Conducted by Professor Henry G. Bell

The object of this department is to place at the service of our farm readers the advice of an acknowledged authority on all subjects pertaining to soils and crops.

Address all questions to Professor Henry G. Bell, in care of The Wilson Publishing Company, Limited, Toronto, and answers will appear in this column in the order in which they are received. When writing kindly mention this paper. As space is limited it is advisable where immediate reply is necessary that a stamped and addressed envelope be enclosed with the question, when the answer will be mailed direct.

L. J.:—1. Do you recommend putting lime rock on sandy soil for alfalfa? How much to the acre? Do you put it on before you plow your land or drag it in? 2. How much sweet clover seed should be sown to the acre? Will sweet clover grow on low land? Can the plant be killed by plowing it up?

Answer:—1. Alfalfa is a crop that does best on sweet soil. Your soil may be sufficiently supplied with lime already, but alfalfa is so sensitive to sourness of the soil that you would do well to apply at least 2 tons per acre of ground lime-stone in order to make sure that the soil is sweet. Scatter it broadcast over the plowed land and work it in by disking and harrowing. It would be good insurance to apply 200 to 300 lbs. per acre of fertilizer supplying 2 to 3% ammonia and 8 to 10% phosphoric acid, when sowing your alfalfa. I have in mind a successful alfalfa grower in Southern Wisconsin who grows 300 acres alfalfa on a 500 acre farm. He always fertilizes the crop at seeding. He says he finds it good insurance of a strong "catch." 2. Ten to 15 lbs. of good sweet clover seed per acre is an ample quantity. Sweet clover will do well on several kinds of soil. It will do best on well drained soils, but should make fair growth if your soil is sweet and is fairly well drained. Sweet clover can be killed out readily by cultivation when the ground is planted to corn, potatoes or similar crops.

W. W.:—My vegetable garden has a lot of sorrel weed. What will improve it?

Answer:—Sorrel weed thrives where soil is sour. The cure is found in adding limestone or air-slaked burnt lime. If limestone is used add two to four tons per acre, if burnt lime is used, cut the quantity in half.

J. S.:—What is the best variety of Fall wheat? How much should be sown per acre? How is wheat treated for smut?

Answer:—Ontario Agricultural College recommends the following varieties of Fall wheat:—O.A.C. No. 104; Dawsons Golden Chaff; Imperial Amber and Geneva. Sow 1½ bushels per acre. For stinking smut or bunt sprinkle on pile of grain a mixture of one pint formalin to 30 gallons of water. Cover pile with bags or other material and leave till next day. When the covering is removed the gas escapes rapidly and the seed is then ready to sow.

COMBINING FRUIT WITH POULTRY

Profits from land used for poultry can be increased by using the land as much as possible for the production of other crops. Red raspberries and blackberries can be raised on the range devoted to young chicks and the shade from these brambles will be good for the chicks and also afford some protection against the ravages of hawks. Gooseberries and currants produce their fruit too near to the ground to make their production possible in poultry yards.

Plums and pears furnish fine shade in the poultry yard and they make a rapid growth. Apples and peaches are sometimes used but apples are slow growing trees and not so desirable for planting in poultry yards. All fruit trees in the poultry yards will require spraying and so they must not be placed too close to the buildings or the walls will be spattered and stained by the spraying mixture.

Some growers of strawberries have found that the hens can be turned into the patch after the fruit harvesting is over. The hens assist in keeping down the weeds and do not injure the strawberry plants. Potatoes can also be grown in poultry yards and the birds will in no way injure the foliage. They follow the cultivator and harvest many worms and bugs whenever the ground is worked.

Poultrymen who plan to raise considerable fruit on their ranges must remember that fruit raising is a specialized business which requires much study along both lines of production and marketing. The trees must be sprayed to keep down the ravages of insect pests and fungous diseases. Varieties must be selected with care to insure profitable prices at marketing time. Grading and packing the fruit properly are prime requisites in making the fruit business profitable.

In theory the possibilities of combining fruit and poultry are wonderful. Very few men seem to have been successful with the combination in a practical way. The reason is probably due to the fact that both the poultry and the fruit business are specialized enterprises in themselves and the man who is fitted to succeed with one line is not always adapted for success with another. Frequently the fruit farmer loses heavily because of the frost and freezing, and on such occasions the yearly income of the farm is very small. A fruit farmer who loses his crop is much better situated if he has a good start with poultry to insure an income from eggs and breeding stock. Sometimes the poultry farmer will have bad luck with hatches or find that the cost of feed too nearly approaches the returns from the eggs to make his business profitable. Then an income from fruit in the fall will be very useful.

There are some farmers who are succeeding with the fruit and poultry combination but they are not found in every locality although the demand for both fruit and poultry products seems to be improving and there is an opportunity to make more money with this kind of farming. It takes some time to place a farm of that kind on a paying basis. The grower must wait several years for returns from the fruit and poultry flocks cannot be placed upon a large paying basis if the breeder starts on a small scale and builds slowly but safely. Farms of this type make ideal homes if the owner enjoys both the production of fine quality fruit and the breeding of first-class poultry.—H. G. Kirby.

Mothers and daughters of all ages are cordially invited to write to this department. Initials only will be published with each question and its answer as a means of identification, but full name and address must be given in each letter. Write on one side of paper only. Answers will be mailed direct if stamped and addressed envelope is enclosed.

Address all correspondence for this department to Mrs. Helen Law, 238 Woodbine Ave., Toronto.

The Bride's Chum:—You might arrange a kitchen shower with the luncheon at your home as follows: Paste pictures of household articles on correspondence cards and use these for your invitations. For place cards, cut other household articles out of cardboard. Instead of a centrepiece, the "housewife's friend," might preside over the table, facing the guest of honor. This fair lady has a doll's head, her body is made out of a scrubbing-brush, two wooden spoons form the lower extremities, and the arms are made of bottle cleaners. Her hood is made of a pot-holder, a chamois skin envelopes her shoulders, a dishcloth and a duster make her petticoat and skirt, while her basket is a tea-strainer.

For favors, use tiny baskets or toy cooking utensils and fill them with salted peanuts. Just before dessert is served one of the guests may excuse herself and leave the room. Quickly disguising herself as a laundress, she should return, knock at the door and insist on delivering a clothes-basket to the bride. Admission should be denied her, but she should vociferously insist. After some parley, she should force an entrance and, addressing the bride, demand an examination of the contents of the basket deposited at her feet, to see that no piece of last week's "wash" is missing. On removing the cover, the bride finds the basket filled with gifts from her friends. Of course, each gift has its accompanying card, with a jingle or sentiment written by the donor. The laundress is invited to join the guests and dessert is then served. Some one capable of carrying out her part should be chosen for the laundress.

Mother:—Two books such as you describe are "The Strength of Sin" by Dr. Winfield Scott Hall—price 20 cents, and "How Shall I Tell My Child?" by Mrs. Wood Allen Chapman—price 30 cents.

Ambitious:—As you live in a fair-sized town you might earn pin money by establishing a hairdressing room for children. Many mothers dread the task of taking to the barber their small children, especially the very small ones, who are likely to grow restless or fretful in strange hands. If they undertake the job themselves, the results are usually unsatisfactory. Shampooing the little heads, although less troublesome, takes time, and the average mother would be glad to turn the task over to a trustworthy outsider.

The only equipment needed, except a high chair for the two-to-five-year-olds and a table to hold the working materials, is a pair of scissors and a pair of clippers, a sanitary hairbrush and a comb, good soap, a few towels and some slip-over aprons of different sizes. If the worker launders the aprons and towels herself, her earnings will be clear, except for the cost of the soap and the first cost of the tools.

A talent for story-telling is a great asset in work of this kind. Even a very young child will keep still as long as his attention can be held by a fascinating tale. Blocks and picture books will keep the incurable wrigglers still. Now and then, in special cases, a reward of merit may be given. The main thing is, of course, to make the surroundings so pleasant and homelike that the children will feel at their ease.

Twenty-five cents for a "bob" and the same for a shampoo are the usual charges. For a close cut and for trimming long hair the price is proportionately larger.

Such a hairdressing room needs very little formal advertising. A simple card in the local paper or a brief typewritten announcement mailed to familites that have children is enough. After that the reports of small patrons who have been pleased with their experience and the recommendation of satisfied mothers will make the patronage permanent.

A MATTER OF EXPLANATION

Dan and his father were deep in the mazes of geometry, working away at what they called the "devil's coffin," when little Marjorie skipped into the room. Marjorie was seven years old and—for seven years—very clever at mathematics. She was also a great "chum" of her father's, who always took pains to explain to her every puzzle that bothered her childish mind. So Marjorie ran across the room, jumped on her father's knee and made her usual request:

"'Splain it to me, too, daddy, please! I want to understand, too."

But this time, instead of explaining, Mr. Shirley smiled down at his little daughter, and said:

"Not just now, I'm afraid, Marjorie. You'll have to wait about understanding this until you are as old as Dan here and are studying geometry, too." And he turned back to Dan and his problem.

But Marjorie had no mind to be ignored. "What is ge-om-e-try, daddy?" she inquired.

"It's a kind of mathematics," cried Dan impatiently, "that big boys like me study! Lines and angles and everything tangled up in a perfect mess. You stop talking now, Marjorie, and let dad go on and finish explaining this to me. You'll come to it soon enough. You don't know enough now."

"Yes, I do, too!" retorted Marjorie hotly. "I know about mathematics and straight lines now. So! 'Rithmetic is mathematics. And lines—are lines. I want daddy to 'splain this to me right now! " She planted her finger on the open page. "Just as soon as he finishes with Dan. Won't you, daddy?"

"Why, I can't, dear," said "daddy," still patiently. "I would if I could, but you wouldn't understand at all; you really don't know enough yet. There, there, don't cry, little daughter! Every day's work on your arithmetic lessons now will help on the time when you can understand this, too. And daddy will explain to you as soon as he can, dear."

But the usually sweet-tempered little Marjorie was sure of only one thing: that her adored father would not explain to her something that she felt she had a perfect right to know. She listened for a moment or two, and then, in a passion of tears, she flung herself down from her father's knee and rushed up the stairs to her own room in a rage.

The geometry lesson proceeded quietly after that, but when Dan had left the room Mr. Shirley turned to his wife, who had been reading at the other end of the room.

"Did you ever think," said he, "how many times we grown-ups resemble poor little Marjorie—broken-hearted because our Heavenly Father doesn't explain to us all the mysteries of his wonderful geometry when we are only just beginning our lessons in arithmetic? I never saw quite so fully as now what He means when He says, 'What I do thou knowest not now—but thou shalt know hereafter.'"

WANTED POULTRY, EGGS and FEATHERS
Highest Prices Paid
Prompt Returns—No Commission
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When I Come Home.

When I come home, dear folks o' mine,
We'll drink a cup of olden wine;
And yet, however rich it be,
No wine will taste so good to me
As English air. How I shall thrill
To drink it on Hampstead Hill!
When I come home!

When I come home and leave behind
Dark things I would not call to mind,
I'll taste good ale and home-made bread,
And see white sheets and pillows spread.
And there is one who'll softly creep
To kiss me, ere I fall asleep,
And tuck me 'neath the counterpane,
And I shall be a boy again
When I come home!

When I come home from dark to light,
And tread the roadways long and white,
And tramp the lanes I tramped of yore,
And see the village greens once more,
The tranquil farms, the meadows free,
The friendly trees that nod to me.
And hear the lark beneath the sun,
'Twill be good pay for what I've done,
When I come home!

—LESLIE COULSON.
(Killed in action Oct. 7, 1916.)

Destroying Quack Grass.

Getting rid of quack grass by clean cultivating is an old story to Ontario farmers, but getting rid of it without losing a crop is somewhat uncommon.

A Wisconsin farmer accomplished it so successfully in 1917 that not one of the farmers who visited his field recently could find a blade of the grass.

After the hay was off last year, the field was plowed. Instead of plowing deep, which would leave enough soil on the roots that they might grow again, the plow was set shallow. This cut the roots close to the surface and sxposed them to the hot sun of late summer. The field was plowed with a tractor three times, harrowed several times—in fact, worked thoroughly all the rest of the fall.

In the spring, the ground was again worked well and the field was planted to potatoes. When the potatoes were inspected by a group of farmers, not one sign of quack grass was found, although the owner made no claim to completely destroying the pest.

A Garden Gate Income.

I feel sure many readers would like to know how I make a nice little income at home, right at my garden gate. For my cash comes in simply by selling the surplus vegetables.

When we went to our little farm on the edge of an Ontario town, there was a lot of repair work to be done. The first year the chickens got most of the benefit of the garden. The next year I persuaded Father to enclose the garden with chicken-proof wire fence on the plea that I could sell enough to pay for the wire. The cost of enclosing was $25.25. The sales from June to September, 1917, were $25.75.

Experiments with alfalfa growing in Bermuda have reached such a stage as to indicate that the crop may be made a profitable one.

INTERNATIONAL LESSON
SEPTEMBER 22.

Lesson XII. Fruits of the Christian Life—Matt. 25. 14-30; 5. 1-12; Gal. 5. 22, 23. Golden Text, 1 Cor. 3. 21b, 23. Matt. 5, 3-10

3. The poor in spirit—Luke omits "in spirit" as if those poor in worldly goods are meant. Matthew shows that they are not exclusively meant. The "poor" are opposed to the spiritually proud and the self-sufficient. They have need of the riches of Christ and feel their need. The kingdom of heaven is not for those who are self-satisfied. To be "poor in spirit" was not a heathen grace. Epictetus asks: "Who wishes to live a humble life?

4. They that mourn—Those who mourn for sin are primarily intended. But the secondary meaning of "all who are sorrowful" is not excluded. They shall be comforted—The root idea in "comforted" here is that they shall have some one alongside of them to console and encourage them. The New Testament Comforter or "Paraklete" is one who comes close to us in consoling and strengthening presence.

5. The meek—This means an absence of resentment; meekness in suffering. This was a virtue which received but faint praise by the Greeks, who could not conceive of such a spirit as consonant with manliness. This was the spirit of Jesus, who prayed for his enemies, yet who was deficient in no element of virility or manliness. Shall inherit the earth—In a literal sense the meek have inherited the earth. No great ones of the earth have a higher place than the apostles. The superman despises the meek as weak and effeminate. But it is not to the brutal or the arrogant and the lordly that the crowns are eventually given by the noblest minds of the earth.

6. They that hunger and thirst after righteousness—"Righteousness" is literally "rightness," correctness in thinking, feeling, and acting. It is integrity, justice, fairness. It is a rightness not of outward conformity but of inward holiness. "Except your rightness shall exceed the rightness of the scribes and Pharisees," Shall be filled—As of one feeding. Shall be satisfied. Spiritual hunger for the highest and the best things shall be satisfied. Compare John 6. 35.

7. The merciful—With the Stoics "mercy" was reckoned among the defects or vices, it was a disturbing element that broke in upon the philosophic calm, but it is a trait of the child of God. Shall obtain mercy—This principle in the divine government that men shall be dealt with as they deal with their fellow men is seen in the parable of the unmerciful servant (Matt. 18. 21-35).

8. The pure in heart—Not ceremonial purity. Purity is a distinguishing Christian virtue. It finds no place in the teaching of Socrates. Shall see God—The Christian education is a gradual unveiling of God. The pure have a clarified, spiritual vision which more clearly sees God in everything.

9. The peacemakers—Peace in a lower sense is the absence of dissension or difference between men, but in a higher sense it is reconciliation of man with God—the peace made by Christ. Sons of God—They are most akin to the divine nature, perfect, as the Father in heaven is perfect.

10. Persecuted for righteousness' sake—The prophets and other servants of God who in all the past have been persecuted or the present followers of Jesus who have already suffered such persecution for Jesus' sake. Theirs is the kingdom—That is, the royal rule of God in the earth belongs to those who in supreme loyalty have not hesitated to give themselves utterly for their convictions, not counting personal ease or well-being or even life itself.

Gal. 5. 22, 23

22, 23. Fruit of the spirit—The Christian man lives, according to Paul, by the "Law of the spirit of life in Christ Jesus." Not a life of outward conformity to certain commandments, but of loyal obedience from the heart. This produces in the life normal fruit. Love—This is the binding principle in all Christian fellowship. Joy—This characterizes the Christian spirit. "Ask and receive that your joy may be full." "Rejoice evermore." The kingdom of God is joy in the Holy Spirit." Peace—"Peace I leave with you,' said Jesus. "My peace I give unto you." Long-suffering—This is a part of the Christian inheritance. "In the world ye shall have tribulation." Kindness—Moral integrity, benignity, a benevolent and gracious attitude toward people. Goodness—Uprightness of heart and life. A clear and definite quality of moral soundness. Faithfulness—A firm conviction and a steadfast adherence thereto, as well as perfect trustworthiness. Meekness—That quality of gentleness alluded to in the beatitudes. Self-control—That quality which indicates that one has mastery over himself, particularly his appetites and passions.

Preserving Fertility.

In these days when there is such a demand for food products, especially wheat and other cereals, the farmer may get into a poor system of farming by ignoring his rotation of crops and raising wheat after wheat. In 1914 when the war first broke out I advocated such practice, since there would be such a demand for wheat it might be good policy to sow the wheat after wheat, using fertilizer to help out, and after the war to take extra pains in plowing down vegetable matter and stable manure to replace the organic matter which wheat after wheat farming had removed from the soil.

The war has continued so long and it may continue so that this argument and policy will not fit the case. If we attempt to raise wheat after wheat it will so exhaust our soils of vegetable matter and plant food that we will get them into an unproductive condition and with the condition of agriculture as it is to-day it seems to me that people are going to need food products from Canada for years after the war just as badly as they do to-day, and so it would seem that it behooves the Canadian farmer, while he should produce all of the food that he possible can, to practice a rational rotation and take just as good care of his land as he did before the war. The man who abandons crop rotations to supply war foods will in the end lose and he will not be doing as much good in the world as he will if he takes pains to maintain and increase fertility to keep his farm productive; the world will need the food for years to come.—C.L.

Keep the Best Animals.

The most successful breeders of pure-bred live stock are men who do not sell the young animals that definately excel the parents. High prices do not tempt, nor equal merit in other herds or flocks concern such makers of breed history. It is with their own familiar animals that they produce the best results, for no matter how excellent the purchased animal may be, it seldom produces as good results in carrying forward the breeder's ideals of improvement.

The Fairies and the Flowers.

There was no place in the world where little Marian would rather be than in Aunt Lydia's garden. To her it was more than just a garden—it was fairyland itself. In some of the rocky places were deep holes, round which delicate vines and been trained until they made the holes into grottoes; and there were a summerhouse covered with red ramblers. But even that was not all. Winding in and out among the flowers and trees ran a brook that flowed southward to the river.

Marian delighted in making believe that each kind of flower had its own especial fairy. The Johnny-jump-up fairies were jolly little fellows, all dressed in velvet—gold, crimson, blue or black. Quite different were those that lived in the sweet peas. They, Marian would tell you, always wore tulle, in white, or pink, or soft shades of red, and were very slim and delicate, so much so, indeed, that no one ever really saw them. The queen of the fairies, without a doubt, lived among La France roses, of which Aunt Lydia was so proud, and her maids of honor lived in the white rosebush near by.

In summer, perhaps because the flowers were even richer and lovelier than usual, the fairies had seemed more real than ever to Marian. Then autumn came, and one frosty day when Marian awoke there were few flowers to be seen. The little girl felt very sad all the morning. What would become of the fairies, she thought, with no flower homes for them to slip into when they were tired or sleepy? That afternoon she told Aunt Lydia all about her fears as they were taking a walk together, through the leaf-strewn garden. Their steps led them by the little stream, down which many withered leaves were floating.

Aunt Lydia, as if in answer to Marian, said, "The stream flows toward the south, where it is always summer. How like little boats the leaves look!"

Marian seized her aunt's hand.

"I do believe," she cried, "the fairies may be using those leaves for boats, and are sailing away in them to the south! Aunt Lydia, don't you think that's perfectly possible?"

Aunt Lydia stooped to pluck the very last rosebud.

"Anything is possible, my dear," she said, "in a world where there are such wonderful things as flowers."

During the winter months when mostly dry feeds are being given, the use of silage will aid digestion very materially.

When the Fur Beavers are Prime.

There is only one excuse—a poor one for all concerned—for trapping too early. The excuse is, of course, that some other trapper may get ahead of you.

But where the trapper hasn't any competition—on his own farm for instance—or where an agreement can be reached to wait, the taking of furs at the right time will bring far larger returns.

In a great many cases inexperienced trappers get out too early because they are not quite sure when the various furs are prime. Hence the following may enable no inconsiderable number of trappers to make more money out of their work this year.

Skunk are prime toward the end of October. They depreciate about the middle of March.

Mink is best during November to the end of January.

Muskrat is fair in the fall, when trapping is, of course, easiest. But the prime fur is taken in the period from mid-winter to March. A good condition may be expected up to about the first of June.

If you are after raccoon, you will find the fur prime about November first.

Fox, speaking generally, is prime from the first of November until the middle of March.

It will pay trappers handsomely to concentrate their efforts upon the periods when furs are prime. Certainly no great departures should be practiced since the result is furs which are of little value to the fur houses.

By having plenty of traps and making every possible preparation to work vigorously during the right season is the way to get the most out of trapping.

Answers to Questions.

Readers of this paper may secure authoritative information on any question pertaining to trapping and treatment of raw furs by addressing "Trapper" care of the office and enclosing stamped and addressed envelope for reply.

September.

September omes tche harvester
To harvest in the grain,
And all the boys and girls begin
To think of school again.

The birds are hying to the South,
The sun doth later rise,
The pumpkins in the garden patch
Will soon be grown pie size.