

Farm Crop Queries

Conducted by Professor Henry G. Bell.



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 Wilton Publishing Company, Limited, Toronto, and answers will appear in this column in the order in which they are received. 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.

Question—Subscriber—What is the value of orchard grass for hay? When and how should it be sown? Does it do better on sandy soil than on clay? When and how should it be sown?

Answer—Orchard grass is a very valuable hay grass if cut at the right time. If it is allowed to come into blossom fully, it tends to become hard and woody, and of course, loses in feeding value. Orchard grass can be sown either for hay or for pasture. In either case from 28 to 30 lbs. of good seed per acre gives good results. Prepare the ground fairly in the spring and seed the grass seed with a nurse crop such as wheat or barley at the rate indicated sowing not more than 1 bushel of wheat or barley per acre. Orchard grass thrives on a variety of soils, but it will not do well on undrained soil. It is very resistant to drought and does better than other grasses in shady places, such as in orchards. In order to assist in getting a good stand, you would do well to give the ground a thorough dressing of manure or add 200 or 250 lbs. of fertilizer to the acre at the time the seed is sown.

Question—H.F.—I wish to know if I could put my second cutting of clover into a better grade of feed than it would be if I cut it for hay? If it is a good plan to put it into the silo, please give me some instructions as to how I should handle it.

Answer—Some farmers claim to have successfully ensiled clover of second cutting. My personal experience in handling the second crop of clover in this way has not been very favorable. The ensilage which resulted did not seem to be readily eaten by the stock. In my opinion, a better grade of feed from this material can be obtained by making it into hay.

Question—L.C.K.—We have a piece of land which is pretty wet, but cannot afford to tile it. Would you think it would do it any good to sub-soil it? Would it drain any better? It is surface-drained but has not got a good

outlet. Would like your opinion on it anyway.

Answer—I would advise you to open the surface drains rather than to attempt to sub-soil this piece of land. Sub-soiling may lower the stand of water to some extent, but the advantage would be only temporary. For permanent improvement of the soil, I strongly advise the addition of tile drain as soon as you can afford it. I rather look upon the use of tile drain as a profitable investment which will lead to greater returns from your field than as an immediate expense.

Question—Reader—I have five acres of very heavy wheat, which is lodged and in a bad condition to cut. I wish to put this ground into alfalfa this fall. I was advised to sow the alfalfa in the wheat this spring, but for reasons unnamed we did not do so. Can I plow this ground after wheat is removed and get the alfalfa in so as to have it get a start for fall? I will very much appreciate any advice as to the proper handling of this problem.

Answer—In order to get a good stand of alfalfa, I would advise you to cut your wheat, as you have planned. Fall plow the field fairly deeply and top-dress with about a ton of ground limestone per acre. If the soil will not wash or puddle, let it stand till spring. As soon as the soil can be worked add four or five bushels of manure per acre, and thoroughly disk the field until it is smooth and mellow. When a good seedbed has been obtained, sow from 20 to 25 lbs. of alfalfa seed per acre at the same time that you drill in about a bushel of barley or wheat per acre. In order to insure a good stand, I would advise you at this time to drill also 200 to 300 lbs. of fertilizer analyzing 2 to 3% ammonia, and 10 to 12% available phosphoric acid. This available plant food will give your young alfalfa plants a quick and vigorous start, and will in nearly all cases, insure a good stand. Cut the barley as soon as it is ripe and give the young alfalfa crop a chance to make a strong growth during the rest of the summer.

Summer Cultivation of Old Meadows. Two years, on the average farm, is quite long enough to leave meadows down, for best results and greatest profits. They should then be broken up and cultivated for other crops.

Deep ploughing is not necessary nor need the furrows be set up with a narrow plough. Rapid work at this time of year is essential. A two-furrow plough, with three horses, will turn over a large piece of land in a day. At the close of each day the area ploughed that day should be rolled. This breaks the lumps, presses down the furrows, re-establishes connection between the surface soil and the subsoil, bringing up the moisture from the latter to aid in rotting the sod.

After rolling, disking and harrowing should not be delayed. With such cultivation one retains a surface mulch, opens, aerates and fines the soil and destroys many bad types of noxious weeds and with the co-operation of the summer sun this work is most effective. With the present scarcity of labor, this is the cheapest and most practicable method of weed destruction and soil preparation for grain or even for hoed crops.

After the sod is decayed, a rigid or spring-tooth cultivator with wide points should be kept going at intervals until autumn. Then the land should be thoroughly ploughed, as deep as the humus or plant food in the soil will allow. On the Dominion Illustration Stations, some results have been obtained in comparing the summer cultivation of sod land with fall ploughing the same, which indicate very clearly the benefit derived from summer cultivation as outlined above. In addition to the greater yield obtained, it should be remembered that

the land is thereby put into much cleaner condition for subsequent crops.

Two fields of 4 acres each were taken; the first field was ploughed after harvest, was cultivated occasionally during the summer and autumn and ploughed in the autumn; the other field of 4 acres was left in sod and also ploughed in the autumn. The oats from the summer-cultivated field gave a yield of 15 bushels more per acre than the field ploughed in the autumn. This difference of 60 bushels on the four-acre field at 50¢ per bushel shows a total gain of \$30.00. Counting the cost of summer cultivating at \$4.00 per acre, a total cost of \$16.00 for 4 acres, an increase in net profit of \$14.00 or \$3.50 per acre was obtained. The soil on the cultivated field being in a much finer condition and almost free from weeds, the difference in the profits from the two fields, if worked alike, should be almost as great the following season.

Roots—28 rows of sugar beets grown on summer-cultivated land produced 10½ tons, while 36 rows of the same length grown on land simply spring ploughed only produced 9 tons, a difference of 3,733 pounds. The price paid at the factory being \$5.63 per ton, a gain of \$16.03 per acre was shown in favor of the after-harvest cultivation.—Experimental Farms Note.

Fat—Destroy the sheep who have grown fat through taking advantage of their fellow sheep he will destroy. Justice—Better judgment. Instead of feeding them on rich pasture, he will feed them on destructive judgments.

17-22. Jehovah will do even more: the strong sheep will no longer be permitted to injure the weak. **23, 24.** Jehovah will appoint a vice-regent to administer the government

The Dairy

From England, as well as from this continent, come reports of dairy herds being reduced. When other men are going out of a staple line is usually a good time for wise men to stay in it.

Insure fancy prices for butter by offering a clean, attractive package of good quality. A neat wrapper more than pays for itself.

Cutting dock, mullen, thistles and poisonous weeds in the cattle pasture is a chore that fits in nicely after rain, when the ground is wet. The task may not seem necessary until a cow is lost through poisoning, when it will be too late for prevention.

Crossing a heavy milk producer of one breed and a high butterfat producer of another in an attempt to

combine the two characters in the offspring, is like trying to produce milk custard by grafting milkweed on eggplant.

The profitable gains on a tunch of feeders are those which increase the value of the animals per pound. Such gains are due more to intelligent buying than to feeding and handling.

Shavings are cheaper than straw for bedding, and just as convenient to use. This does not justify burning straw and buying shavings.

A thermometer for the dairy is just as essential as a toothbrush for the toilet. Success in handling dairy products is due largely to maintaining definite temperatures, and such is not possible by guess.

Almost any pure-bred bull with good milking ancestry will improve a herd of grade or scrub cows. That does not infer that the best bull is not desirable.

THE ONTARIO AGRICULTURAL COLLEGE GUELPH.

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G. C. CREELMAN, B.S.A., L.L.D. President.

FACTORS IN SHEEP RAISING

By I. J. Mathews.

It has been quite a long time since farmers have taken any great interest in sheep, and for this reason the oncoming generation knows very little about the particular points of care that are necessary to make the sheep business a paying one.

Desirable as Scavengers.

As scavengers, sheep are certainly good and for this reason alone a dozen or fifteen head of sheep might well be carried on a farm of ordinary size—say one that contains a hundred and twenty acres. Cattle in the pasture refuse to eat the weeds along the fences and here is a place where sheep come in handy, since they seem to eat the weeds almost as much as the grass. Many farmers have found to their everlasting pleasure that a few sheep turned into a corn field that is weedy will soon rid the field of the weeds without doing any particular damage to the corn. Of course, if the corn is about ripe, after the sheep have eaten up the ragweeds and other foreign plants in the corn field, they may tackle some of the ears of corn; but they will not do this until after they have exhausted the supply of weeds. In cleaning up old brush rows and pastures that are intended for breaking, sheep do excellent work since they sprout the stumps so completely that the sprouts are killed out during the first season of pasturage. The following spring this land can be broken very well.

Rotate the Pastures.

Where sheep are kept as one of the

major businesses of the farm, particular attention must be paid to the pasture upon which they graze, since there seem to be a number of internal and external parasites that prey upon the woolly creatures. After sheep have pastured upon one piece of land two seasons it is high time that they were moved to the next pasture. Another point that often comes up regarding sheep is that of shelter during the winter. When it is taken into consideration that when winter draws on the sheep have all the way from two to five inches of wool covering their backs and when we remember how warm woolen clothing is, we are in a position to know at once that the sheep do not require a very warm shelter. The most successful sheep men with whom I have acquaintance do not give the sheep close shelter at any time of the year, except the ewes, for a few days just at lambing time.

The Dog Menace.

Dogs, no doubt, contribute something to the loss of sheep and whether or not there happens to be a law to that effect I should feel perfectly free to shoot any dog that was nosing about the sheep yards. Until secure protection from dogs can be legislated through, sheep men should take precautions by building high dog-proof fences about the place where the sheep stay nights. Under present conditions, however, there can be no doubt but that it will pay to take on a few sheep, but as with all other ventures, he who makes the venture should know the limitations of his enterprise.

In his name. One shepherd—the promise that Jehovah will set a shepherd over the flock does not contradict the statement in verse 13 that Jehovah himself will shepherd the sheep. As verse 24 indicates, Jehovah will continue to be supreme; but he will govern through a representative. The numeral 13 is used to suggest the reunion of north and south under one ruler (compare 37: 24; Hos. 1: 11; etc.). Servant—Any individual, or group of individuals commissioned to carry out the divine purpose may be called Jehovah's servant in this sense the title is applied to the nation, to the prophets and, as here, to the ideal king of the future.

There will be abundant peace and prosperity. Covenant of peace—A covenant that will guarantee permanent peace. Evil beasts—The last source of trouble will be removed. The shepherd is displaced, the sheep are restrained in beasts of prey are gone; when the sheep will be safe even in the jungle. Though the figure of the flock is maintained, "beasts" is here used figuratively of foes of every kind. In Hos. 2: 18 the thought is slightly different. While Ezekiel expects the destruction of the wild beasts Hosea looks for a covenant decreed by Jehovah that will prevent the beasts from troubling the people. Isa. 11: 6 holds that the same thing will be accomplished through a transformation of the nature of the beasts. Make a blessing—That is, make altogether blessed, or bless in abundance; in the manner suggested in the context especially, by giving abundant prosperity.

a rule it is pastured off, but it is also a valuable soiling crop for sheep.

When the pastures become a little dry, rape may be cut and drawn to the sheep. A little of it will go a long way in preventing the animals from running down in condition. However, as a rule it is pastured off and proves valuable in keeping the lambs in condition after being weaned, and in toning up the breeding stock.

There are a few precautions, however, which must be observed in order to avoid loss. It is a feed which if care is not exercised at the first, turns the flock on in the middle of the afternoon the first time or two when the rape is perfectly dry. After a time, but there should be grass pasture near the rape field to which the sheep have free access.

Your Problems

Conducted by Mrs. Helen Law

Mother and daughters of all ages are cordially invited to write to this department. Initials only will be published with each question and the 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, 233 Woodbine Ave., Toronto.

Mrs. J.L.T.—1. The cause of your five-months-old baby crying so much at nights may be—1. He is not awakened every three hours for food throughout the day. 2. The room is too warm. 3. He is too warmly clad, or the clothes may be wrinkled. 4. He sleeps in a lighted room. 5. He has been accustomed to being picked up every time he cries. 6. He may be constipated. 7. His ear may ache or his throat may be sore. 8. He may have had too much excitement just before going to bed. 2. It is never safe to use old rubbers saved from the year before on a new lot of preserves. To test rubbers for preserve jars, pull them out to see whether they are of sufficient elasticity to return to shape and not break. 3. Parts should be subjected to the strain. Expense should not be spared in buying rubbers. 3. To cure a child of sucking his thumb, swab the tip end of the thumb with tincture of aloes or with a saturated solution of quinine. 4. Lemon is a splendid thing to keep on your sink to rub on your hands after you are through with the dishes. It takes away the stains, freshens your hands and makes them sweet and clean. 5. Hemstitching can be very neatly done on the sewing machine and also reduce the quantity of sugar required. 7. Apply salts of lemon to the ink spots on the pink cotton dress. 8. To get rid of beetles, sprinkle equal parts of red lead, sugar and flour, mixed, near the holes.

Lulu—1. To make a fountain that will delight the convalescent child you should get a small glass bottle and nearly fill it with water. Then bore a hole through the cork and place a straw through the hole. The straw should be long enough to reach almost to the bottom of the bottle, and if the straw does not fit the cork tightly you should put sealing-wax round it to keep out all air. You should now take a glass jar and heat it over a lamp or candle. Stand the bottle of water on two or three sheets of damp blotting paper laid on a plate or dish, place the jar over the bottle, and press hard to prevent air getting underneath. Now, as soon as the air in the jar begins to cool, the water in the bottle will rise through the straw and form a pretty little fountain. To great thing to remember is to press the jar down ever so tightly. If air can get away from under the jar you will not have your fountain. 2. The costs of tailored suits will probably be longer during the coming winter than they have for some time. 3. Grass stains can be removed with ether. Most medicine stains can be dissolved by alcohol. 4. Keep only a tea or coffee service with a pair of candlesticks on the sideboard. Lackey the service or a handsome tray, have a good-looking receptacle for fruit. Keep all small silver necessary to everyday use out of sight. The aim is to keep all dignified and free from a cluttered-up mixture. For the dining-room table use a runner or square of crash hem-stitched with a bit of cross stitch or a round center-piece of oyster-white linen with a heavy fillet insertion and edge.

E.F.—A canning outfit may be made in five minutes. All you need: A wash boiler, a false bottom for it, made of laths or sticks, or of corrugated tin with holes punched in it; a square of cheesecloth to hold fruits or vegetables when dipping into hot water; a kettle. Principles of home canning fruits and vegetables: Wash and cleanse the food; blanch by placing it in boiling water; plunge immediately and momentarily into cold water; pack food in hot jars, add boiling syrup or boiling water; place rubbers and tops in position half air-tight; submerge jars in boiling water in the wash boiler and cook; tighten the tops.

Value of Bees on Farms. To give an idea of the value of bees in agriculture, it is stated by a German writer that an ordinary colony during Summer contains an average of 20,000 foragers. Of these 80 fly minute; therefore, taking the working hours as from 7 o'clock in the morning to 5 in the afternoon, 48,000 flights every bee visits at least 50 blossoms. This amounts in round numbers to 2,000,000 for the hive in one day. It is reckoned that there are on an average 100 fine days when bees are able

to fly, consequently 200,000,000 blossoms may be fertilized by the bees of one colony. When only one-tenth of these blossoms are properly fertilized by bees, it leaves the enormous number of 20,000,000 fertilizations to each colony.

Never leave the soap in the dish-pan to waste and stick to the dishes. A duck may lay a bigger egg than the helpful hen can lay, but when she's through she cackles not, but simply walks away. And so we scorn the silent duck—but the helpful hen we prize. This is only another way to say that it pays to advertise.

The Fairy of the Fountain. The Fairy of the Fountain and the Little Boy of the Fountain are not the same. The Little Boy of the Fountain is a small image who sits by the waters, day in and day out, with uplifted finger, beckoning the birds to drink or bathe in the basin that he holds in his lap.

And how many, many birds come at his mute carrefour. Freda could tell you, for she is always watching for such things. But how the fairy got there, or where she really came from, Freda never knew.

According to the little girl herself, it all happened in this way: As she was sitting one morning by the fountain, feeding the goldfish, she fell to wondering what it was that made the water bubble up in the basin in such a queer way. Of course grandmother could explain it all; but then that would stop the wondering, which in it self was such fun! Suddenly a wild canary flew toward her, and perched on the finger of the Little Boy of the Fountain; but the strange thing was that, instead of singing Freda a song, it began to speak to her!

"Little girl," it said, "shut your eyes for just a moment."

Freda did so, and when she opened them again, behold, standing right on the edge of the basin, was the tiniest and loveliest little figure that you can imagine!

"I am the Fairy of the Fountain," the little creature said at once. "You were wondering what made the water bubble up in such a funny way. It is I who make it do that, with my little magic. Just notice how still the water is now, while I am talking to you!" And sure enough, the rippling sound had quite ceased.

At first Freda felt very shy in the presence of so strange a visitor, but at last she found her voice and asked the fairy a question.

"Will you let me play some day with your little golden churn?"

"I wish I could," said the fairy

THE LURE OF THE IMAGINATION

The Farnams were not by any means the poorest family in Hinsdale, but all through his boyhood and youth Albert had known what it was to need money. When he accepted the position of teller in the village bank, the salary, which was comparatively small, seemed to Albert a princely income, and he outlived it the first six months. None of his indulgences were vicious, however, and he retrieved himself before another six months had passed.

During the next five years Albert Farnam was again and again tempted into unwarranted extravagances. He did not take it much to heart, for he had no one to provide for except himself, and found it comparatively easy to make up his deficits by compensating economies. A little thoughtful introspection would have convinced him that his ideas of money were being unconsciously influenced by the large sums that passed through his hands daily, but Albert was "easy-minded," and not much given to probing motives or states of mind to the bottom.

When young Farnam was twenty-five, he was elected cashier, with an increase of salary. The year before he had married, and his promotion seemed to warrant him in renting a more expensive house and in buying furniture accordingly. He had to go into debt for this, and some of the old bills were yet unpaid, but that did not trouble him much. He was earning more now, he told himself, and he attached no importance whatever to the fact that his eye rested carelessly upon a heap of bank notes as he indulged in this comforting reflection.

One snowy December afternoon, Albert, who was alone in the bank, surprised himself in the act of making a false entry in one of the books. That may seem a strange way of expressing it, but he described the experience in those very words years later. For weeks he had been in sore straits. His creditors were growing clamorous, his wife was ill, and the last quarter's rent was unpaid. More than once he had permitted himself to draw a contrast between the affluence round him and his own slender purse; but to this day he solemnly avers that he had never consciously entertained the thought of tampering with the funds in his charge until he and himself that afternoon with the book open before him and the dipped pen already poised over the page.

Albert was so distressed and frightened that great beads of perspiration started out on his forehead, and he flung the pen from him as if it had been a deadly weapon. Was his mind temporarily unbalanced by his days and nights of harrowing anxiety? That was Albert's first thought, but he dismissed it as absurd. At all events, he must resign his position. He was unfit to be trusted with a temptation that had almost overcome him. In time, however, his sturdy manhood rallied against the shallow plea of the weakening. If he were afraid of himself, it must be because he did not know himself thoroughly, and he determined to spare no pains in getting at the root of the trouble.

The conclusions that Albert reached were startling enough, but he did not shrink from them. Ever since he entered the bank he had been giving loose rein to a covetous imagination. He had not taken the matter seriously, to be sure, but in the mental sphere, he had been living luxuriously upon money that did not belong to him. He could see plainly now how his habits of thinking had repeatedly betrayed him into extravagance, and this once had led him, quite unsuspecting, to the brink of a grave crime. Suppose the pressure had been stronger! Suppose some emergency had arisen unexpectedly! He trembled to think what the result might have been.

Save Valuable Clippings.

Did you ever stop to realize the great waste of information that is being made each day? Reference is made to the hints and suggestions which one finds in newspapers. In glancing over the columns of the paper one sees the receipt for some dish. At the time one intends to remember the directions or clip them, but something drives the thought away, and the receipt is lost.

Or one may read about a sure way to clean stained clothing, brass or dainty fabrics. At this time there is no need for the information, but the day arrives when one would give anything to know what to do to clean the light tops of boots, or remove the marks from the brass kettle. If only such and such an article had been kept!

There is a way to store a great deal of the knowledge that is being handed out. Make a card index. You need not go to a great expense—an old shoe box will serve as a holder, and cards to fit can be bought for a reasonable amount. Group different classes of clippings under different headings, having one index for each class. For instance, have one index card marked "Canning." On cards following that heading have receipts and suggestions relative to canning, preserving, pickling, etc. On another index card write "Cleaning." Under that group put suggestions as to the best methods of cleaning, and certain stains from clothing, linen, and the like. Have another index card marked "Remedies." Under this have home remedies that are to be applied in emergencies.

SPY SYSTEM

THE A REMARKABLE OF ITS

Prussian Agent Boat Command

Up came the choppy, rolling, around. The three conceal itself in heavily over the But the trained of the Southland to see the perils "Submarine!" The "captain on the "Fire!" command gun crew.

In an instant the aboard the steaming ring at full speed zone, had found of the run crew, beside the piles of deck, shells and ready to fight to the "Bang-g" roar. But the shot rebounding along the target. Perfectly favorable circumstances.

"Bang-bang!" was closer to the porting. By this time the devil commander let go a torpedo. Quickly the vessel its nose toward the get. The torpedo astern.

Then there was streak in the water other torpedo, what. There was an explosion on the port a great hole in the side set gave a shudder forward.

The U-Boat of being hit the gun the periscope for a rain of shots fired a mark. Seeing that it had done its work, it merged in order to get of the gunfire.

With a great above and below the Southland began to and in four minutes efficiently to pull the bellows out of the water ing noise.

All over the steaming were adjusting life lines and stokers, in shoes and trousers out of the hold to a able seaman and steering the lifeboats from side. The gunners, marine subtarget, saw away with their lives to the side, crawled down the ropes, but faintly, but landing lifeboats, which air launched. The great ship was There was another Lurch, and then, as about two hundred vessel was swallowed water; first her deck and then the top ing masts. The crew, but wondering what they were, watched silently. But their muscles, before the whirl of sinking vessel had been there appeared on the thousand yards away, doubtfully the same to up at the beginning of

An Eye-Opening The periscope was moment—no doubt mander was observing he had wrought—and further, finally revealed of a Prussian submersed over her an surface. A little high leading to the interior opened to allow a G look into the open at hole, then, came half crew and an officer. Kicking up a spray air, the submarine was one of the lifeboats—tained the second mate the crew of the steaming "What ship was this submarine commander came up with the boat. "The Southland," reported, "from Liverpool. "Huh?" said the Southland? Are you a "Yes," said the steam "That's odd," replied "You weren't due to it for another week." "I know," replied the "but they finished our of time, and, as we w light, they sent us out day than originally set. "Punny," said the off get any report of it."

Traitors in the This is an astounding intelligence system the Prussians in their