

Soils and Crops

This Department is for the use of our farm readers who want the advice of an expert on any question regarding soil, seed, crops, etc. If your question is of sufficient general interest, it will be answered through this column. If it is not, a complete and addressed envelope is enclosed with your letter, a complete answer will be mailed to you. Address Agronomist, care of Wilson Publishing Co., Ltd., 73 Adelaide St. W., Toronto.

In the production of winter eggs no consideration is of more importance than the health of the hen. It is contented, healthy hens that pay the profit and care should be taken to insure the welfare of the flock. A few hours work on many poultry houses, coupled with an expenditure of a five dollar bill will transform them from an ugly makeshift into a comfortable, profit-paying hen home, and sometimes it is not even necessary to spend a dollar. If one does not wish to spend real money there is often enough to be gained by buying boards that lay around in disuse a long way in doing repairs.

Even corn fodder from which ears have been husked keep out cold and prevent drafts when set out three sides of the house.

Provide for Ventilation

It is better to leave an open space in the front of an otherwise closed house than to board it up tight until no air or sunlight can enter. In such a house colds are the rule and disease germs thrive. No hen can work properly under such conditions and if you really cannot afford a window or two, leave an opening that will admit light. Leave an opening in the front of the house anyway.

Too many winter houses, and for that matter all poultry houses, are built too narrow and too high. Build your house at least twelve feet wide and sixteen feet is better. Then make it only high enough to work under comfortably. This saves material and at the same time allows the perches to be placed far enough from the front. The wide house also conserves floor space and a house sixteen feet square has many advantages

over one twice as long and only half as wide.

Use plenty of litter in the laying house but be sure that it does not become wet and mouldy. Damp houses bring about this condition and floors should be higher than the outside yards. Even in houses where no dampness is noticeable and will draw moisture after it becomes finely pulverized.

The Best Breed vs. Good Care

Just what we have learned from the various egg-laying contests about which are the best breeds would be difficult, indeed, to determine, but one thing stands out clearly and that is the fact that almost every known breed—at least, every breed that is in anything like general use—can be relied upon to produce good returns if the keeper does his part. Practically all of the better known breeds have won in these contests under identical conditions, so if your Rocks lay less than your neighbor's Reds, do not be in a hurry to change breeds. It may be your own fault.

Skim-milk in copious quantities is a valuable egg feed and many farms can supply it at practically no expense. Where it is not at hand a portion of meat scrap added to the ration usually makes up for the lack of milk. However, do not get the idea that milk will also take the place of water. Milk is a food—water a drink. Corn has been severely criticized because of its fat-forming tendency but do not let this deter you from feeding corn. Fed rightly it is a great food and no one ever found a poor hen that was laying eggs enough to be profitable. It is usually the old hens that become too fat, but feed enough corn to aid in keeping up the body heat when the weather becomes cold. Corn and wheat are two great feeds.



INTERNATIONAL LESSON
JANUARY 13.

Lesson II. Jesus Begins His Work—
Mark 1. 12-20. Golden Text, Mark 1. 17.

Verse 12. Straightway the Spirit driveth him forth into the wilderness. The inaugural glories are followed by the temptation. According to Matthew and Luke he is led of the Spirit. In Mark the Spirit driveth him forth. He was impelled by a powerful influence, by a divine impulse.

13. In the wilderness—The wild and barren locality already alluded to. Forty days—Evidently a round number occurring frequently in Scripture, such as Israel's forty years in the wilderness, Elijah's going forty days in the strength of food given him by the angel of Jehovah (1 Kings 19. 8), Moses was in the mount forty days and forty nights (Exod. 24. 18). Tempted of Satan—The temptation occupies an initial place in the ministry of Jesus. Mark gives the briefest account. Matthew and Luke furnish details. The gist of the temptation is clearly stated by Matthew—"If thou be the Son of God," Take a short cut to the attainment of the Messianicship. Work miracles for your own advantage. By the manifestation of the divine power your possession come at once to power you throne. Satan—in Matthew and Luke he is called "the devil," the accuser or slanderer, also in Hebrew, "Abaddon," and in Greek, "Apollyon," Destroyer. Mark uses the name "Satan," "Adversary," as in Job 2. 1, and in Zechariah 3. 1. We have here current Jewish ideas of the existence of a personal evil agent with his minions, who opposes God, and by temptation, persecution, deceit, and guilt, estranges men from God. It is

to Milton and Dante that we owe much of the popular conception of the tempter. Was with the wild beast—A vivid touch of Mark, to show the awfulness and terror of the wilderness.

14. John was delivered up—To prison, the fortress of Machaerus, built by Herod on the east shore of the Dead Sea, where—John was beheaded. Came into Galilee—One of the four districts of Palestine in the time of Christ (Judea, Samaria, Galilee, Perea). The text indicates that he withdrew to Galilee because it was not safe to remain near the scene of John's labors. Preaching the gospel of God—Heralding the good news of the kingdom of God, according to some texts. The manner of Jesus' preaching is given in Luke 4. He thus begins his official ministry with preaching—a message of pure mercy which God had commissioned him to declare.

15. The time is fulfilled (or completed)—That nothing now stands in the way of ushering in the Messianic kingdom which God had purposed—nothing in the counsel of the nations of Israel or the condition of the nations. God has his own philosophy of history, his great purposes are executed not prematurely, but when the time is ripe or completed. The kingdom of God is at hand—Has come near. The people were familiar with the conception "kingdom of God." It becomes now a characteristic term of the New Testament and a fundamental idea of the preaching of Jesus and the apostles. The idea of a kingdom of God has its roots in the Old Testament conception of the rule of Jehovah. It means the rule of God on earth, as the goal of the Gospel and the completion of the course of history. It comes to its climax in the New Testament in the book of Revelation, where "the kingdoms of this world are become the kingdom of our Lord and his Christ." Repeat ye—He takes up John's message and makes it the first article in his preaching. Believe in the gospel—Believe in the good news announcing that the kingdom of heaven is at hand. This is not Christian faith, but only a step toward it. Christian faith is trust in

MOTHER-WISDOM

Suddenly Your Little Girl and Boy Become Different. What Is Wrong?

By Helen Johnson Keyes

Your little girl had grown to be a comfort. She was obedient, reliable, loving and she confided to you her pleasures and pains. How you had come to depend upon her although she was only thirteen years old. Your boy, too, about a year older, was faithful in all the work which you and his father gave him to do. Your love and your wisdom in bringing them up were rewarded; you were contented and at peace.

Then suddenly every thing was different. Your little girl burst into tears one day when you asked her to sweep the hall. Now, she only half hears what you say to her and pleads, "I forgot!" when you call her attention to the tasks undone. Her teacher complains of her inattention and her reports are poor. She walks as if in a dream, tells you very little about herself and goes off alone whenever she can.

About the same time your boy began to ask for all sorts of impossible things and to sulk when he did not get them. For instance, there is a horse in the barn which is full of tricks and which no one except your husband takes out; but this foolish boy has begged to drive him. Moreover, one day after having been punished for insisting on this privilege, he ran away and was found some days later in a lumber camp, earning good wages and indifferent, apparently, to the anxiety he had brought into his home. After you begin to recover from the confusion which it has caused you, to have your world turn a summersault, a feeling of anger rises in your heart. What wicked children you have after all!

No, they are not wicked. They are simply passing through a change so enormous that scarcely an organ or a blood vessel in their bodies is the same as it was last year. Some are larger, others are smaller, and some are learning to perform entirely new functions. If your world has turned several and then a series of handspiral!

Wise Parental Guidance

Be glad that you live on a farm. At this age more than ever before or afterwards, this boy and girl need wide spaces, freedom, variety and exercise out-of-doors. Perhaps they have had these privileges all their lives but you must manage to make them different now. They are filled with a passion for different things just because they are different. They crave what is unusual, startling and thrilling.

You may disapprove of this but you might as well disapprove of an eclipse of the sun! Your boy and girl crave them so intensely that they will get them in some way; it is your duty to see that it is in a wholesome way. Let them have their clubs and their parties and their visits.

Something new, too, should be put into their work. They should be given a sense of partnership with you and their father in whatever they undertake; for the age when they will work contentedly under authority, is temporarily passed and they must be inspired

instead of compelled. They are ready and eager to assume responsibility and are happy if you treat them like comrades. Nothing is more injurious to their development and to the peace of the home than an attitude of distrust and criticism toward these maturing children.

Your daughter's labor should be light until she is well established in the changes which make her a woman. She should be given a monthly period of rest, during which, for at least two days, she is not allowed to do heavy work nor take hard exercise. She must be protected from nervous worry, nagging and teasing at these periods, for only so will the new function develop properly.

At the same time, however, remember that too much coddling will make her selfish. Every girl thinks about herself when she is adolescent and it is not well to increase this tendency by constant references to her bodily and mental states. A mother must learn to take care of her daughter almost without seeming to do so.

A Period of Great Promise

When animals come to maturity their horns, fangs and claws develop. So, too, with the boy! Sometimes he seems to be an animal possessing and employing all these weapons upon us at once! Thus nature makes a man out of him. The tendency will not last for more than a few years, for then he will have learned how to use these wounding appendages or not to use them at all.

In the meantime, let him work off his excess energy and reduce the fullness in his blood vessels by a normal but not excessive amount of work and by all wholesome sports. Swimming is the very best sport in which he can engage. No exercise lessens to the same extent a boy's temptations or fills his heart with a purer joy.

He should understand his own nature. If his father does not speak with him about these things, ask the doctor to talk frankly with him as man to man.

Plenty of wholesome, simple food and almost no pastry, soda water or candy should be eaten by the young folk. The bedroom windows ought to be wide open and in mild weather they can sleep out-of-doors. Daily baths, preferably in a tub, should be taken and at a temperature cold enough to be bracing. These are a real help toward moral control. Of course your daughter should not take cold baths during her monthly periods.

Try to seize all the good traits which are manifesting themselves in your children and as much as possible to ignore the disagreeable ones. Most of the latter will be shed like a snake's old skin. Overcome evil with good. Never is the heart so quickly moved by religion, by all nobility and beauty as it is during adolescence. Feed your boy and girl with stories of brave men and women, with pure and cheerful religion, let them read poetry, make music and commune with the gentle loveliness of nature, which is always gracious and benevolent on the farm. Thus they too will grow graciously.

Poultry

Lice by day and mites by night furnish the unhappy conditions of poultry kept under insanitary surroundings. Treatments for lice are not effective for mites because the latter work only at night, making raids on the fowls from their hiding places in crevices of the roosts and cracks of the building. To destroy mites and keep the flock free of their depredations insecticide sprays and a sanitary building are necessary.

The presence of mites is indicated by small black and white specks on the roosts—the excrement of these insects. The first step is to get rid of the hiding places so far as possible. The roosts should be taken down and all unnecessary boards and boxes removed. In heavily infested houses the mites are to be found in all parts of the building, including the roof. Where they are less numerous the infestations usually are confined to the roosts and nests and the walls immediately adjacent. For small coops a hand atomizer will suffice for applying insecticides as sprays, but for larger houses a bucket pump, knapsack sprayer or barrel pump is desirable. A rather coarse spray should be applied from all angles and thoroughly driven into the cracks. The floor also should be treated, as many mites fall to the floor when the roosts are being removed.

Several materials that have been found effective, one of the so-called

wood preservers, consisting of certain coal tar products, known as anthracene oil with zinc chloride added, has given particularly good results. Its repellent power lasts for months. The cost is about \$1 a gallon, but twice the quantity may be obtained by reducing with equal parts of kerosene.

Crude petroleum is almost as effective, retains its killing power for several weeks and in most localities is very cheap. It will spray better if thinned with one part of kerosene to four parts of crude oil.

Both of these materials often contain foreign particles which should be strained out before spraying is begun. It has been found that one thorough application of either of these materials will completely eradicate the mites from an infested chicken house, but ordinarily it is advisable to make a second application a month after the first, and in some cases a third treatment is required. These subsequent applications may be made with a brush, using the materials pure and covering only the roosts, their supports, the walls adjoining and the nests if they are infested. This method of application is effective for the first treatment also if the houses are not heavily infested. Poultry should be kept out of the treated buildings until the material is well dried into the wood.

Used as a dip crude petroleum will also destroy the small mite which causes scaly leg. In dipping for this mite the solution should not be allowed to reach the flesh above the infestation or to get on the feathers.

The parents young; the children healthy; earthly paradise.—Victor Hugo.

Baby's Development.

First Month: Baby is sensitive to light as early as the first and second days. About the eleventh day it takes pleasure in the light of a candle and in bright objects. It hears on the fourth day. During the last two weeks of the month it discriminates sounds. It starts at gentle touches the second and third days. It shows sensibility to taste about the end of the first week. Strong smelling substances produce mimetic (that is, grimacing) movements the first day. During the first few days it evinces pleasure in nursing, in its bath, in the sight of agreeable objects; on the other hand it can evidence discomfort from cold, wet and tight clothing. Nor can any words be unmistakably more eloquent than the expression of its sense of outrage by reason of delayed alimentation. On the twenty-third day it can exhibit tears. On the twenty-sixth day—mark that blessed date in the calendar—it smiles! Within the first month it can utter vowel sounds. The memory as to taste and smell is first active; then, in order, as to touch, sight and hearing. The movements of the eyes are not yet co-ordinated; and no mother need worry at this time about squint. The reflexes begin to be active. Baby sleeps two hours at a time and sixteen hours in the twenty-four; thus far sleep and pabulum together make up its main interest in the universal scheme, in which it will later take so world-compelling a part.

QUESTIONS AND ANSWERS.

Baby Sleeps All Night.

When I put my 4½ months old baby in the hammock at ten o'clock after a

good nursing, it does not wake until 7 in the morning. And then it does not cry or seem to be hungry.

Answer—All right, mother, don't worry. Doctors are now advocating no feeding at all at night, unless baby makes a strenuous and unmistakable demand for a 2 a.m. repeat. Yours is a good hefty baby. Most babies weigh only 16 pounds at 6 months.

Some Baby.

My baby weighed 9½ pounds at birth; now, four weeks after, it weighs 12¼. It has several white spots in its mouth and I am afraid it is going to have a sore mouth. Is there any way to prevent this? He is otherwise perfectly healthy. I have no appetite for solid food; is this just nervousness or do I need something to give me an appetite? I am myself only eighteen.

Answer—A model baby, sure to take a prize in any baby competition. Two full pounds—yes, positively—two full pounds heavier than the average at birth, and holding its own well and strong at four weeks. Wash out the mouth with a solution of boracic acid (a teaspoonful to the pint of water that has been boiled); add a few drops of honey to this, so that baby will like it. You nurse baby yourself; that is splendid. Am mailing you information as to what you should eat and drink and much else helpful.

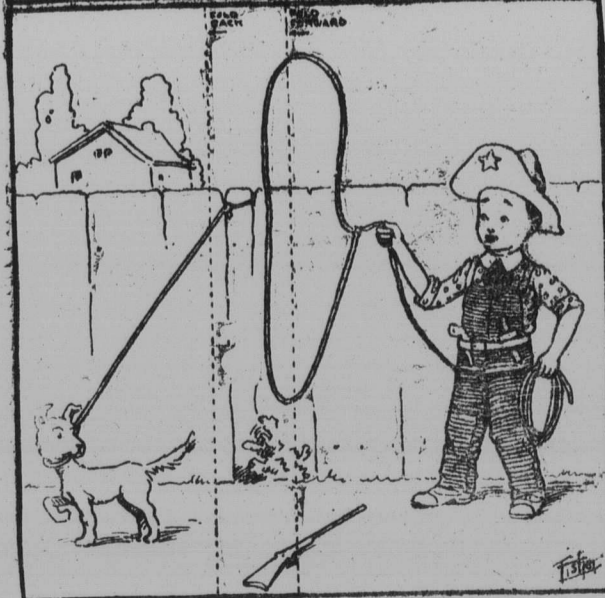
Something Terrible.

I am suffering terribly day and night. My hands, arms, elbows and neck itch terribly. I scratch and bleed terribly. My health seems to be good except this terrible trouble. Is there a remedy for this terrible itching and scratching?

Answer—Relief goes by return mail; try to hold on until it comes!

FUNNY FOLD-UPS

CUT OUT AND FOLD ON DOTTED LINES



See how I spin thisariat.
It's real wild western, is it not?
And just to show how well I cast,
I'll rope my dog and make him fast.

The Dairy

The losses caused by ox warble each year aggregate millions of dollars. Not only is the hide of the infested animal punctured by the emerging larvae, causing a reduction in value of one-third, but the presence of the grubs in the animal's back is a source of loss which can not be neglected. The latter is very often overlooked. The poor condition of the animal, its inability to take on flesh, or poor showing at the milk-pail, are factors attributed to other causes. Most uninformed cattlemen attribute these conditions to poor care, lack of proper nourishment, or physiological troubles. The presence of fifty or sixty burning, running ulcers on the back of the animal seems a matter of small importance, and is considered lightly by most people. But, Mr. Farmer, how much would you accomplish if you had fifty or sixty boils on your back? The two conditions are analogous and conducive to the same results.

The insect causing all of this trouble is one resembling, in the adult stage, the horse bot-fly, or as is sometimes called, the "nit" fly, but somewhat larger. The adult is seldom

seen about the cattle. It is timid and appears only when everything is quiet. The eggs are deposited upon the hairs during the spring and summer, and the animal, upon licking them, carries the egg or larva into its mouth. The young maggot passes into the gutlet. From the gutlet it migrates slowly through the tissues toward the back. It arrives beneath the skin, and a lump or excrecence begins to appear about mid-winter. This lump gradually grows larger until the middle or latter part of April, when the full-grown grub, which caused the lump, emerges through a hole cut in the hide some time previous, and falls to the ground. It then burrows into the ground and transforms to a pupa, and the adult two-winged fly appears from three to six weeks later. This completes the life cycle, which occupies about one year.

This is one of the easiest insect pests to control that we have. In the winter and early spring all the insects are in the larval stage in the backs of the cattle. If every one owning cattle would squeeze the grubs from the backs of his animals and destroy them, there would be no nucleus for a new generation, and consequently no ox warbles the next year.

When the grub "ripens," i.e., when it matures, a large hole appears in the lump, bordered with pus. This condition usually appears in April and May. When it comes, wrinkle up the hide containing the grub, get the two thumbs and first two fingers on each hand beneath the lump, and squeeze. The grub usually flies to the ceiling like a wad from a pop-gun; now tramp on it, and the job is completed.

HIGHEST PRICES PAID

For POULTRY, GAME,
EGGS & FEATHERS

Please write for particulars.
F. FOURN & CO.,
55 BONSBOURN ST., MONTREAL