OF INTEREST TO FARMERS

THE HAPPY HEN IS THE BEST LAYER

We think of the hen as but a machine, whose sole purpose is for the manufacture of eggs for the food of man. We forget that it is the maternal instinct which prompts her to lay those eggs, and that it is only by selecting breeding and supplying unnatural conditions that we have been able to make use of her product in paying quantities of a food. Now a hen is a thinking, feeling animal. She is endowed with intelligence of a low order, to be sure, and, yet, we seldom give her credit for all she knows. She is sociable and capable of enjoying true happiness.

The sunlight of her surroundings is reflected in her moods. She can either sulk or be joyous. Like the human, bodily comfort tends to maintain the happy hen. Her teaspoon of brains is highly organized.

Few farm animals have eyes so well developed as our feathered friends. Their eyes are keen for detecting the minute seeds or the elusive bug, and the crow or hawk can be seen by the cock at a great distance who warns his mates of approaching danger. Their sense of hearing likewise well developed.

The nervous organism of the hen is delicate in the extreme. She apparently suffers as intense pain when a live feather is plucked from her body as you would suffer from the prick of a pin.

The homing instinct of the hen is strong. She will find her way great distances from her roof tree in search of food or to steal her nest in a favorite nook.

The song of the robin is no more pleasant or even musical, than the lay of a happy hen.

A hen is sociable. Given no companions and no congenial employment to busy her mind and feet I much doubt whether Biddy would pay her board. A few carresses and kind words are appreciated by her, and are factors toward a full eggbasket. Happy hens will recognize the voice of their attendant, and break into a chorus of song at her approach, while their "better half" will pierce the air with his clarion notes.

Speak sharply to them, and it startles them, arousing fear; while, if you speak softly, they will come crowding around you expecting a hand-out.

A hen has a delicate sense of taste. She picks up each particle of food, and perhaps drops it several times before she decides whether to swallow it. She tastes every morsel which she does not recognize at once, before she swallows it.

Her appetite craves a variety of foods and her bodily needs require it as well.

No one food contains all the needed constituents for sustaining her body in a healthy condition as well as furnishing the needed materials from which eggs are made.

The hen must be kept both healthy and happy to be a money maker for her owner. Health is necessary to happiness. A hen "with a grouch" is not in it with a happy hen.

POULTRY MEN NEED NOT WORRY

Poultry raisers who know and understand their business have no cause to worry. It is now a matter of better methods if success is to be attained. As much money in clear profits can be earned under a condition of low grain prices and reasonable egg prices, as even during the past months of the highest geg prices and corresponding, high feed prices.

Feed even at present prices, must not be wasted. Millions of dollars are annually wasted in poultry feed, not by carelessly over feeding, so much as by providing the feed to the fowls by wrong methods and in wrong proportions.

Ventilation in the Poultry House.

In building a poultry house it is important to provide for good ventilation both for summer and winter. This does not mean that a special ventilating system should be installed, for results in recent years have demonstrated that special ventilating systems are rarely if ever successful It has really been found that adequate ventilation can be provided for in the arrangement of the windows. It has long since been established that a combination of cotton and glass is best. The amount of cotton in proportion to the amount of glass depends upon local climatic conditions in the district where the house is being located. On the average, however, the proportion should be about half a glass and half cotton. The total window area on the south side should be about half the total area.

Both cotton and glass sections can be opened in the summer months to give plenty of circulation of air, and on hot days and nights the door should also be kept closed, the window probably being opened on fine days. The cotton section of the window will admit plenty of fresh air, providing the curtain is kept free from dust. The house will have plenty of fresh air and dampness and draughts are This is just what the laying hens need for they have plenty of fresh air and dampness and draughts are avoided. In planning the house therefore, make provision for cotton and glass section in the windows.— M. A. J.

FRECKLE-FACE

SUN AND WIND BRING OUT UGLY SPOTS. HOW TO REMOVE EASILY

Here's a chance, Miss Freckleface, to try a remedy for freckles with the guarantee of a reliable concern that it will not cost you a penny unless it removes the freckles; while if it does give you a clear complexion the expense is trifling. Simply get an ounce of Othine—double strength—from any druggist and a few applications should show you how easy it is to rid yourself of the homely freckles and get beautiful complexion. Rarely is more than one ounce needed for the worst case.

Be sure to ask the druggist for the double strength Othine as this strength is sold under guarantee o money back if it fails to remove freckles.

TEACH CHICKS TO ROOST WHEN 8 TO 12 WEEKS OLD

It is often advisable to teach the chicks to roose when 8 to 12 weeks of age. When they are allowed to remain on the floor, it is difficult to keep them clean and to keep them from crowding. If wide roosts —3 to 4 inches—are used, there is but little, if any, more danger of crooked breasts than if the chicks are allowed to remain on the floor.

The chicks can generally be taught to roost by putting the perches near the floor, but if this plan is inconvenient or does not prove effective the chicks may be placed on the perches after dark for a few nights until they are learned to go there of their own accord. Where a large number of chicks are brooded together around a brooder stove it is a good plan to place the roosts in the house when the chicks are 4 or 5 weeks old, so that the larger and stronger chicks will start using the roosts while the weaker chicks will stay around the brooded hover.

CAPONS

You will observe that the above selection does not include the various egg breeds or Mediterranean class. Custom has decreed or been responsible for this, and while the demands of certain large markets are sufficiently emphatic to create "custom" yet the present so-called customs are really chargeable to the same old cause—poor tools or inability to caponize the smaller breeds owing to clumsy instruments. The instruments have, however, been so improved in the past few years that Leghorns and other small bodied birds can be successfully operated upon at about eight weeks of age and the gains on these birds as proportionate to their natural size. At any rate the markets are subject to education and they should yield as readily on this as any other question, where a demand is to be created for a valuable staple article of food and shoud readily accept capens of the smaller of lighter breeds.

If these were caponized and properly conditioned for winter and Easter markets, is sold even at the price of fowl (hens), would show a profit, but it is not too much to say that better prices could reasonably be expected.

If you are only raising a few for your own use caponize the cockerels and your meat supply can be spread over the entier year instead of being compelled to use or dispose of them while young. This applies to all breeds, whether leargе or small, and if they are fed the same as hens or pullets, they will be ready to use any time between the ages of four and eighteen months. They can run anywhere but do the best in a pen by themselves.

Let us take stock, as it were, and see what caponizing means to the poultry inetrests when the operation is performed successfully:

1, The youngsters—pullets and capons—grow faster and develop better.

2 Keeps your flock orderly. Reduces noise, quarreling and feed bills, and aids in infertile egg production. "Swat the Rooster."

3 Their value increases with age, until full maturity is reachen.

4 You can watch markets and take advantage of high prices and increased growth.

5 You can enjoy the greatest luxury; on your own table, known to king or peasant, at a cost less than that of ordinary cockerels.

6 A reputation is easily built up and maintained for the highest grade of table poultry known, enabling you to choose your customers and practically fix your own prices.

7 As foster mother the capon will stop your losses from hawks and crows and solve many of your brooding problems.

8 As a means of conserving resources, increasing quantity, improving quality, and as a source of greater efficiency, pleasure, satisfaction and profit, caponizing is one of the greatest, if not the greatest, asset poultry raising possesses today.

Making Yolks White.

A scientific poultry breeder in Italy has succeeded in producing eggs with perfectly white yolks.

It appears that the yellow color of an ordinary egg-yolk, which is sometimes intensified to a bright reddish hue, is due to a pigment called "carotin." The same pigment gives to carrots their familiar hue, and hence the name bestowed upon it.

The yellow legs of Leghorn chickens, and of some other breeds, owe their color to carotin, which, as it would seem, is a rather common coloring substance in nature. There is much of it in corn and in the green feed supplied to poultry.

The experimenter found that by entirely eliminating canotin from the food given to his chickens he was able to produce Leghorn hens of the white variety with white shanks and white beaks, and the yolks of the eggs they laid were white.

Scaly Leg

Frequently fowls develop a condition of the leg known as scaly leg, which is caused by mites burrowing under the scales of the fowl's shanks. The shanks appear rough and scaly, and in time are a source of annoyance to the fowl and may even cause lameness.

One of the chief factors giving rise to the development of scaly leg is filth and mud. If the poultry yard is muddy and dirty in the spring of the year look out for scaly leg.

In order to cure the condition individual treatment is necessary. The shanks should be anointed with some penetrating oil. Use a few drops of kerosene. Rub the shanks well and treat once or twice a week until the trouble disappears.—M. A. J.

HOUSING OF POULTRY

Not all who keep chickens either in town or country know how to secure the best results from their flocks. For lack of knowledge the chicks often develop into spindle legged, small-bodied, poor laying creatures. And yet no amount of instructive literature is published and can be had without cost by applying to the Publications Branch of the Department of Agriculture at Ottawa. Housing shares in importance with feeding, if the best results are to be gained. In this connection it is interesting to observe that a revised edition of the bulletin on Poultry House Construction by F. C. Elford, Dominion Poultry Husbandman has just been issued by the Department of Agriculture at Ottawa, to meet the constantly increasing demand for information coming from almost every class of the community. The bulletin, which is based on trials of various kinds of poultry houses in different parts of Canada, treats of the subject clearly and comprehensively. Plans and building instruction, with illustrations and diagrams, are so given as to enable anyone to erect such a poultry house as may be desired.

Growing Ducklings Need Attention

Growing ducklings need careful attention in hot weather. Provide plenty of shade and watch out for fleas in the ears. It is a good plan to give them a tub of water in which they can immenrse their heads above the ears. We have found that even in rapidly growing market ducks, which are normally kept out of swimcayed food.

The symptoms of the various poisoning cases differ somewhat but usually include loss of appetite, lack of lustre in the plumage, unsteadiness of gait, and finally convulsions and death. Sometimes, especially in cases of ptomain poisoning, resulting from the consumption of bad food, there is a partial paralysis of muscles in different parts of the body. Frequently, in cases of poisoning, birds lose the control of their head and neck, giving rise to the so-called "limberneck."

Treatment obviously first consists in removing the cause. Determine whether the birds have been fed or could have obtained any put rid food or salt, arsenic or other poisonous substances. If only a few birds are affected they may be treated individually but if many birds are affected then it is wise to treat the whole flock. In a moist mash give a dose of Epsom salts, allowing one pound for 100 birds, or at that rate. Also give them plenty of milk to drink M. A. J.

PREPARING GREEN DUCKS FOR MARKET.

The greatest profits are to be made out of ducks by selling them as soon as they reach marketable age. This they do at about twelve to fourteen weeks of age. Therefore, if large sized Pekin ducklings are being raised, when about 19 weeks old they should be fattened for two weeks on a ration made of corn, three parts by weight, middlings two, bran one, beef scraps one- half part, and three per cent. grit and ten per cent. green food. During the last seven days, however, leave the green food out, because it tends to color the flesh and produces a soft rather than a firm flesh. Feed and mash three times daily, but do not allow food to remain before the birds for any length of time. Give plenty of water to drink, but none in which to swim.

It is best to pluck the ducks dry, although the feathers are scalded slightly. Killing is generally done by sticking in the mouth or through the throat with a knife which has narrow blade about four inches long. Then the ducks are stunned with a sharp blow on the back of the head.

The feathers are scalded by rolling the duck in a grain sack which has been soaked in boiling water. Do not leave in the sack too long. Pluck the feathers of the body first, taking a firm grip near the base of the feathers and pull in the opposite way to which they lie. Then pluck the tail and wing feathers. Leave the neck covered for about two inches. Long pin-feathers may be removed with a dull knife. The down may be rubbed off with the moistened hand or after sprinkling rosin over the body it may de dipped quickly into hot water, after which the down and rosin are rubbed off easily. When the ducks are steamed carefully they seldom show any signs of scalded flesh.

After the ducks are plucked, they are usually washed and put in the water for an hour or two to cool and plump. M. A. J.

Hood's Sarsaparilla

Makes Food Taste Good

Creates an appetite, aids digestion, purifies the blood, promotes assimilation so as to secure full nutritive value of food, and to give strength to the whole system.

ROOTS FOR MILK

Roots are in their general effect succulent roughage and serve the same purpose as silage. Because of the labor required in raising them roots are comparatively little used for dairy cattle. They could well be used more widely, since in many respects they are superior to silage and are specially useful when large quantities of grain are fed.

The kind of roots varies with the region, mangels in general giving the largest yield. Sugar beets, carrots and turnips are also used with success. Turnips must be fed after milking, and in medium quantities, if the milk is not to be tainted.

FATE OF COW FED ON STRAW

I had a seven year old cow in calf that was thin in the fall, but I fed her corn, and got her in better shape. A week ago I let her out at noon and she took a drink of water. She lay down and was unable to rise without help and could only remain on her feet a few minutes. She bloated and after five days died. I had fed her on good straw this winter. I did not feed her heavy, but fed her often. What was the trouble? A. P.

The cow died from indigestion brought on by your method of feeding, which was practically a process of slow starvation. Straw will not keep any farm animal alive during the winter, especially a cow thatis carrying a calf. You forgot that the cow had a calf to feed as well as herself. She had probably been very thirsty from the continuous ration of straw given her, and had thus taken an overdose of water, but the starvation feeding of so much indigestible matter, as straw proves to be, was thez real and first cause of death. There is no use for anyone trying to keep cattle throughout the winter unless succulent feed is prepared in the summer. The winter feed for cattle must have variety in order that some balance in providing all the nutriments required to sustain and build up the different animal organisms. These feeds include corn for silage, clover hay, roots and cerial grains, such as oats and barley.

The bloating you refer to, after the cow had taken the water, frequently accompanies indigestion, and is caused by the gases evolved from the walls of the stomach or the gases given off in the process of fermentation.

FEEDING COWS AT FRESHENING TIME.

Many farmers in drying up their cows prior to freshening make a costly mistake by cutting off feed of the animals and turning them out to live on second-rate hay and meagre grass from poor pasture. Such a system of management results in a thin condition in the cow which seriously affects her entire year's work. If the farmer will adopt the other practice, that of reducing the feed of the cow for a week to dry her up and then feed liberally to build her up to the point where she is almost fat, the cow will be strong and ready for a good year's work at freshening time. The animals should be dry at least six to eight weeks, and during that time should be gaining rapidly in flesh.

A ration which has produced good results is composed of four pounds of ground oats, two pounds of wheat bran and two pounds of cotton-seed meal. This is supplemented with 30 pounds of corn silage and 10 pounds of clover hay. The cow that is dry should receive six to eight pounds of this grain feed with silage and hay. As soon as she has freshened, the amount of grain fed should be regulated by the quantity of milk produced. Figures show that world's record cows require one pound of grain for every four pounds of milk whicvh they give but the average cow will require one pound of grain for every three and a half pounds of milk. Big producers are therefore most profitable, even though they do eat large quantities of feed.

Weigh the milk, and feed according to a cow's production. For a Holstein cow, feed one pound of grain for each 3 1-2 to 4 lbs. of milk produced. For a Guernsey or Jersey feed 1 lb. of grain for each 3 lbs. of milk. Feed all the roughage a cow will clean up.

SUMMER FEEDING THE LAMBS

By A. L. Hay ,Fredericton.

There are many advantages at the hand of the intelligent farmer woh practices summer feeding of his lamb crop. Every farmer breeding sheep, either for the block or for the pure-bred market, should realize that his net profit is measured by his degree of success in raising a lamb crop fit for market when the market demands are greatest.

It we stop to consider that in recent years the highest prices have been paid on the market for lambs in the early part of the season; that over two thirds of the lambs have been marketed between September 15th and November 1st; and that the method of selling lambs by grade, both for slaughter and as breeders, is fast coming into practice, we can readily see that the man who has his lamb crop developed to meet the season has a decided advantage over the man who has not done so. It is not meant from this that every farmer should adopt this practice of raising early lambs, as this is impracticable on many farms owing to lack of housing facilities, etc., but the point is this: the lambs should be better fed duringtheir growing season than is generally the case.

Lambs raised under favourable conditions should at least weigh sixty-five pounds at four months of age, but a large precentage of the lamb crop of the country finds its way to the market every fall at five and six months and weighing less than sixty-five pounds. This indicates that the lambs have been neglected during the summer months. The practice of feeding lambs just as soon as they will take feed has been followed in has given good results, especially if the ewes have lambed in poor condition and have a small milk flow. If the ewes are fed their grain in a low trough, the lambs will generally begin to eat with their dams at about two weeks of age. As soon as they are noticed doing this a portion of the pen should be set apart as a feeding place for them in which they will find a grain ration of equal parts by weight of wheatbran and oilcake. When the flock is put to pasture, if the pasture is good, very little is gained from feeding grain to the ewes, but a little grain fed to the lambs will give very good results. A sheltered place where the flock is in tre habit of gathering should be selected and a small peen or creep constructed into which the ewes cannot get, where the lambs can eat. At the age of one month they will eat and use to advantage about half a pound per day of equal parts by weight of bran and oilcake, and it should be borne in mind that liberal feeding is the source of liberal growth. It is possible to overforce lambs by injudicious feed with such foods as cornmeal but it is seldom, if ever, that this results from feeding the above mixture.

Lambs that have been fed a little grain before weaning will not only have put on a few pounds extra weight, but they will be accustomed to grain feeding and when changed to the grain ration before going to the fall fair or to the market, as the case may be, they will experience no bad effects from the change. It is at this particular time, when the farmer is anxious to have every day's feeding tell, that he will realize the advantages of summer feeding.

Try to arrange a change of pasture for the sheep. Changing the pasture as frequently as possible minimizes losses through parasitic diseases.

HORSE VICES

Cribbing and wind-sucking are habits and are catching. Technically the terms mean two different thirgs, but in horsemen's parlance they are interchangeable, as the two faults are usually found together, and neither name answers. "Crib-biting," or "cribbing" means biting the manager, fence, or anything the horse can catch with the teeth, and "wind-sucking" means just what it says, and can be practiced without cribbing; but the two go together. If a horse cribs and sucks wind the vice is incurable. Indigestion and painful or shedding teeth are sometimes given as primary causes for colts chewing or biting mangers and fences, and while doing this they incidentally learn to suck wind with the peculiar grunt familiar to those who are acquainted with "stump-suckers."

The harm of the habit depends on how hard the horse works at it, and even then all are not affected alike. Some suffer from digestive troubles and grow thin; others seem none the worse for it. Such delight some old-timers take in the habit that even when hungry choice food will not keep them away from it. A confirmed wind-sucker will find some way to practice, despite all erorts to stop him. While a cribber or wind-sucker cannot be cured as a rule, its effects may be lessened or temporarily prevented by keeping him in a box stall from which everything has been removed upon which he could fix or set teeth or chin to practice the habit. A strap tightly buckled around the upper part of the neck just back of the ears is about the only thing in the way of a help. This prevents gulping so hard when sucking in the air, and helps shut off the intake, and much of the lack of condition resulting from the habit is avoided, but will not cure.

One accustomed to them can usually tell a cribber before he sees him perform. The marks of the tight strap—if it has been in use—are plainly visible, and the edges of the front teeth are chipped or worn where he has been holding to something.

Treat your kicker by buckling an eight-inch length of chain to pastern of leg most used. Put in a swinging stall partition to cure a confirmed stall kicker. If the horse pulls back on his halter double a long, thin rope, put the loop under his tail, twist the ropes, bring them forward to withers, knot them there, pass free ends through rings of halter, and tie them to manger ring or hole in place of halter rope; or the halter rope, made long, may run from manger through ring in halter and down to strap on pastern of foreleg, so that when the horse pulls the foot is raised off the ground. A hind foot, if required, can be used in place of a fore-foot. One way of curing a balky horse is to unhitch him, pull his head around to his side, and tie it by means of a halter strap and slip knot to a strand of the hair of his tail pulled around to his side. In this position make him hustle in a circle until he drops. Sometimes merely distracting the attention of a balky horse, such as putting a twitch on his nose and starting the animal by any means hit upon, temporarily breaks up the habit. It is usually incurable when confirmed.

THE HARMONIOUS PIG.

Practice gentleness with the brood sows. It is best to be kind to them. It is best to have them consider you as a friend and counsellor, in a sense, rather than as an unwelcome party. Good treatment makes for contentment all around and more than repays in the long run—yes, more than repays even in the short run. If one cannot be in harmony with his swine herd, day in and day out, overlooking, of course, the little disappointments that come and go, then that one had better think as he has never thought before, and then decide on harmony, or some other business. Life is too short to live on the glooming side.

MINERAL FEEDS PREVENT BREAKDOWN IN SWINE

Through the feeding of mineral supplements to swine it has been found possible to prevent much of th loss caused by breaking down of hogs before or when they are sent to market.

Hogs that are given skimmilk, tankage or leguminous pasture commonly possess strength of bone sufficient for heavy feeding. Feeding additional mineral supplement, however, increases the strength of bone.

Bonemeal flavored with about ten percent. of tankage and fed at the rate of one pound per day for each 100 pounds of live weight fulfills the necessary mineral requirements.

The need for feeding mineral supplements comes under artificial conditions, as when hogs are confined in dry lot, or where they receive but little leguminuous roughage, and for purebred breeding animals.

PUTTING A FLOOR IN THE HOG HOUSE

An inquiry has been received asking for suggestions as to the best material for flooring in the hoghouse. Cement is the best all round material for the hog house floor. Some objection is heard in that it oftenbecomes damp and cold. This can be largely overcome by using an abudance of bedding. It is important that the floor have a solid surface underneath. In making the floor it is best to remove a few inches of top soil and then stamp well the surface that is to receive the cement. A good way is to excavate 8 to 12 inches and fill with gravel. Precautions must always be taken so that water cannot stand under the floor during the winter months for freezing and thawing will crack the floor.

The best concrete for the hog house floor is made of broken stone, gravel and coarse sand. A mixture often recommended consists of 13 parts gravel, 6 parts sand and 6 parts cement, with clean broken stone added later. Coarse gravel can be used instead of the broken stone. A floor of this nature will cost from 25 to 50 per cent, more than wood, but the concrete is for all time and is certainly more sanitary and easier to clean and keep clean.

TIP BURN OF POTATOES

(Experimental Farms Note)

A trouble which is widely distributed and very prevalent in some seasons and to which the name "Tip Burn" has been given is to be found among our potato crops. This trouble takes the form of a gradual burning and drying up of the leaves of the plants, often commencing at a comparatively early stage in their growth and in many cases if allowed to go on unmolested or unchecked, surely but surely involving the whole of the plants so that they die down a considerable time before the tubers are fully developed.

The appearance of this trouble in the fields is often mistaken by growers for late blight. There is however, a marked distinction between the two, for Late Blight may commence by attacking any part of the plants, leaves and stems alike and has a dark, water soaked appearance and in its early stages, is damp to the touch, while Tip Burn invariably commences at the margin or tips of the leaves and has a decidedly dry appearance and touch with the exception of after rain. It also appears much earlier in the season than Late Blight has ever been recorded and does not cause the death of the plants so early or rapidly. Nor has it ever proven so destructive as Late Blight, alto' evidence has been obtained that in seasons when it is severe and where no effort is made to check, a considerable reduction in the yield of marketable tubers, due to the premature death of the plants from this cause may result.

Investigators of this trouble are not yet in agreement as to the cause. The observations of some have led to the belief that a period of hot dry weather during the growing season causes the leaves to throw off moisture more rapidly than it can be furnished by the plant, the result being the appearance of Tip Burn. This theory, however, to be disputed by the fact that the trouble is not found in the hot regions of the Western States where the temperature often becomes excessive and the air is especially dry.

More recent investigations lead to the belief that this burning of the leaves probably follows the depredations of sucking insects. These investigations are not yet complete, but enough evidence has been produced to serve as a warning to potato growers to keep these insect pests thoroughly under control in an endeavor to avoid Tip Burn.

We have found in our experimen work with potatoes that Bordeaux mixture will to a large extent control this trouble. In 1918 when it was extremely prevalent, we had several plots to which, for the purposes of experiment, Bordeaux mixture was not applied. These plots suffered from a severe attack of Tip Burn and the plants were all killed down by the second week in August, while other plots on the same land and to which for the control of Late Blight, Bordeaux mixture was regularly and thoroughly applied, suffered to a very slight extent only, the plants remaining green until frost came. Bordeaux mixture acts as a repellant to the Leaf Hopper, as well as a protection to the plants. Many other cases in addition to that referred to, have come to our attention, bearing evidence that regular and thorough spraying with this mixture will reduce to a minimum the ravages of Tip Burn.

DISEASES OF BEANS

(Experimental Farms Note)

BEAN MOSAIC is one of the numerous hereditary and infectious plant diseases which have come into prominence during the last few years. It has caused considerable loss in the bean growing districts of Southern Ontario and has been noted in Manitoba, Quebec and the Maritime provinces.

The leaves of infected plants show irregular mottled and crinkled or puckered areas. The raised or crinkled area is of a normal green and the remainder of the leaf smooth and of a dry yellow green color. At first only a small portion may be of the yellow green color; this however gradually increases until the whole leaf and perhaps all the leaves on the plant assume the same shade and texture. Infected plants are usually small and readily crowded out or hidden by the more vigorous healthy ones.

Under normal field conditions, the plants set few or no pods at all and the pods produced are usually small. This naturally greatly reduces the yield, depending on the percentage of infected plants in the field. Diseased plants are however, found producing normal or nearly normal yields. These plants may have been infected late during the growing season. Seed from diseased plants is usually but not invariably infected and produce diseased plants. Such seed has a low germinating quality and frequently produces weak plants. Sufficient is known concerning the loss which may be caused by this disease to justify every grower in taking precautions to avoid and eliminate it.

It is carried in the seed from year to year and spreads from diseased to healthy plants under field conditions. Just how this transmission takes place is not known. However it can be transferred by crushing diseased leaves and then rubbing the extracted juice on the leaves of healthy plants. As this can be done quite readily it is possible that it may be spread by pickers, cultivating machinery or possibly by insects.

Home Nursing And Health Hints

UNTIDY SICK ROOM DEPRESSING

"I don't know what on earth is wrong with mother."

The speaker was a tall, comely woman, who moved leisurely and with remarkable grace. Her face bore tribute to careful and conscientious massage. Her graceful hands trailed a little as she seated herself flowingly in a low chair near the window and regarded her husband thoughtfully. Her husbad over the morning paper, looked up abstractedly and said: "Exactly my dear! exactly," and went back to the stock news.

The graceful woman shrugged her shoulders and looked past him. The door opened and a young girl litterally spilled into the room, scattering books and clean pocket handkerchiefs as she came.

Approaching the breakfast table with swirling movements, she dived toward the coffee pot, helped herself to sugar, and attacked her grapefruit breathlessly.

Grandmother Surprised Her

"Mother, dear! What on earth is wrong with grandmother? I rushed in to say good morning to her and to ask her how she slept, and she is sitting up in bed with the most desperate look in her face fiddling her fingers nervously looking straight ahead of her, with tears running down her face. She simply snapped my head off when I spoke to her. Snapped at me mother! Think of it! And grandmother is such a placid old lamb. What can be the matter-"

"Do try to sit up straight and stop wiggling, my dear. You make me quite nervous, plunging around like a young colt," said the graceful mother. "I am quite upset myself about grandmother. I was just trying to get your father's attention for a minute, but he is absorbed in stocks as usual. Simply wapped up in the morning paper."

"Well, I hope the old dear comes to. I must rush, mother! I'm late now. What on earth do you suppose—" and with an unfinished sentence floating in midair, the girl tossed a kiss in her mother's direction and literally ran from the room. She was not in the least like her graceful, well-preserved mother.

Learns Mother's Troubles

"I'll send for the doctor. But he'll be furious. He said grandmother was quite better and that he only bothered her by coming."

With a helpless gesture in the direction of the man of the house the tall woman trailed to the hall telephone. And, waiting for a response, was considerably enlightened by a fragmentary conversation that drifted down the stairs to her as she stood, telephone in hand.

Charlot, the upstairs maid, was speaking, and then her mother's voice was quite audible. Tear-shaken though it was, the words came distinctly down the stairs.

"It's the disorder and untidiness of it all that annoys me so, Charlot. I can't sleep for wanting to get up and straighten the room. That steamer rug has been lying on the floor beside my desk chair for three days now. No one ever thinks of picking it up and folding it and putting it away.

"That pot of daisies that my old school friend sent me last week has never had a drop of water and now it's too late. The flowers are all dead.

For Her Ancestors' Days

"I am old fashioned—and I have an orderly mind. There wasn't a better housekeeper than my mother in New England and I pride myself upon having followed in her footsteps. But daughters nowadays are different. They have no time for housekeeping. They are too busy keeping youthful."

The youthful looking matron in the hall below winced a bit, then gently replaced the telephone receiver and seated herself on the stairway. It was not treason to listen, for the conversation concerned her most of all. And she was ashamed and conscious of her failure as she listened.

"Sometimes I think nervous prostration could easily come to an enforced stay in an untidy room,' continued the old voice. "Since the nurse left, no one even thinks of bringing me my tooth brush and the wash basin before my breakfast. And I hate a breakfast tray before I have combed my hair and brushed my teeth."

This then, was the secret of the untasted breakfasts of the past few mornings, thought the listening woman. Why hadn't she remembered. It was stupid of her.

Other Nerve Wrackers

"And the medicine glasses and dishes that accumulate up here—and the dust. Just look at the dust on that table. And the clock has run down, and there are three cold hot-water bottles at my feet, and I haven't had a fresh sheet on the bed for two days! Yet the linen cupboard is full of sheets. It's just that my daughter doesn't think."

The daughter, ascending the stairs was thinking—very seriously. But she entered the sick room gracefully, sending Charlot from the room with a request to light a fire in the south guest room.

"We are going to move you into a sunnier room, mother dear," she said gently. "The change will do you good. I must wate these daisies. Perhaps they will revive and will cheer up in the south window."

And the grandmother, who had no idea that her voice had carried so distinctly, in her wonderment and surprise cheered up amazingly in the new room that suddenly blossomed into apple pie order, and convalesced rapidly.

FERTILIZERS GIVE HIGHLY SATISFACTORY RESULTS

Probably one of the latest statements regarding results from fertilizing comes from the 1920 report of Purdue Agricultural Exeprirment Station, Lafayette, Ind., which reads as follows:

"The Soils and Crops department has secured most valuable results on the North Vernon filed, which is representative of over 100,000 acres of land in Southeastern Indiana.

Use Potassium Permanganate

A little potassium permanganate in the drinking water will tend to prevent the spread of sickness among the chicks. Potassium permanganate may be purchased from the drug store in crystal form and a stock solution may be made up by dissolving as much of the permanganate as possible in a jug of awter. A few undissolved crystals in the bottom of the jug will show that you have a saturated solution. Add enough of this stock solution to the drinking water each day to prevent the spread of cold or sickness among the chicks.

Number of Chicks to a Brooder

Practically all of the commercial brooders are overrated as to their capacity. Chicks will always do better in small flocks than in large ones, although the brooder manufacturer is desirous of making as good a showing as possible from the standpoint of economy in rearing. Naturally, the more chicks you can brood together the less it is going to cost per chick. Most of the hovers on the market will accomodate about fifty chicks nicely up to weaning time. Stove brooders will accompodate larger numbers, depending upon their size, but about one hundred chicks is enough for one flock.—M. A. J.