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 Wilson 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.

G.P.W.:—I have a field of well manured sandy loam that is literally infested with horse nettle, bluegrass and smartweed. The field is now drilled to corn and soy beans, but the ordinary methods of cultivation has had but little effect on the weeds. I wish to soon sow rye among the corn. Can I seed this field to some kind of grass next spring to use for pasture when the rye comes off that will assist in getting rid of these weeds?

Answer:—If you sow rye among the corn and it gets a fairly good start, I would advise you to plow it under about the end of May or early in June next year. Cultivation will kill out a large amount of the horse nettle, bluegrass and smart weed. As soon as the ground is thoroughly worked up, I would advise seeding with a temporary pasture mixture which has given good results at Guelph. This mixture is a follows:

10 lbs. common red clover
8 lbs. timothy
2 lbs. alsike

Total 20 lbs.

This mixture will produce a satisfactory pasture early in the spring and will maintain stock until early in autumn. In order to insure a good catch of the grass and clover seed, I would advise at the time of planting to apply 200 pounds per acre of a fertilizer carrying 2 to 3% ammonia, and 10 to 12% available phosphate acid, unless it is possible for you to apply five or six loads of well rotted manure per acre. In your case the fertilizers would be preferable, since it supplies just the same plantfood but does not carry weed seeds. When the stock are taken off this pasture next fall the ground should be plowed immediately and disked and harrowed until it freezes up. This will destroy the weeds in question.

R.M.:—Is it a better time to set out fruit trees in the fall than in the spring, and should they be mulched?

Answer:—It is generally conceded better practice in cold climates to plant fruit trees in the spring. As a rule, they are taken out of the nursery rows in the fall and are "heeled" in; that is, a trench is dug in a sheltered place and the trees are set in at an angle or upright, being covered half-way up the stem. As soon as frost is gone in the spring they are taken out of the trench and planted at the desired distance in the new orchard ground. Care should be taken to prepare the ground in good shape. Many farmers lose their orchards by not giving deep and thorough preparation to the soil. As soon as the trees are well set the soil should be kept loose to a depth of at least two inches by sufficient cultivation so that the much needed moisture will not escape.

An addition of fertilizers or barn manure both at the time of planting and later as a side-dressing to the trees will greatly assist in giving them a vigorous start.

W.F.:—Would you please tell me of the culture of hops for commercial purposes?

Answer:—For hops, the plants are set in spring at about the depth from which the roots were dug up. If the hops are being propagated from cuttings, these cuttings are set in a shaded and well-tilled seed-bed in the summer. They are transplanted from this seed-bed the following spring. The shoots should be cut back in early spring until the third year so that the plant will store up sufficient strength. In preparing the soil see that it is well enriched with rotted manure or fertilizers, or with both. When fertilizer is used, from 200 to 300 pounds per acre carrying 3 to 4% ammonia and 8 to 10% available phosphoric acid with as much potash as possible, should be applied. If you have a supply of wood ashes, it is a good thing to add a good top-dressing of ashes to the ground, since the ashes carry both potash and lime.

GOOD HEALTH QUESTION BOX

By John B. Huber, M.A., M.D.

Dr. Huber will answer all signed letters pertaining to Health. If your question is of general interest it will be answered through these columns; if not, it will be answered personally if stamped, addressed envelope is enclosed. Dr. Huber will not prescribe for individual cases or make diagnosis. Address Dr. John B. Huber, care of Wilson Publishing Co., 73 West Adelaide St., Toronto.

A brush in time saved mine.

THE HYGIENE OF THE TEETH.

Digestion doesn't begin in the stomach; it begins in the mouth. If this truth were realized a great many—though far from all—cases of dyspepsia would "fold their tents like the Arab and as silently steal away" never more to affect the sufferer. The first thing necessary to good digestion is to have the food thoroughly chewed so that it is in a condition to be readily mixed with the digestive juices, the first of which is the saliva in the mouth. How necessary then, it is to keep the mouth, the teeth and the gums in good condition. How salutary to this end is the advice to go to the dentist at least once a year, and have those precious masticators overhauled and kept right!

The teeth should be brushed at least on rising and at bedtime and the mouth should be rinsed with water after each meal. Any one of the many dentifrices now in market is right. Also clean the spaces between the teeth with dental floss. Soft wooden tooth picks are well enough; but picks made of hard substances are apt to injure the precious enamel. You would be surprised to hear how much tooth irregularity in children is due to the mouth breathing habit; see therefore that any possible adenoids or enlarged tonsils in your child's throat are attended to. Have your children get the teeth preserving habit in early childhood.

QUESTIONS AND ANSWERS.

Asthma and Climate.

I have been troubled all my life with asthma. But after I got my growth I was not bothered so much until about 3 years ago it has been getting gradually worse. On the least bit of exertion I feel choked up and I wheeze. I am so short of breath I can scarcely work at all. I am bothered mostly at night, as I can't breath lying down. Tuberculosis was suspected in my case; but the examination of the sputum for the germ showed none. I am advised not to stay in this climate and we are undecided where to go. Will you give me your opinion. We would like to locate in California. Is that climate suitable? I know what benefits one may not help another. I am 39, height 5 ft., weigh 95 and am anemic.

Answer—The "negative sputum" test is not an absolute one. I am sending you the signs of early tuberculosis. Do not worry; only be sure and then get well. Your weight is 30 below the average of your age and height. No climate can be assured beforehand to be beneficial in asthma. California should be excellent for you. But as the going would be something of an experiment I would advise you to precede your family by a few weeks; then, if you are being benefitted the others can come after. Best wishes.

Cancer of the Tongue.

Is cancer at the root of the tongue in a person of fifty possible to operate on, or should it be left alone? Or should X-Rays be used? or radium?

Answer—The examining surgeon must decide. The rule is to operate. The condition, I am bound to say, is a grave one, but recoveries after operation have been reported. This is I believe the best procedure. Some cures by radium have been reported. I do not believe the X-rays would be efficacious in such a case.

Hogs

When fed alone to young pigs, corn produces relatively slow gains at a high feed cost. Supplemental protein feeds will make faster gains at a lower feed requirement per unit of grain.

Just now, when grains are high in price, farmers should understand that there are other kinds of hog feeds which are cheap, and one of the cheapest is rape pasture.

For the first day after farrowing the sow should be fed somewhat lightly, and the full feed should be advanced to by degrees during the first ten days.

Pigs on pasture must be given some grain in addition if they are to gain at all.

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Housing Farm Animals

BY I. J. MATHEWS.

The time of year has come when all the animals on Ontario farms must be housed and this matter of stabling is of some importance. The arguments on each side of the question must be weighed and each given due consideration in planning for the comfort of the animals and for the pocketbook of the owner.

Degree of Warmth

Among stockmen to-day there is quite a dispute as to how warm the stables should be for different animals, and this question is answered largely by the type of animal and by the requirements which are made of them. It is very true that cold animals will use up the body flesh in furnishing warmth and the flesh thus used up can only be replaced by good food which is expensive. Carbohydrate feeds do not generally range as high in expense as the rich protein feeds, but present prices are very high indeed. It seems then, that any precaution or extra care in housing will be well repaid by the ease of keeping which will result. It costs somewhat more to winter a feeder steer over and keep him growing if he is kept out doors in the cold, than as though he is sheltered from the elements. Then there comes the valid argument that the labor involved is one of the greatest costs in any of the farm activities and so the problem of the feeder is to balance these things over against each other and decide which will prove the most profitable.

With fattening stock, especially where labor and building materials are high, feeders find it more economical to use the open shed for their stock. This reduces the labor for the forage and grain can be easily distributed to the stock and the labor of removing the manure is reduced to the minimum. Of course, more bedding must be supplied in this case, but that is a small matter when compared with the other considerations. Added to this, the open shed which affords protection for the animals in inclement weather is also a factor in conserving the manurial product. The more nearly the air can be entirely excluded from the manure, the more perfect will be its preservation and for this reason, the constant trampling of the stock keeps the fertilizer elements from passing off and prevents fire-fanging.

Dairy Cows Must be Kept Warm

The moment we pass from fattening animals to dairy cattle, the problem becomes altogether different and the solution must assume another angle. Since the product of the cow is largely protein and fat, she cannot do her best at milk producing and at the same time use up a large amount of the food which comes into the body for supplying heat. She cannot be expected to do this; the good cow usually does one or the other, but seldom proves very successful at both the same winter. Cows that are forced to stand out in the cold usually commence to go dry when cold weather comes on, and while it is not true that housing is all there is to making a cow give milk, it is true that it influences the milk flow to quite an extent.

The exact temperature at which the dairy barns ought to be maintained is a disputed point; some authorities claim that 70 degs. F. is about right, while others say the proper temperature is some 30 degs. below the first figure. Owing to the fact that the covering of hair decreases the necessity for artificial heat, most successful dairymen agree that the temperature for dairy cows ought to be maintained at from 40 to 60 degs. F. This does not mean that the barn should be supplied with steam heat or artificial heat of any kind, but it does mean that the barn should be so built and cared for that in the coldest days in winter, the inside temperature never goes below 40 degs. F.

Avoid Cold Drafts

Fresh air sufficiently warmed never hurt any animal but cold drafts have brought on many ailments which have resulted disastrously. The mistake that is made in the construction of a great many Ontario stock barns is that of excluding the air too much and not providing any means of ventilation at all. Bank barns seldom are ventilated at all and while they may be just right as far as warmth is concerned, the absence of plenty of pure air is detrimental to the stock; they are compelled to re-breathe the same air so many times that the body processes cannot take place as they should.

Since fresh air is so free, and since it can be so easily and inexpensively supplied to the stock, and at the same time not subject them to drafts, there is little excuse for not supplying it. I know that the moment I speak of ventilating a stable, someone is going to think immediately of a high-priced ventilating system which will take more money than he can rake and scrape to pay for but such a system is a luxury and not a necessity.

Method of Ventilation

The thing to be remembered in any method of ventilating is that cold air is heavier than warm air and so, if the air is allowed to get out through the top of the stable, the stable will be cold for all the fresh air will be supplied at the bottom. On the other hand, if all the fresh air is supplied at the top through one large opening and is conducted out at the bottom through another single exit, the pure air is not sufficiently warmed, and besides, a draft is created.

In some stables, enough air can get in around doors and windows, but others are too tight so a stale stable results; open the doors in winter and stable odors and impure air roll out in sufficient quantities to be noticeable in the extreme. In order to have the air well warmed, it should come in at several places, preferably near the top of the stable.

It has been found that the average 1,000-lb. cow breathes 2,804 cubic feet of air in twenty-four hours. There should not be more than three per cent. of breathed air in the stable at any one time and on these calculations, there should be provided 3,500 cubic feet of pure air per day for each 1,000-lb. animal. Fresh air is just as essential as is good food.

INTERNATIONAL LESSON OCTOBER 28.

Lesson IV. Ezra's Return From Babylon—Ezra 8. 13-36. Golden Text, Ezra 8. 22.

Verses 21-23. Ezra collected the exiles, who were to accampany him, by the river or canal Ahava, in preparation for the long journey to Jerusalem; but before the caravan got under way he proclaimed a fast so that the people might humble themselves before their God and pray for an auspicious journey. Fast—An occasion of humiliation, before God, an acknowledgement of the people's entire dependence upon the divine favor for a safe journey. Ahava—A branch of the Euphrates or canal in the vicinity of Babylon. Its exact location can not be determined. Straight way—A successful or safe journey. Ashamed—He did not want to create the impression that the people of Jehovah had to depend upon human agencies for protection. On the contrary, he assured the king that their God would care for them, for he always protects those who put their trust in him and destroys those who forsake him. Nehemiah did not hesitate to accept an escort (Neh. 2. 9). Enemy—Desert robbers who might trouble the caravan. The ultimate success of the enterprise proved that Jehovah heard the prayers.

24-27. Ezra appointed special custodians for the gifts and offerings. Chiefs—Leading members of the priestly class. Even—Better, with margin, "besides." The thought seems to be that Ezra selected a commission of twenty-four men, twelve representing the priesthood and twelve the laity. Sherebiah . . . . Hashabiah—Called Levites in verses 18 and 19. Either the Levites are here counted as laymen, or the text is corrupt. Batten, following in part First Esdras, reads: "And I set apart from the leaders of the people twelve, and from the priests of the temple Sherebiah and Hashabiah and with them ten of their brethren." Offering—Reference is made to these gifts in the king's decree (Ezra 7. 15ff.). Talents—While there is some uncertainty regarding values, the silver talents figure up to about a million dollars, the gold to about three millions, the one thousand darics to about five thousand.

28-30. Ezra carefully impresses upon the custodians their great responsibility. Holy—The custodians are holy because they are set apart for a special task in connection with the service of Jehovah, the vessels because they are to be used in his temple. Chiefs—The commission guarding the treasures was, on reaching Jerusalem, to hand them over to the representatives of the priests and Levites and of the laity already there. Chambers—Rooms in immediate contact with the temple, serving as storerooms for vessels, provisions, etc., and in some instances are residences for priests.

31, 32. Arrival in Jerusalem. First month—The month Nisan. From Ezra 7, 8 it appears that about four months were consumed in making the journey. Delivered—A convincing proof of the divine favor. Caravans were always exposed to attacks from roving Bedouin; in this case the large amount of treasure carried made an attack especially inviting. Abode—In the sense of "rest." They rested for three days and then delivered the treasures to the proper authorities.

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, 236 Woodbine Ave., Toronto.

Reader:—The following are some games which you may consider suitable for your Hallowe'en party:

Fortunes in the Cellar—Before the party assembles prepare walnuts by taking the kernels from them, substituting a little piece of paper and then gluing the shells together. The writing on each is the same. It should read somewhat after this fashion: "On the stroke of twelve steal silently to the farthest end of the cellar and dig. Keep this strictly secret. Do not let any one see you go down cellar. To tell any one will break the spell." The walnuts are hidden around the room where the party is to be held. They may be searched for at a given warning from the hostess. On the stroke of twelve, or any other hour you have mentioned in the slip hidden in the walnuts, all the players will, after trying to sneak away from each other to get down cellar, find themselves in the cellar, which must be dimly lighted. Digging with tin spoons at the farthest end will reveal little envelopes with fortunes, which have been prepared before the party. These fortunes can be made very funny. A day or so before the party let a couple of the young people who are giving it get together and make up queer prophecies about those who are coming. All members of the party must sit down right then and there in the cellar and read their fortunes aloud.

Seeing Your Future on the Stairs—Before the party secure a hand mirror without any glass in it. Some one will be sure to have a broken one. Then try to get photographs of all of those who will be at the party Tell the boys as well as the girls that they must walk down the cellar steps blindfolded with a mirror in order to see a picture of their future mates in the mirror. One is blindfolded at a time and is led down the dark cellar stairs with an electric flashlight and with the mirror in his hand. In the mirror has been placed a picture of the girl about whom it is most fun to tease the boy who is on the stairs. Remove the bandage from his eyes suddenly. He must look over his left shoulder in the mirror the moment it is removed. Of course the result is funny. As the trick is played on each one in turn those who have seen their fate may follow the blindfolded one down the stairs, thus increasing the fun.

There are many other games that every one knows about that never fail to make a success of a Hallowe'en party. Bobbing for apples, pinning a little broom on the witch, whose picture has been drawn with shoe blacking on a big sheet, are always fun. For the latter a prize can be given to the one who comes nearest to the witch's hand. Of course, it is fun for every one to come in costume. Try an advertisement costume party. Let each one come dressed up like some character seen frequently in ads. The one who guesses what most of the ads are gets a prize.

Mrs. M.:—To fill a hot-water bag correctly heat the water until it is nearly boiling. Fill the bottle a little more than one-third full. Before putting in the stopper lay the bag flat and double the upper part over. This drives out the steam and prevents an accumulation of it. It is steam that makes a hot-water bag hard and uncomfortable for the patient.

The Two Towns.

"Pray can you tell me, little maid,
The way to Grumble-town?"
And first she pointed up the road,
And then she pointed down.

She pointed up and pointed down—
Then shook her pretty head:
"I've never been to Grumble-town,"
The little maiden said.

"Then maybe you can show me, child,
The Town of Pleasantville?"
"Oh, yes, indeed," she said, and smiled;
"It's just beyond the hill.

"Good sir, it's just beyond the hill;
And if you'll come with me,
I'll take you into Pleasantville;
That's where I live," said she.

Some Comical Tenants.

"Are you the landlord?" Bobby sat up in bed with a terrible start and a creepy feeling along his spine. "Are you the landlord?" persisted the cross voice. He stared around wildly and saw to his dismay ten queer little men about three inches or less in height hopping toward him over the covers.

"Oh, Oh!" he stuttered and drew his knees up so suddenly that the whole ten tumbled head over heels down the incline. Quick as lightning they picked themselves up and started climbing over the hill made by his knees, one a little ahead of the others waving a paper and crying, "Are you the landlord?" Bobby's heart nearly leapt out of this throat with fright, but he swallowed hastily and managed to say in a shaky voice, "I, I, I'm a bo-o-o-oy; who-o-o are yo-o-ou?"

"Come on!" shouted the man with the paper to those who were still struggling up the hill; "this is the fellow." Then running like a squirrel up Bobby's shirt, he shook the paper in his face crying, "This is our notice. We are going to move. Our houses are not fit to live in, do you hear?"

"Yes sir, all right sir, what can I do?" cried Bobby in a panic of fright.

"All right," repeated the little man in exasperation. "You'll see how all right it is when we have gone. That's what I say, good tenants are never appreciated." By this time all the little fellows had clambered up and stood in an accusing line on Bobby's knee. The most important one now opened the paper that he had been flourishing so madly and read in a very stern voice:

"We, the undersigned hereby give due notice that premises Right Shoe and Left Shoe, situated at extreme southern points of Right and Left Leg Avenues, will be vacated at noon tomorrow, owing to unlivable conditions.

Signed:

R. G. Toe,	L. G. Toe,
R. F. Toe,	L. F. Toe,
R. T. Toe,	L. T. Toe,
R. S. Toe,	L. S. Toe,
R. L. Toe,	L. L. Toe,

Before Bobby could seize the paper another dream came rushing along and away went the ten little men.

"Father," said Bobby next morning at breakfast, "I must have a new pair of shoes right away!"

No wonder he wanted them quickly, for my goody, who would like to be deserted by his toes?

A Helping Hand.

Here is one way in which to offset the loss of strength in rural communities by reason of our boys joining the colors or migrating to the cities. Every week there are boys from eight to twelve years of age becoming homeless. There are great possibilities for good in these lads. They would make good farmers if taken early into the family and brought up through the next few years.

These are not delinquent boys, but boys who by no fault of their own have been cast upon the mercy of the world. They deserve a chance to win success.

Scores of our readers in Ontario rural homes could to advantage avail themselves of this opportunity to do a kindness and at the same time help themselves.

If labor and equipment are not made to serve to their full capacity throughout the year, the output of the farm will be lowered, and the profits correspondingly decreased.

How Much Do You Pay For Decay?

keeps your buildings from the costly, patched-up class. Not only ends those constant repairs that grow worse year by year, but retains for generations their value when first erected. Don't wait until your buildings have cost you twice their value in repairs. Pedlarize now with Pedlar's Corrugated Iron Siding. Easily and quickly put on. Booklet free. Write!

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