diversity of opinion exists as to the quantity of seed to be used. It varies all the way from 20 to 80 pounds per acre. A great many farmers have sown 30 pounds with good results. Probably about 45 pounds is the most popular quantity at the present time, but the tendency is distinctly downward. Of course, much depends upon the preparation of the land. The better this has been done the less seed need be used. Sub-surface packing is largely practiced, and promises to become a feature of wheat growing on non-irrigable lands.

Winter wheat production is a seductive proposition. The elements of uncertainty as to returns have been reduced to a minimum. Winter wheat production comes nearer to being a straight manufacturing process than any other line of farming. The grain grower is better able to forecast results and to estimate revenue and expenditure. He is not at the mercy of the vicissitudes of seasons. He does not have to wait with seeding until the frost is out of the ground. The seeding period comes during the warm summer season. He does not have to like awake nights wondering whether he will get his wheat cut before frosts destroy the fruits of his labor. Winter wheat ripens early, and, with any adequate equipment, can be handled comfortably and housed safely before adverse weather conditions prevail.

Again, where farming is carried on upon summer-fallowed land, the economy in labor is considerable. The winter wheat farmer starts summer fallowing as soon as he can comfortably get on the land. A week or two one way or the other makes no material difference. Surface culture follows summer fallow, and seeding takes place before harvest. There is no expensive crowding of teams and hired help to get the spring work done in time, and, later on, to get the harvest completed within a few days. All the help can be engaged for the whole season, and the farm work can be systematically pursued, with the certainty that nothing will intervene to prevent the completion of each particular farming operation in good season.

The facility with which a large area can be prepared and seeded to winter wheat in these days of steam and gasoline motive power is developing a tendency to tempt farmers in southern Alberta to embark upon wheat growing on a scale quite beyond their ability to properly take care of. The task of putting in 1,000 acres of winter wheat is a comparatively easy one. The harvesting of such an area, however, presents certain difficulties which cannot be readily surmounted by the average farmer. In the Pacific winter wheat-growing states the proposition is a simple one, owing to the successful operation of the combined harvester, which cuts, threshes and bags the wheat in one operation, and is capable of covering 4 acres per day. This implement has not, however, as yet, been introduced into southern Alberta, and until it is the problem of harvesting the ever-increasing crop area may become a serious one. In the meanwhile the railways and the Government of Alberta are doing their best to meet the situation by organizing in Eastern Canada harvesters' excursions to the West at a nominal return fare. The enormous expansion of the winter wheat area will very soon grow beyond the possibility of harvesting the crop by present methods. No doubt this problem will ultimately solve itself, but in the meanwhile southern Alberta's greatest need is an efficient harvesting appliance that will minimize the volume of hand labor required in handling the crop.

Do not disgrace yourself any more than you have to by letting a crop of weeds and briers grow to maturity in the orchard. Get busy; cut them while in bloom. This will fix them. Try it once and you will be convinced.

Sheep will not thrive if they must go far after water.

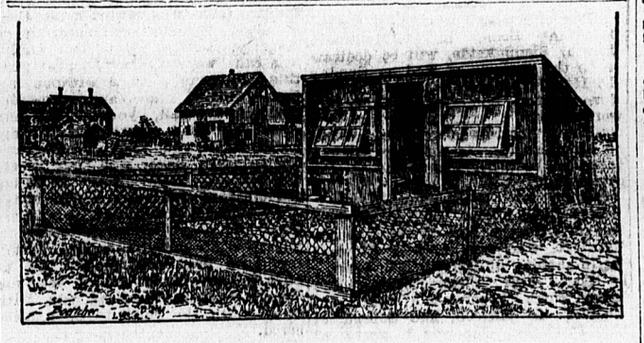

Fig. 1—Portable brooder house.

AGRICULTURE

ROTATION IS THE KEYSTONE OF GOOD HONEST FARMING

Where the Grower in the State of Maine Won Out.

SHORT ROTATIONS ARE BEST.

(BY J. S. GATES.)

Rotation may well be said to be the keystone of modern conservative agriculture. By conservative agriculture I mean that type of farming which looks to the future, this in contradiction to the exploitive type of a system which has for its aim getting the most out of the land in the shortest time and for the least possible cost. Exploitive farming is usually a one-crop system and if it deserves a place at all in these modern times it should be confined to the very fertile soils. Its place here will, of course, be only for a limited time.

A conspicuous example of a good and bad rotation is that of the Maine versus the New York state system of potato growing. The potato is a main money crop for both Maine and New York. The department of agriculture crop reporter for December gives the average yield of potatoes for Maine at 225 bushels an acre, and for New York only 82 bushels. The potato expert of the department of agriculture, L. G. Dodge, recently stated that this wide difference in yield for these two states was due more largely to the difference in rotation followed than to any other cause.

The Maine grower always plants his potatoes on a clover sod. His rotation is: First year, oats seeded with clover and timothy; second year, hay; third year, potatoes; and the fourth year the land is seeded to oats with grass and clover again. In northern Maine this rotation has for many years been practised by almost all of the potato growers with the result that Aroostook, the great potato county, with its grand total of 20,000,000 bushels a year, shows an average yield around 200 bushels an acre.

In Southern Maine, like New York State, no definite system has been followed. The potatoes were simply planted on a convenient spot of land that was found vacant when planting time came along. Until quite recently the yield of potatoes there has been very low, but during the last five years many of the growers in Aroostook county have sold out their high priced land, come south, and re-bought for one-fifth as much an acre. Further, they have gone to work and proved that it is not the superior soil that has made the high yield in Arostook, but that it is the superior method, particularly with reference to rotation, for the Arostook rotation transplanted in southern Maine has produced as high yields as it did away up there 300 miles from market.

In a few instances this same short rotation has been practiced over in New York state with just as good results as anywhere else. A short time ago my attention was called to the work of J. D. Taylor of Steuben county, N.Y., who has practiced this same rotation. On one acre of ground Mr. Taylor secured a record yield of 600 bushels of potatoes, and this without the use of any commercial fertilizer at all.

In most eastern states of equal importance to rotation stands out the necessity of that rotation being a short one. This is particularly true with any rotation which includes grass or clover. Hundreds of letters are received each year by the Department of Agriculture asking what to do—that the weeds are simply taking possession of the meadow land. Obviously, the only thing to do is to plough up the meadow land, put to some cultivated crop, and then seed again; and in this way only can the encroachment of undesirable plants be prevented. By this method the yield of the hay is always larger and the quality and feeding value very superior.

To sum it all up, let me say that if we expect to do profitable general farming in the east, a definite set plan of rotation is imperative. The days of profitable haphazard farming are over.

THE QUEBEC HAY CROP.

The Sherbrooke Record publishes reports from correspondents in various sections of the Townships on the hay crop. With but one or two exceptions they report a considerable falling off fro mlast year's yield. In the vicinity of Sherbrooke the haying is about completed, and the farmers are in a better position to determine how they stand as compared with last year. The majority report a slight falling off, but speak of the good quality of the hay. They predict that the long price for hay will be maintained.

DOLLAR WHEAT AHEAD?

From all points of Manitoba and Saskatchewan come reports of heavy rains, and a good part of Alberta shares in the rains. This is a good import, as under the hot suns the grain would probably start to ripen before filling, whereas the cooler weather and the added moisture will cause the grain to continue developing, increasing the yield and improving the quality. Taken in conjunction with the favorable report of the Saskatchewan Government, the outlook is propitious.

The hens will live quite cheaply on grass as a good part of the feed, but should have some grain.

ANSWERS TO CORRESPONDENTS

NOTE.—Not more than one question from one correspondent can be considered at one time. Questions should be specific, plain and concise, and should be addressed to the Editor of the Agricultural Department of this paper. Any person requiring answer by mail must enclose stamped envelope.—Editor.

AD Correspondence Cau Cyn

Lame Horse.—Subscriber—"I have a horse that is lame when he moves briskly, though is not noticeably so when walking slow. Will a blister help, back of stifle joint? That is where the soreness is."

Ans.—Try the blister, repeating every ten days.

Swamp Fever.—J. B.—"A two-year-old colt became sick last winter. He is very weak and lifeless, but has no cough. A blister on his hip broke, discharging yellow matter. He eats well but is getting very thin. What ails him?"

Ans.—We suspect your colt is suffering from disease known as swamp fever, or infectious anemia.

Opening the Teat.—O. L.—"1. I have a heifer that has a second opening in the teat about half way up. Is there a remedy? 2. Some of my cows have boils on teats; boils are sore and break open after three or four days."

Ans.—1. The opening of teat must be closed by proper surgical operation. 2. Apply carbolized ointment to the diseased teats.

Stringy Milk.—W. W. K.—"I have a cow that is well and fat, gives a good amount of high testing milk, but the milk is stringy and sticky after souring. Is it good to use?"

Ans.—Such trouble with milk is generally due to germs which gain access to the milk after being milked. Try boiling all milk dishes twice daily and whitewash the milk room.

Founder. — Ringbone.—C. K.—"1. I have a horse that is stiff in front legs when backing has hard work to reach grass in pasture or drink out of anything low. He lays down a great deal. What can be done? 2. What is a good ringbone cure?"

Ans.—1. Probably chronic founder. Try rubber air cushion shoe. 2. Blister same as for spavin.

Neck Swollen, Colt.—F. W. P.—"A colt twisted halter rope around her neck and remained so some time before the rope broke. The neck swelled twice its size and she can't lift her head. She eats well. What can be done?"

Ans.—If the bones of neck are not out of place, the colt may recover in time. Rub the neck with spirits camphor.

Laws Governing Veterinarians.—Subscriber—"Can a veterinarian condemn a horse for glanders without testing? What are the laws relative to such cases? Does the owner bear the expense of testing?"

Ans.—Apply to your governor for a copy of the laws you wish. It is unusual for a state veterinarian to charge individuals for work which the state pays him for.

Abscess.—P. E.—"1. Mare's bag is caked on one side. She has lump just in front of bag. What can I do for her? 2. Colt is six days old. What can I feed him to help nourish him?"

Ans.—1. An abscess is probably forming which should be opened and washed out with carbolic acid. 2. Feed colt cow's milk diluted with one-third water and sweetened.

Mare Ailing—Wire Cut.—G.V.C.—"1. I have an old mare that has partially lost control of her hind legs. When down she has great difficulty in getting up. Her kidneys are out of order, urine scanty. I fed 6 quarts ground barley and oats mixed three times a day, grass during the day and wild hay at night. What can be done for her? 2. I have a colt that walks on back part of hoof, toe turns up and is very long. When he was four months old he became caught in wire which twisted tight about his leg and was not discovered till the leg was badly swollen. Could this have affected his leg to make the toe turn up? What can be done for it. Ans.—1. Feed bran and shorts with oats in place of the barley; give 1-2 dram tinct. nux vomica on tongue 3 times daily. 2. The injury to the colt's leg caused by the wire accounts for the present condition. It may improve with age, but there is little you can do to help it.

Shoulder Lameness.—Mare 17 years old has shoulder lameness out of stable. After working her on a fodder cutting machine I found her sore in the shoulder blade about 5 inches from where the collar rests on the neck. Her leg ever since has seemed stiff. It hurts her to move it sideways. Bathe her shoulder with a strong liniment in the morning and in the evening again. I notice swelling as far as it was hot and sore. Ithen used another liniment it is not as strong. I used this for a day or two. It helped little. I then started to use witch hazel and all of the swelling was taken out of the shoulder joint and is swelled a little. I bathed her shoulder for the first few days with hot water and vinegar. What can I do for her?—H. P. R. This is probably due to the anterior and posterior subscapular muscles, which have been sprained by over exertion when she was out of condition. I think the main thing is the rest cure. However, if she doesn't get better in four weeks, apply thoroughly rubbed in, the following blister: Cerate of cantharides one ounce, lard 1-2 oz. biniodide of mercury one dram, mix, and repeat in four weeks if needed.

HORSE SENSE.

A happy medium can never be reached by striving to raise average crops. To be happy one must raise more than medium crops.

Stir the soil when a crust begins to form.

For late lettuce select a cool somewhat shaded spot.

Bush lima beans should not be set closer than two feet apart.

Kerosene emulsion, or tobacco solution for the plant lice.

Plant at least three plantings of sweet corn this month, ten days apart, so as to have plenty of corn for the table.

Keep all space in the garden occupied with a crop. As fast as one crop of vegetables are gathered, clear up, and plant another.

It is not advisable to cut much asparagus after the third week in June. Remove the weeds, stir soil and give a coating of well rotted manure.

A crop of beans enriches the soil. After the beans have appeared above the surface of ground cultivation should be carried on that will stir the surface of the soil and leave it fine, loose and almost smooth.

Rice hulls are a very poor dairy feed, being very woody. Rice bran is better, but not so good as rice polish, which is a dairy food very rich in nutritive elements.