

Farm Crop Queries



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. An space is limited and 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.

Question—W. E. A.:—Have a piece of land I do not wish to work this season except to summer fallow. Can I plow it about June to kill weeds, and sow it to oats or anything else good for pasture? By not pasturing it too close and turning it under in the fall, will land be in good shape for next year?

Answer:—If you intend to summer fallow the land, I would advise you to plow it sooner than June, probably early in May, and keep it harrowed and disked about once in two or three weeks, so as to root up the young sprouting weeds and to preserve a dust mulch which will prevent the escape of the water from the soil. If you wish to establish a temporary pasture the mixture advised by Prof. Zavitz of Ontario Agricultural College. He advises sowing 88 lbs. per acre of a mixture composed of 51 lbs. of oats, 30 lbs. of Early Amber sugar cane and 7 lbs. of common red clover. Professor Zavitz says to sow this early in May. The oats and the Early Amber sugar cane can be drilled in through the regular grain drill and the clover seed through the grass and clover seeder attachment of the grain drill. At Guelph this mixture has been found to be ready to carry cattle late in June. This pasture has carried more than one steer to the acre and in 1911 was successfully used to maintain milk cows. If this material is not pastured down too close it will form a valuable addition of humus to the soil if turned down late in the fall. Land under such management as outlined should be in good shape for next spring, if plowed fairly deeply in the fall.

Question—M. C.:—Kindly tell me how I can get rid of thistles and quack grass.

Answer:—The killing of thistles and quack grass requires heroic methods. Plenty of muscle, horse flesh or gasoline used through a tractor will kill them. The top of the plant serves much the same purpose as a systemic animal, so that if the plant is deprived of that vital part it must soon die. If this principle is kept in mind both thistles and quack grass can be killed. No one method will work in all soils, and in all locations. If the thistles are cut down and not a single spear allowed to come above the surface, they must soon die from lack of power to breathe in air and ability to digest food. Usually some form of clean cultivation is the best method either with a crop or by bare fallowing. The thing to do is to outline a systematic plan of attack and to keep in mind at all times the fact that you must keep every leaf cut off.

The same persistent methods apply to the killing of quack grass. However, if the quack grass is in sod it is best to plow the ground shallow during the summer, say about three inches deep. For this it is advisable to use a special type of plow with a Scotch bottom having a real long gradually sloping mold board. This permits the easily turning of the sod. The next thing to do is, within a week or ten days, go on the land with a disc and thoroughly cut up the land. You should disc this every ten days or two weeks until fall when the quack grass will be completely killed out. Don't count the number of times you go over the land. Keep on going, going, going until every spear of the grass is killed out.

Question—J. G.:—What is the comparative food value of oats cut while green and cured and fed in the winter as hay, especially as a milk producer?

Answer:—The following is the analysis of oats cut in the milk stage: Oats cut in milk stage and fed as hay in winter.

	Water	Ash	Crude Protein	Carbo-Hydrates	N. Free Extract	Fat
Oats in Milk	14.0	5.7	8.9	27.4	41.2	2.8
Oats, the Green	10.4	3.2	11.4	10.8	59.4	4.8

It is seen from the above analysis that oats cut in the green stage make a very good feed for all classes of livestock. They should not be fed alone to milk cows but supplemented with alfalfa hay and concentrates in the form of bran, cottonseed or oil meal. The chances are that better results will be secured and perhaps a larger quantity of food can be harvested if the oats instead of being sown alone are seeded with Canada field peas.

Question—A. S. L.:—I am thinking of planting a few acres in strawberries for the market. What is the best soil, fertilizer, and variety of plant and the best time to begin? A detailed answer will oblige.

Answer:—Strawberries are not overly particular as regards the soil in which they grow; however, they will usually do best on soil that is suitable for potatoes. They should

be grown in a rich, friable seedbed well supplied with humus in order that there may be a reasonably good supply of moisture held in the soil. Strawberries are not very hard on the soil. A ton of strawberries is worth say \$200 and only takes from the soil about 85 cents worth of plant food, yet because their growing season is so short, the soil must be well supplied with available plant food. This is best done by getting the ground ready a year ahead of time. Pick out the strawberries you expect to plant the crop covering the ground before this crop is put in with anywhere from 20 to 40 loads of manure to the acre. Absolutely clean cultivation is necessary in order to free the land of weeds. If manure is available that is well decayed and free of weed seeds, ten to twelve tons to the acre may be applied before planting the berries and re-enforced with from 1,000 to 2,000 pounds of commercial fertilizer to the acre. A good fertilizer for strawberries should analyze about 2 to 3 phosphoric acid and 4 to 6 percent potash, if it can be purchased. This analysis is suitable for a good sandy loam soil. If the ground is extra thin and manure is not available a little more ammonia should be used in the fertilizer and more pounds to the acre applied.

The ground should be plowed late in the fall if possible and allowed to lie over the winter and preferably plowed roughly worked down to prepare a fine, firm seed bed and to eradicate all the weeds possible. In the choice of varieties, the soil, climate and market must be considered. Varieties, that under certain conditions of soil, climate and market, may prove profitable, may under changed conditions prove worthless. In selecting varieties the beginner should be guided more by the advice of progressive growers in his community than by what catalogs say. If his land is early he may find profitable plants from the early varieties such as Crescent, Barton's Eclipse, Senator Dunlap, Warfield, and Beeder Wood. If his land is late he will find it more profitable to plant some of the later varieties such as Sample, William Belt, Commonwealth and Brandywine. Just as soon as the planting is finished cultivation should begin. The first two or three cultivations should be rather deep so as to remodel the soil trodden down in planting. All later cultivations should be shallow. The land should be cultivated at least every ten days and after each rain.

If you will write and get the Annual Report of the Secretary for Agriculture, Halifax, Nova Scotia, for the year 1910, you will find therein two splendid articles on strawberry culture that go quite a good deal into detail regarding best methods of handling this crop.

May Flowers.

The people talk of windy March and of the April showers. And how these two are sure to bring the welcome Maytime flowers.

But I am sure that both these months are failures as to weather. For every year they seem to get most sadly mixed together.

There's rain in March and April wind; The snowstorms get all twisted, Which makes it clear that Maytime flowers Come forth quite unassisted.

Use Fertilizers Freely.

It costs time, labor or money to plough or spade up a garden and to get the best return for the labor or expense it is absolutely necessary to purchase seeds of the very best quality. These can be had from seedsmen with established reputations. To sow cheap seeds or seeds of doubtful quality is to invite failure. After the seeds begin to grow labor must be expended in cultivating and keeping the weeds down. It is very gratifying after a season's hard work to harvest a large crop of flowers or vegetables of superior quality and contemplate how well the work has paid.

The starting point of success is first to get the soil well pulverized and as deep as possible; second, to sow good seeds; third, to use fertilizers liberally. Using fertilizer is similar to depositing money in a savings bank. All the original deposit or investment is returned and the liberal use of fertilizers pays many times better interest than any savings bank. It is folly to try to make good gardens without the liberal use of fertilizers and the hoe or some similar implement.

PREPARING POULTRY FOR MARKET

It Pays in Dollars and Cents To Add The Finishing Touches To Produce Intended For Table Use.

(By F. G. Elford, Dominion Poultry Husbandman.)



From the original drawing by Dr. A. B. Wickware.

HOW TO KILL
The illustration represents the correct way to pluck a bird. The lower jaw being removed, the neck is cut across the throat. The mark in the neck is the place to cut to bleed. The mark in the wing is the place to cut to bleed. The mark in the tail is the place to cut to bleed.

If all the dressed poultry that goes into the market was of an appetizing appearance and of good quality, the producer would get a better price, and the consumer would be willing to pay for something he could enjoy eating. It is a good object lesson for the producer to see what his produce looks like just before it goes into the consumer's hands. If he saw it, he would sometimes wonder how it brings as big a price as it does.

Warm weather and long hauls, coupled with rough handling in transit all have a share in depreciating the quality, but it must be borne in mind that produce never arrives on the market in better shape than it leaves the shipper.

Why intelligent farmers will persist in selling their poultry in any form but the best of condition is hard to explain. Possibly present-day conditions could not help but create a carelessness that has left the trade in its present state.

There is, however, no reason for letting it remain there. The careful producer should get a higher price for his good quality products than does his neighbor who cares nothing about how his are produced or where they are marketed.

Inferior Produce—Who Loses Therefore?
There is less reason every year why producers should put up with this state of affairs. By more care in production, through co-operation or direct communication with better markets, better prices may be received by the producer, and more satisfaction given to the consumer, but the first step is for the producer to produce a higher and more uniform quality, for all producers, whether their product is good or bad, lose on any bad produce that goes on to the market.

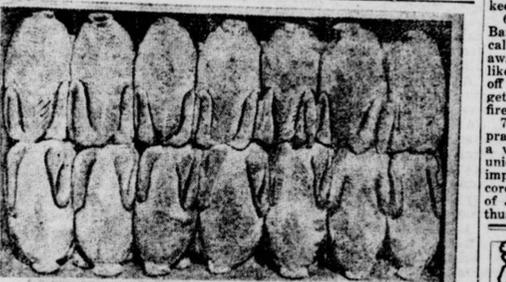
The producer loses on this because the dealer loses on the poor quality and he cannot pay as much for the good, for on it he has to make good his loss on the poor; the bad produce which comes out of the producer; these poor quality birds are retained, and the producer again loses by the decreased consumption. Not a package of dressed poultry is offered for sale but either helps or hurts the selling.

It is quite probable that many a chicken dinner has been changed to beef because of the way these products are exposed for sale and the producer is first responsible for this and is the heaviest loser.

Inferior Produce—Who is to Blame?
Though it has been pointed out that the producer might improve his product and his methods of selling, it must not be imagined that he alone is guilty. Each person who handles the product even to the consumer is sometimes at fault. Though it is possible to improve the quality delivered by the producer, it too often happens that the stuff that is good when it leaves the farm is spoiled before it is eaten.

It might therefore be noted that all, from the producer to the consumer, are more or less to blame for the condition of the poultry market and every link of the chain should be strengthened, though the wholesaler and the producer are the two most important. However, as it is the producer that we are writing this information for, it is his responsibility that we are emphasizing.

The Improved System—Its Methods and Advantages.
Thanks to demonstrational work and to co-operation among the producers, better business methods are



A CASE OF CHEAP FED, WELL PACKED CHICKENS. Fourteen in this box but they are well fleshed, uniform in size and packed tight.

being adopted. Conditions in some sections are greatly improved but the work has only started and this improvement must become more general if producers are to get the returns they ought. The demand for good stuff is steadily increasing and with it the price. Fifteen years ago farmers occasionally sold poultry for 6 to 8 cents a pound. Now dressed poultry sells for 12 to 20 cents a pound and in some cases much higher. There seem to be few industries that promise brighter prospects to the farmer than poultry managed on a business basis.

In some sections farmers are co-operating, thus putting on the market a more uniform product in better condition and at less expense; more care is being taken in the production and finishing, and consumers are discriminating more in the quality they purchase. Some of the middlemen's commissions are being eliminated and the producer and the consumer are coming closer together.



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, 235 Woodbine Ave., Toronto.

M. M.—1. For a home wedding the bride party should enter the room in the following manner: The clergyman leads, followed by the bridegroom and best man. When he reaches the place before which the bride and bridegroom are to stand for the ceremony he turns and faces the people and the bridegroom and the best man stands at his left hand, also facing the guests. When they have taken their places the bridesmaid enters the room, followed by the bride, who rests her arm on the left arm of her father. As she advances and reaches the place in front of the bridegroom she steps forward and offers her left arm. Her father steps to his left and the bridesmaid steps to the side of the bride, while the best man remains beside the bridegroom. All five now face the clergyman, who performs the ceremony. After the father has given his daughter in marriage, which he does by a simple nod of acquiescence when the clergyman asks who gives her in marriage, he steps back and joins his wife, who is standing near. After the clergyman has given the blessing he steps to one side and the bride and bridegroom turn and face the guests, the best man and bridesmaid taking their places, one on each side of the newly married pair. The family and friends then advance to offer their congratulations and after all have spoken to the bride and bridegroom the wedding breakfast is served, after which the happy pair, if in wedding clothes, change for travelling costumes and depart amid a shower of friendly confetti and old shoes. 2. Displaying the presents is entirely a matter of personal taste. Some persons do not care to do so, but it has become to be considered quite the thing, and it is very pleasant for the guests to see them when they have been well arranged. It is in a perfectly good form, therefore, and is expected at most weddings. 3. The bride should acknowledge each present herself. If the donors are kind enough to think of you, you should be gracious enough to acknowledge them yourself.

God does not will, it shall be done unto him still, in that something better will come. Compare Paul's experience, 2 Cor. 12, 9.

INTERNATIONAL LESSON
MAY 13.

Lesson VII.—Jesus The True Vine—John 15, 1-16. Golden Text—John 15, 5.

Verse 1. We have another instance here of John's habit of compressing parables by fusing the parable and the interpretation. Matthew would have omitted the references in these two verses to the Father and the Son, and added the exposition at the end. True vine—The adjective "true," or "real," becomes here practically all the thought the eye of Jesus sees in the parable.

2. In me—This parable may possibly be the starting point of the highly concentrated phrase "in Christ," repeated in varying forms some seventy times in Paul's letters, and constituting the very kernel of his theology. Cleanseth—Not by pruning, which is in the first clause: it is a washing that is meant.

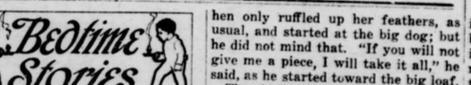
3. Cleanse the Greek, recalls over again the teaching which Jesus has given them through their discipleship has achieved its purpose for those eleven men: see verse 11. It has purged the branches from blight and parasites, and prepared them for more abundant productivity, which is their only reason for existence.

4. And I in you—Just so Paul is always setting by his great formula "in Christ" the complementary "Christ in me." It was no figure of speech, or pious phrase for him the Master was literally living his human life over again within his soul. And nothing less will ever give real life to any of us. Except ye abide—There is this mysterious property in the branches of the spiritual vine, that they can cut themselves off, as Judas had done. Nature does something, and grace does more; but grace may be rejected" (The Cambridge Bible).

5. The vine—The whole vine, including the branches. Paul has the thought with another figure when he calls the church the body of Christ, each Christian being a limb or organ of it. Do nothing—The verb is that of Matt. 3, 8, and quite possibly we keep up the figure, "produce nothing."

6. This is the parable of John the Baptist (Matt. 3, 10). "A metaphorical description of the fate which awaits an unfaithful disciple. He is like a useless branch which is broken off and thrown away and after that gets withered and dry is consumed as firewood."

7. Observe how this illuminates prayer, which is not mere petition, but a vital harmony with God. Such union with God in Christ will make it impossible to ask what is out of accord with the Will, except in the spirit of Jesus in Gethsemane. If a man thus blessed does ask something that



The Foolish Hen.
"Please give me a piece of your bread," said the cat to the old hen that was trying her best to eat a loaf of bread that was almost as big as she was. It was far more than she needed for herself.

The old hen only ruffled up her feathers and clucked something that could not be understood, so the poor, hungry cat had to go without.

"Please give me a piece of your bread," grunted the little pig. But the old hen only ruffled up her feathers, took her big loaf and turned off to one side where she thought she would not be bothered.

"Please give me a piece of your bread," said the pigeon, as it flew down from the fence right by her side. The old hen was getting very angry by this time. She flew at the pigeon, and scared the little thing out of the yard.

"Please give me a piece of your bread," said a big, old dog. The old

HOW GASOLINE MAY HELP THE FARMER

THE LAND

Displacement of Horse Labor Would Enable Farmers to Increase Grain Crops.

In an article entitled "Time and Tractors, the Essence of the Food Problem," in the New York Times, Mr. Edward A. Bradford discusses some phases of farming which are problems in Canada as well as in the United States. Mr. Bradford takes the ground that the war has had but a secondary effect upon agriculture, and that if the world is threatened with famine it is not on account of the war. His proofs, being derived from the United States alone, are not altogether conclusive, but it is nevertheless astonishing to learn that in the two years before the war began the United States was consuming more food than it produced. In two years of the war the United States produced more food than it consumed and exported 76 per cent more.

Supporting the Horses.
In the course of the arguments he advances in favor of the tractors Mr. Bradford speaks of the tremendous waste due to the employment of horses to work the farms of the nation. He says: "It takes more land to support a horse or mule than a man. The usual allowance of land to support a man is something over three acres. A horse needs over five average acres. It takes at least 125,000,000 acres to support the horse-power of our farms. Their feed alone costs \$2,000,000,000, or more than the total operating cost of all our railways. A horse averages three hours' work each day on a farm, at a cost of about 12 or 13 cents an hour. Those who speak of the scarcity of food for men should consider what a tremendous slack might be taken up in the release of one-quarter of our cultivated land from the support of such wasteful power. The displacement of horse labor would enable us to double our corn crop, or to add a half to our wheat yield. Of each five acres of feed used by each horse not an acre's produce is turned into power, and that power is among the least efficient known in mechanics. We dislike to eat horse meat, but what the horse would produce animal food to our liking."

Gasoline the Remedy.
The tractor plow is but a symbol. The soul of the machine is the gasoline engine, and an engine that can haul a plow can operate almost every other farm implement. It can do more than this, it can take the backache out of the farming, and make obsolete the phrase "a horny-handed son of toil." A son of toil who uses gasoline will be no more horny-handed than a son of a gun. The farmer will then be able to appreciate his other natural advantages. He is not subject to regulation. Unions do not worry him. He can work as many hours a day as he pleases. He can chaffer all the market will stand, in full assurance that the Government will not puttax on him like a race track or a munition manufacturer. In the ten years between 1900 and 1910, the railways of the United States doubled their ton miles; by practising similar economies, made possible by gasoline or kerosene, the farmer may do the same. In short, it would appear to be the proper thing for farmers to supply themselves with tractors as soon as possible.

The Sea We Live In.
If Sea of Air Were Removed We Would Freeze To Death.

We crawl about on the bottom of a sea of air. Only very recently have we learned to swim in it. We call the performance "flying."

The gaseous mixture composing this ocean of air is so fluid and transparent that we hardly realize its presence. Doubtless fishes, in like manner, are not conscious of the water in which they swim.

But the air is much denser than we imagine. A small child blows up a toy balloon. Probably the air inside the inflated rubber bag is at a pressure of no more than two atmospheres, yet the balloon has become in effect a solid object that will resist a blow of the fist.

A cubic foot of air weighs considerably over an ounce. A dry-goods box three feet cube will contain 2 1/2 pounds of air. This means, of course, at sea level.

As one climbs a mountain or goes up in a balloon, the air becomes thinner, its density diminishing steadily until perhaps 150 or 200 miles from the surface of the earth there is virtually none of it left. It is reckoned that one-half of the entire bulk of the atmosphere is below the three-mile level.

The sea of air is a warm sea, conserving the heat delivered by the sun upon the earth. If it were suddenly removed we should find ourselves exposed to the cold of outer space (460 below the zero of Fahrenheit), and would be frozen.

Nothing but the Infinite Pity is sufficient for the infinite pathos of human life.