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# Farm Crop Queries

CONDUCTED BY PROF. HENRY G. BELL  
The object of this department is to place at the service of our farm readers the advice of an acknowledged authority on all subjects pertaining to soils and crops. Address all questions to Professor Henry G. Bell, in care of The Wilson Publishing Company, Limited, Toronto, and answers will appear in this column in the order in which they are received. When writing kindly mention this paper. As space is limited it is advisable where immediate reply is necessary that a stamped and addressed envelope be enclosed with the question, when the answer will be mailed direct.  
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R. B.: What is your opinion on my idea re two acres of strawberries this coming spring, sandy loam, subsoil clay, plowed from grass in fall of 1919, crop of beans, 1920; tomatoes, 1921; manured 1920, and 1921 acid phosphate, 16 per cent. placed around tomatoes. I have the tomato vines in ridges and covered over so to make humus in spring. In spring I intend putting this on level and plowing it, sow about 400 lbs. to the acre of a fertilizer mixture 1000 lbs. tankage, 6-15-0; 1,000 lbs. pure steam bime meal 4-24-0; 2,000 lbs. muriate of potash. (I think muriated potash runs 53 per cent.)

Would it be still better to place a light coat of horse manure, work it in separate from the commercial fertilizer? As to planting the strawberries, I intend part pure Brandy Wine, part pure Williams, part 4 Brandy Wine to 1 Williams, part 5 Brandy Wine to 1 Parisian Beauty. I have these plants of my own, pure. Why I am using the Brandy Wine most is I have a year-old patch I intend taking up. The plants will be two years old in spring and I may have some of these to sell I find them the best table berry for flavor, to date, on the market.

What would you figure out the analysis of my mixture of commercial fertilizers? How would this be for cherry and plum trees, raspberry covers, also for vegetables—tomatoes, potatoes, carrots, sugar beets and turnips?

Answer: I would advise working in a light dressing of fairly well rotted manure, just as you are working down

## Poultry

H. B.: Will you kindly tell me the amount of grain a laying hen should have?  
It is difficult to say exactly how much grain a laying hen should have, because much depends upon the breed and the individuality of the bird. Some breeders have found that one hundred hens will eat about ten pounds of dry mash and ten pounds of scratch grain each day. Others find it difficult to make the hens eat as much mash as hard grain.

In general a tenth of a pound of hard grain per hen per day should be about enough if the hen has access to a balanced dry mash, oyster shells, green food and plenty of fresh water. It pays to keep the mash before the birds at all times. Then give them scratch grain in the litter in the morning to keep them exercising. At night give enough grain to send the hens to roost with full crops. A little study and observation of a flock soon tells the owner what the birds need to keep them satisfied and in laying condition.

## Live Stock Prices Improving.

Every farmer and breeder will be interested in noting the gradual rise in prices that is taking place in live stock. The following figures taken from the weekly report of the Live Stock Branch at Ottawa show an encouraging trend. Taking the average prices that prevailed in November, 1921, and February, 1922, at the five principal markets in Canada, namely, Montreal, Toronto, Winnipeg, Calgary, and Edmonton, it will be found that they compare thus: Steers, 700 to 1,000 lbs., good, \$4.29 to \$5.84; heifers, \$4.34 to \$5.71; bulls, \$2.69 to \$3.65; cows, \$3.80 to \$4.78; calves, \$5.91 to \$8.47; hogs, select, \$8.83 to \$12.99; lambs, \$7.58 to \$10.40, and sheep, \$4.16 to \$6.52. It must be understood that these prices are the average at the stock yards of the whole country and are for good animals in every case. Of course prices are higher in Montreal and Toronto than in the West.

Good advertising of good goods is putting some farmers out of difficult places.

## Windmill Does Double Duty

On a great many farms it is possible to have a complete and up-to-date water system with little expense. In many cases the windmill is located very close to the house, sometimes right on the porch, so it is very easy to pump the hard water into a gravity tank in the house and thus put this water where it can be used to supply the kitchen sink, or a bathroom with water under pressure. Simply have the water pumped first into this gravity tank, which may be located on the second floor of the house or in the attic, and when full let it overflow back to the barn tank.  
One farmer whom I visited had contrived a way of making his windmill do double duty. He put a rock-

## The Dental Tragedy

Ninety to Ninety-Five Per Cent. of Children Have Decayed Teeth.

BY DR. WILLIAM E. LEAK.

"My grandfather and grandmother, they are brought into contact with had fine teeth, Doctor, and my father had good teeth. Never had one out, or never had a cavity. I think that is why I have such fine teeth." I often have patients say something like this to me. Or the patient may conclude his remark by wanting to know why it is that he has such poor teeth. Mr. Brown once remarked to me that the reason he had such a wonderful set of teeth was because at Stony Mills, where he was born and brought up, there was considerable lime in the water they drank and he believed this fact accounted in a large measure for his strong teeth. When I asked Brown, if his mother also lived at Stony Mills and drank the same water, he expressed some surprise at my question. Then when I told him that he could thank his mother for having used that water and for having eaten good foods, and explained to him that the baby teeth start to form at the fourth month of uterine life and that even the six-year molars of the second set start formation at the seventh month of uterine life, he readily comprehended the value that his mother's diet had been to him in giving him the strong sturdy body which he has.

Not Due to Heredity.  
Heredity as little to do with the strength or texture of our teeth; food which we eat has much to do with this. The greatest reason why many of our grandfathers had good teeth was because they ate better and more wholesome foods than we do to-day. They ate the natural foods, practically preparing them altogether themselves, taking into their bodies the whole of the grain or vegetable without its being prepared in a factory and having some of its best parts removed to make it more pleasant in appearance, and then doctored to tickle the palate.

The greatest factor in the prevention of tooth decay, as already stated, lies in the foods we eat. These operate in different manners. This does not mean that if we have had teeth that we may alter them or prevent their decaying, presto-change, by changing our diet, as some dietitians and nutritionists would lead us to believe. In this connection we must remember that the baby teeth start their development early in uterine life, are built up very slowly, do not erupt until the child is about six months of age and from then on until three years of age, and that even after they erupt the roots are not completed for two or three years. The second teeth start to form late in uterine life and during the first year of infancy, slowly develop, erupting in the mouth at between the ages of six and twelve years; the roots take even a longer period to form.

It can not be said that there is a definite circulation in the tooth structure; when it is once laid down, changes, if at all possible, must take place by osmosis, which is a very slow process, taking months. It is evident then that the tooth structure is dependent in a large measure upon the food of the prospective mother and upon the food of the infant. Thus the starting point in the care of the teeth should and must be exercised by regulation of the diet and health of expectant mothers, and by controlling the diet of infants.

## Chew Hard Foods.

After the teeth appear, the service to which they are put governs to a large degree their liability to decay. The teeth are the hardest substance in the body. Normally they are well embedded in and well supported by strong bone and gum tissues and are capable of withstanding heavy pressure and of grinding coarse food. Indeed, if we do not chew hard and resistant foods the gum tissues will become flabby; to chew such foods (and this applies to children as well as adults) will strengthen the gum tissues and cause an active flow of blood to them, keeping them healthy. The chewing of coarse, hard foods materially increases the flow of the saliva. This fluid not only dissolves but also acts chemically upon certain foods, removing them from the surface of the teeth. Also during the act of chewing, the cheeks, lips and tongue rub over the surfaces heavily and fast, mechanically cleaning them. If we avoid hard foods and eat soft foods, these normal activities do not occur, the gum is likely to become diseased through lack of use and the presence of food stuffs upon it. If the food deposits are not washed away by the saliva or action of the cheeks or lips, it remains upon and between the teeth and is likely to cause decay. Persons who resort to soft foods usually also desire much sweet food. Our pastries, pies and cakes, the soft starches and refined sugars allowed to remain near the teeth will ferment and an acid results which acts upon the enamel and causes decay.

## Get Your Customer's Eye.

Not long ago I found a truck farmer who has hit upon a rather spectacular and effective way of catching the eye, orders, and cash of passing motorists. He built a windmill about 10 feet in spread of fans and mounted it in a conspicuous place near the highway. It is a fairly good miniature of the famous Dutch windmill, and this in itself attracts the passer-by.  
But he went further than that. He conceived the plan of making his production of a Dutch windmill do some effective advertising for him as its fans slowly revolved. He arranged suitable slots or grooves on the blades to receive advertising cards conspicuously lettered with the names of various kinds of truck, fruit, and produce in which he specializes. The cards are tin or sheet iron, neatly lettered and produced so infrequently advertised are able to withstand the appeal. When once they are enticed to see the produce the sale is assured. A man having such advanced ideas on publicity can be depended on to hold his customers by means of quality, once they are caught.

When I saw the windmill the blades bore the words, honey, applesauce, fresh eggs, strawberries; while the upright, which is 36 inches wide at the base, carried the announcement, "We beat the Dutch."  
There are numerous publicity schemes which depend on some similar plan of appeal that can be originated. One essential is to attract the eye of the public by some means that will please and cause comment. Then keep your publicity method constantly fresh and attractive.  
When mounting a windmill as described, it is necessary to have it geared and governed so that the revolutions will be slow and steady, no matter what the wind velocity may be. A well-proportioned, neatly built mill, kept tastefully painted, becomes a widely known farm landmark, and can appropriately bear the proprietor's name and the farm name, which in this case it is "The Windmill Farm."

Another thing greatly needed in schools for developing fellowship as well as leadership.

Starch from clothes will not stick to the iron if a little salt is added when the starch is made.  
The country church will serve most when identified closest with the everyday life of the community.

The good farmer is one of the most capable, industrious and steadfast of men and the day society in general recognizes this we shall mark the beginning of another epoch.

# SMOKE OLD CHUM

The Tobacco of Quality

## 1/2 LB. TINS and in packages

## A Poultry Pen Asset.

Poultry manure has both solid and moisture voided together and so, when it is collected daily and used before it dries, a double benefit is derived. When manure gets too dry they denitrify; that is, certain denitrifying bacteria will destroy all the nitrogenous compounds and set off the free nitrogen into the air.  
Hen manure is very heating and has large quantities of nitrogen, so when storing it care must be taken that it shall not lose any of its value.  
Urine is rich in nitrogen, and with the larger farm animals there is a big waste from this source alone, which is not present when poultry manure is used.

The kind of food fed always influences the manure. When hens are given green bone, meat, vegetables, etc., a bigger percentage of phosphorus is found, on analysis, to be present in the excreta.  
It is not too much to say that an adult fowl will make twenty-five pounds of excreta a year. Multiply this by the size of the flock to estimate the amount of manure possible.  
Pure poultry manure (free from bedding), such as is collected from the dropping boards, is at least twice as rich in nitrogen and five times as rich in phosphorus, as the barnyard manure.

Now because of the very large per cent. of nitrogen in this kind of manure, much of its value soon evaporates if it be left exposed, and so there is a reason for gathering it often. The extra cleanliness induces health, vigor and thrift in the flock.  
In summer the droppings may be taken at once to the garden and used, but in winter they should be mixed with a little dry earth and kept stored away from the weather, in covered boxes or barrels.  
Do not sprinkle wood-ashes nor air-slaked lime on the dropping boards to keep them sweet, for the lime contained in the wood-ashes will at once react with the manure and drive off the ammonia which holds the nitrogen, the much-sought-after and expensive plant food, and the very thing we want to save.

Gypsum (land-plaster) is very good for use on dropping boards, and so is finely ground phosphate-rock. When very fine the latter is a good insect-powder, and makes a good filler for the dust-box.  
The kind of plants that gain greatest benefit from hen droppings are the leafy crops, which require a great amount of nitrogen, but the droppings can be used with excellent results for roots, corn, cereals, etc.  
For forcing early tomatoes, celery, etc., I have never used anything so good as liquid manure made from hen droppings. Put a pailful of droppings into a tub of water and let it stand in the air for a day or so, stirring once in a while. A little of this impregnated water poured about the young plants seems to make them fairly jump out of the ground.  
Nitrogen from any source would be worth at least ten cents a pound.

Robins obtain most of their insect food on the ground. It consists of cutworms, wireworms, ground beetles, earthworms, caterpillars of all kinds, spiders, grasshoppers, crickets, slugs, and the white-winged fly which does so much damage to grasslands. The cock beetle, the parent of the wireworm, is also included in Robin's diet. Every farm should encourage Robin guests. If boys are handy with tools they can make a Robin shed for the Robin family to nest upon. It proves a safer nesting site than the crotches of trees.

## The Robin's Diet.

Take Time by the forelock  
And plan the garden now;  
When spring has come there'll be no time  
Except for spade and plow.  
Ah, March! we know that art  
Kind-hearted, spite of ugly looks and  
threats,  
And out of sight art nursing April's  
violet.

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