

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. 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.



Henry G. Bell

F.M.C.—I have a gravelly, sand soil, on which I want to sow rye and sand vetch, and then sow sweet clover. When should I sow the sweet clover, in the fall or in the spring, and how much seed per acre?

Answer:—I would advise your sowing the rye in the fall and the sand vetch in the spring. This can be done as soon as the ground is firm enough to work. A light harrow will cover the seed. If the soil tends to be open, it will be well to roll the rye. Follow with a light harrow, preceding both with the sowing of the seed. As to amount to sow per acre, $\frac{1}{2}$ bushel of vetch seed along with about 10 lbs. of sweet clover to the acre should give a good stand.

H.C.H.—I have 10 acres plowed intending to sow winter rye, but it was not ready in time. I want this field in a cash crop. What do you think of spring rye?

Answer:—If you are in a good wheat section, why not sow spring wheat instead of spring rye? Statistics show that you could expect a larger yield and what is selling at a higher price than rye. In order to make a sure stand, I would advise your drilling in about 200 lbs. of fertilizers at the time you are seeding the wheat. Apply fertilizers carrying from 2 to 3% ammonia, 10 to 12% phosphoric acid. It will insure

a good stand of grain and will increase the yield and better the quality of the crop.

A.B.—I would like to have you give me information as to the culture of horseradish, and how they market same. I notice it is quoted in the markets, at so much per dozen, would that be the roots?

Answer:—For best results in growing horseradish, the soil should be plowed deep, early in the spring. As a rule the rows are 24 to 30 inches apart and the space between the root settings are 15 to 18 inches. These are planted from 3 to 5 inches below the surface. In preparing the ground, well rotted manure should be worked deeply into the soil. Top dressing with manure tends to cause the branching out of the roots. The yield of the roots can also be improved by adding from 300 to 500 lbs. to the acre of a fertilizer carrying 3 to 4% ammonia, 8 to 10% phosphoric acid and 1 to 2% potash. These should be worked thoroughly into the soil. Inter-cropping is often a profitable practice in growing horseradish; that is, a crop that can be harvested early is planted between the rows.

I assume from looking up the market reports that the quotation is per dozen roots. These are known as cuttings or sets. I do not find any standard of weight nor size of bundle.

BEDTIME STORIES HAVE IMPORTANT PART IN CHILD TRAINING

By Irene Stillman.

Personally, I look upon stories as very efficient "mothers' helpers" and consider them invaluable in child training, for I have known them to tame the wildest and most unruly of kiddies. Therefore when little Mary Ann or Johnny Jr. comes to you with the world-old childish plea of "Tell me a story, please," look not upon the time conceded as wasted upon an unproductive amusement, but rather as an opportunity to give youth a hypodermic of almost any virtue which you would like it to have under its tender skin and so mold the coming generation nearer to your heart's desire.

A story may be made the sugar coating of a moral pill which "put over" upon the young folk who beg for the amusement will, in further slang, be "good for what ails them!" The bedtime story is hung with medals! Its possibilities are many. It soothes overstrung nerves, comforts juvenile distress and quells juvenile rebellion, and is such a skillful nurse altogether that it frequently succeeds in tucking the unwilling child into bed when, without its timely assistance, mother would have failed. It acts, properly selected, as a quietus for all the turbulence of the long day, and so brings the childish mind into an ideal state for slumbering peacefully and restfully throughout the night. It is, of course, understood that bedtime stories particularly should not be of the exciting kind or contain any ferocious dragons, giants, pirates or similar characters which might haunt the little folk's dreams.

As a rule, I thoroughly disapprove of bribes, but the story will often prove a most seductive and harmless reward for good behavior while a rebellious child is being undressed for bed or dressed in the morning. The story should be told during the process. Thus no time will be wasted by the mother and the child's concentrated attention upon the story will make him or her easier to handle.

Peacemakers. And the opportune story is a peacemaker. If you can get children to laugh together after they have quarrelled or if you can get your little boy

or girl interested in one of your stories after you were compelled to punish, any subsequent sulks or unpleasances will quickly disappear under its genial influence. I have known story-telling to bring parents and children into closer companionship and even comradeship and to even draw the children themselves closer together when they are inclined to drift too far apart in their amusements and the selection of their friends, thus endangering the family unity (although this does not mean that I do not approve of outside and individual interests.) One wise mother who had a small family of quarrelsome children, and who could not spare the time to watch them closely enough to prevent such discord, taught them to tell stories among themselves, impressing upon them that the story-teller should have some little training in the art, if that is possible. And it usually is, for there are many excellent books upon the art of story-telling that can be obtained at the libraries or better still, at the bookshops, so that one may have such a book to keep and refer to from time to time.

An instinctively cruel child, where animals were concerned, was taught kindness to them and even love for them and the desire to protect by the effective animal stories related to him by his older brother. The same little lad was taught to love nature by stories of "green things growing."

The Pueblo Indians have some excellent ideas in child training, although, on the other hand, they have, of course, methods which we would find impossible. But that custom of giving their children reasons for the commands laid upon them shows great consideration. These reasons are usually in the form of legends and ancient tales, there being one or more to fit almost every case wherein the child must give obedience. So effectively do the Indian parents tell these revered legends of their race that a sharp impression is left upon the little Indians' minds and characters. I would say that the wily Indian par-

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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.

"To be a good animal is the first requisite for success in life."—Spencer.

WHAT TO DO FOR DIABETES.

Most adult diabetics would do well if they would obey their doctor's orders. But it is a very considerable medical experience that such patients are hard to control; they are very prone to do as they please as soon as they get beyond the doctor's observation. Every diabetic must be under a doctor's constant care. Each must be treated according to his own peculiar constitution. Worry, excess, great exertion, exposure must in all cases be avoided. Tea, coffee, and, indeed, all food must be sweetened with saccharin (to be had in 100 tablet bottles of the druggist) instead of sugar. The bowels must move once a day. There are medicines appropriate to the individual case which the family doctor must prescribe. And the diabetic diet must be faithfully adhered to. Such an one is the following:

Soups or broths of beef, chicken, mutton, veal, oysters, clam, terrapin or turtle (not thickened with any farinaceous substances) beef-tea.

Shell fish and all kinds of fish, fresh, salted, dried, pickled, or otherwise preserved (no dressing containing flour).

Eggs in any way most acceptable.

Fat beef, mutton, ham or bacon, poultry, sweetbreads, calf's head, sausage, kidneys, pig's feet, tongue, tripe (all cooked free of flour, potatoes, bread, or crackers).

True gluten—gum gluten, for instance, gluten foods of known gluten percentage, whole wheat containing gluten beyond that of ordinary farinaceous foods (so-called gluten breads sometimes contain quite as much

QUESTIONS AND ANSWERS

Systemic Infection.

I have been troubled the past year with my nerves. Have headache quite frequently, with pains just back of my ears. And my ears run wax more than ever in the last few months. My eyelids become puffy and my ankles swell. I seem to sweat very easily and lack my usual ambition.

Answer:—Ears never run wax; there is a purulent discharge, something more than nerves. There is an infectious process going on in your system. See a doctor at once, lest you come to the serious pass. You have neglected the signs of ear trouble, probably also of the mastoid process behind the ear.

NIGHTINGALES OF FLANDERS.

The nightingales of Flanders, they have not gone to war; A soldier heard them singing Where they had sung before.

The earth was torn and quaking, The sky about to fall; The nightingales of Flanders They minded not at all.

At intervals he heard them Between the guns, he said, Making a thrilling music Above the listening dead.

Of woodland and of orchard And roadside tree bereft, The nightingales of Flanders Were singing, "France is left!"

Serious Oversight.

"How are the tomatoes coming on?" the gardener asked the wife of the new summer resident.

"I'm rather afraid that we shan't have any," was the reply.

"Why, I thought you said you'd planted half your garden?"

"I did; but I forgot to open the cans."

Sheep Notes

It is estimated that it costs \$34 to feed a dog one year. On this basis some farmers could keep two more cows or ten more sheep with no more general expense to the farm if they dispensed with their dogs, as it only costs about \$60 or \$70 to feed a good cow, and five sheep can be kept on the same amount of food as one cow. The neighbors' sheep would be safer, too. If you feed your lambs by the thumbful you can not expect to get money from them by the peck measure. When running on fall pasture it takes from two to three bushels of corn per hundred head when on full ration.

Some method of marking the ewes when bred is advisable. A simple method is to mark the ewes with paint, making one mark on the shoulders of ewes bred the first week, two marks for those of the second week, etc. As the lambing time approaches, the ewes may be separated and placed in suitable quarters. Where the ram runs with the ewes a good scheme is to paint his breast each day and separate the ewes as soon as they show paint on their fleeces. The color of paint can be changed every ten days, and the herdsman can tell how sure the ram is.

Horse Sense

About the first thing some folks do when they go to buy a horse is to hitch him up to a carriage and take him down the road for a spin. The main thing seems to be, "Can he trot a blue streak?" Lots more common sense in testing the animal at the plow, on the mower, at good, honest farm work. Horses need wider and more exclusive stalls than cows. Enough width is necessary that the horse can lie down and stretch his legs, but not enough to allow him to roll and tear down the stall.

The natural method of avoiding dry, contracted hoofs is to place the horse on a good rich pasture after a heavy rain. Unfortunately it is frequently not practical to give a horse free range according to weather conditions. The best substitute for nature's own provision is to stand the horse in a strongly built trough of water or in a clay puddle from two to four hours once a month.

Give the team a pail of water in

Eating for Health and Strength calls for intelligent food selection. It is easy to keep in top-notch vigor of mind and body at low cost if you know **Shredded Wheat Biscuit**. It is 100 per cent. whole wheat—nothing wasted, nothing thrown away—contains more real body-building nutriment than meat, eggs or potatoes and costs much less. Full of nutriment, tasty and toothsome. Most people like the nutty aroma of the baked wheat, especially when served with hot milk. Delicious with sliced peaches, bananas and other fresh fruits.

Made in Canada.

The middle of the forenoon and afternoon when doing the fall plowing. Water refreshes the horses as well as the man.

As far as the light-legged horse is concerned, he is practically doomed. The motor car has taken his place. For a number of years the heavy horse will be in demand. He is keenly in demand at the present time.

The Shrewmouse.

The smallest mammal in the British Isles is the shrewmouse. This is not only the smallest British mammal, but, with the exception of one other of the same genus, the smallest in Europe. The harvest mouse is sometimes thought to be even smaller, but the length of its head and body is often two and a half inches, while that of the lesser shrew is rarely more than two inches. The tail measures about one and a third inches, and its teeth are so extremely small that a lens is required to detect them.

If the remnants of old garden crops are destroyed immediately after harvest and weeds are kept down along fences, injuries by insects and diseases to vegetables next year will be materially lessened.

Your Problems

Conducted by Mrs. Helen Law

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.

Add all correspondence for this department to Mrs. Helen Law, 233 Woodbine Ave., Toronto.

Perplexed Mother:—Raw milk quickly develops bacteria, and to overcome this and prolong its keeping qualities it is necessary to pasteurize it. There is a regular apparatus that comes for this purpose, but you may improvise by your own outfit and accomplish successful results. First and foremost a mother must realize that every dish, spoon, bottle and utensil that is used in preparing the baby's food must be absolutely clean, surgically clean, if you will. To accomplish this it is necessary to use plenty of boiling water.

Fill the milk into sterilized bottles. Stop the top well with absorbent cotton and put in a kettle deep enough to hold the bottles. The kettle should be two inches deeper than the bottles. Fill the kettle three-quarters full of cold water and stand a thermometer alongside of the milk bottles. Put over the flame to heat it. Heat until the thermometer registers 167 degrees Fahrenheit, then turn the flame low, so that you can maintain this temperature for half an hour. Remove from the fire and cool rapidly, taking care that the bottles do not break. The kettle should be kept for this purpose alone, and it will greatly facilitate the work of preparing baby's meals if all the utensils, bottles, etc., are kept in a place of their own, away from other household utensils.

If baby is restless, feverish and appears unwell, call a physician. If necessary, cheerfully neglect the household duties to give baby the necessary care. Give the baby a spoonful of boiled and cooled water.

Use a piece of absorbent cotton on your finger to wash the baby's mouth. Do this frequently—in fact, after each feeding. It will refresh the child.

Economist:—1. The recipe for the war cake follows. It is made with one cupful of brown sugar, one-quarter cupful of shortening, cupful of boiling water, two cupfuls of seeded raisins and a half teaspoonful of salt. Boil these five minutes. Cool and add one teaspoonful of cinnamon, a half teaspoonful of mace, one-quarter teaspoonful of clove, one teaspoonful of soda and two cupfuls of flour, which have all been sifted together. Beat well and put into greased, paper-lined bread pan. Bake in a slow oven one hour. 2. Apple butter, such as our grandmothers used to make, requires quarter-peck apples, 2 quarts water, 1 cup vinegar, 1 cup brown sugar, 4 tablespoons cinnamon, 1 tablespoonful nutmeg, 1 teaspoonful allspice, 1 teaspoonful cloves. Cut the apples in pieces and add the water. Cook until soft, then rub through a fine sieve or colander. Do not peel the apples. Cook the vinegar, sugar and spices until very thick, stirring constantly. Put an asbestos mat under the pot to prevent burning. Pour into pots or crocks and cover with paraffine. This is fine for the children and grown-ups. It is delicious on mush, cereal and hot cakes. It is excellent for tarts, very good between layers of a cake, and delicious when combined with a cream cheese, seasoned with salt and pepper and spread on crackers, as an appetizer at social affairs.

Health

Time Required For Digestion.

The observation made by Beaumont on the stomach of Alexis St. Martin nearly a century ago gave the world the first valuable information on the question of the time required for the gastric digestion of various foods. The following table embodies the most important observations of Beaumont:

	Hrs.	Min.
Rice	1	45
Sago	2	..
Salticorns	2	..
Barley	2	..
Beans, pod, boiled	2	30
Bread, wheat	3	30
Bread, corn	3	15
Apples, sour and raw	2	..
Apples, sweet and raw	1	30
Parsnips, boiled	2	30
Beets, boiled	3	45
Turnips, flat, boiled	3	30
Potatoes, Irish, boiled	3	30
Potatoes, Irish, baked	2	30
Cabbage, raw	2	30
Cabbage, boiled	2	30
Milk, boiled	2	..
Milk, raw	2	15
Eggs, hard boiled	3	30
Eggs, soft boiled	3	30
Eggs, fried	3	30
Eggs, raw	2	..
Eggs, whipped	1	30
Potatoes, salted, boiled	4	..
Oysters, raw	2	30
Oysters, stewed	3	30
Beef, lean, rare, roasted	3	..
Beefsteak, broiled	3	..
Beef, lean, fried	4	..
Beef, salted, boiled	4	15
Pork, roasted	5	15
Pork, salted, fried	4	15
Mutton, roasted	3	15
Mutton, broiled	3	..
Veal, broiled	4	..
Veal, fried	4	30
Fowls, boiled	4	30
Duck, roasted	4	30
Butter, melted	3	30
Cheese	3	30
Soup, marrowbone	4	15
Soup, bean	3	..
Soup, mutton	3	30
Chicken, boiled	3	..

More recently observations have been made by Penzoldt and by Cannon, the latter using the X-ray, and following facts discovered:

Carbohydrates pass out of the stomach most quickly, beginning in ten minutes after they have been eaten. Protein is next in order and fats last.

When protein (beef) was fed before the carbohydrates the discharge of the food was much delayed. When carbohydrates (crackers) were fed first the discharge of the food was almost as rapid as when the carbohydrates alone were given.

A mixture of carbohydrates and protein passed out of the stomach more quickly than protein alone and less quickly than carbohydrate alone. When fat and carbohydrate (suet and crackers) were mixed the time required for gastric digestion was longer than when carbohydrate alone was given. When fat and protein (equal parts of suet and beef) were given, the food remained longer in the stomach than either the fat or the protein given alone. Evidently the addition of much fat causes delay in the stomach. The reason was found to be that fat does not leave the stomach faster than it can be absorbed by the small intestine.

When a mixture of the several food principles was given, Cannon observed that at the end of a half hour eight times as much carbohydrate as protein had left the stomach, and at the end of an hour five times as much.

The amount of food eaten also influences the time required for the stomach to empty itself. Seven ounces of water left the stomach in an hour and a half. The quantity of water made little difference, but seven ounces of milk require two hours to leave the stomach. Aerated water—charged water—leaves the stomach more quickly than plain water. Increasing the amount of water five times only doubled the time in the stomach.

Six times the original amount of meat required three times as much time for digestion. Four times the original amount of biscuit required twice the original time for digestion. The time required for the digestion of an ordinary meal is four to four and one-half hours. The stomach needs an additional hour for rest and disinfection before another meal.

FIND NINTH CENTURY ARMS.

Long Sword and Spears Found in Warrior's Grave in England.

In the course of some excavations at Horncastle, Lincolnshire, some workmen unearthed a well-preserved human skeleton and weapons of the Anglo-Saxon period, or the ninth century A.D. There is a long sword, a large spear, and a smaller one, all of iron. The sword is remarkable for its length, and is double-edged, its total length is 33 in., and it is $1\frac{1}{2}$ in. wide and tapers at the top to accommodate the handle. The spears are both socketed, and the large one, still containing the rivets which hold the shaft, is 10 in. long, somewhat lozenge-shaped, and $1\frac{1}{2}$ in. across at the broadest part. The smaller one is more knife-shaped, and $7\frac{1}{2}$ in. in length by $\frac{1}{2}$ in. in width. It was very unusual for the Anglo-Saxons to be buried with their swords.

The Doings of the Duffs.

OH TOM, HERE COMES THE MINISTER! WHAT WILL HE THINK OF YOUR BLACKEYES?—GO HIDE QUICK!

I'VE BEEN HERE QUITE A WHILE NOW THINKING MR. DUFF WOULD GET HOME. DO & HE STAY OUT THIS LATE VERY OFTEN?

WHY-A HE HAD A LOT OF WORK AT THE OFFICE TONIGHT AND HAD TO STAY LATER THAN USUAL.

I SMELL SMOKE MRS DUFF!! SOMETHING MUST BE BURNING!! IT SEEMS TO BE COMING FROM THAT CLOSET!

OH-A-WHY YOU MUST BE MISTAKEN—