

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 answer will be mailed direct.



C. K.—One of my neighbors who feeds silage to his cows told me that they gave twice as much milk when fed corn silage, but that it would test only half as much. And one of my other neighbors said it did not increase the flow of milk. Which is right? My hogs tear holes in the cement floor as soon as I feed them corn for a few weeks while fattening. What is the cause and what can I do to prevent it?

Answer: Regarding the feeding of ensilage to dairy cattle, I wish to say that a nine-year survey of the dairy interests of United States by Hoard's Dairyman resulted in the following findings:

	Annual Butter Over	No. of Cows	Yield Lbs.	Cost of Feed	Cost of Returns	Feed Cost Per Pound	Butter-fat Returns
Fed Silage	6,689	181.8	34.98	\$48.48	\$13.50	18.9c	
No Silage Fed	21,759	151.2	\$32.95	\$39.41	\$ 6.46	22.2c	

The above table shows the practical value of feeding silage. The very fact that the use of silos has so greatly increased in this country is further proof of the correctness of the statement that ensilage pays.

Your hogs tear holes in the cement floor when you are feeding them corn because corn supplies large quantities of energy and heat-producing food or carbohydrates, and but very little ash. You should mix in a pound or two of tankage once a day in order to supply ash for the building up of the animal's bones. They are in search of the lacking elements, and this explains the reason for their tearing up the floor, which contains a small amount of lime and phosphate.

H. J.—In building my barn I have not solved the question of how far to treat the liquid from the gutters. I understand some people run a drain out to a cistern and then later pump this into a sprinkler and spread on the land. Please let me know if you think this practical, or if you have some other system you think is better.

Answer: It is the custom in some dairy stables to arrange the gutters so that the liquid manure is gathered in a cistern and is later pumped on top of the manure pile, which is stored in a concrete pit. In Germany they take the liquid manure, as you describe, and sprinkle it on the land. This has never become a custom here as yet, largely owing to the high price of labor. In one of the most successful dairies I know, dairy stable laborers spread horse manure in the gutters. This absorbs the liquid manure very well. Others use dry peat, and still others use sawdust. I believe horse manure is one of the best absorbents. The liquid manure is exceedingly valuable since it contains over 50 per cent. of the nitrogen and potash in well kept manure.

C. L.—I am feeding ground beans and oats equal parts. We fix two sacks of that with one of bran. What can I add to make a good ration for dairy cows? Our rough feed is corn ensilage and No. 1 mixed timothy and clover hay.

Answer: Study of the feeds that

Hogs

Experiments show that where stock cars are protected on the north during stormy weather, hogs will shrink a pound and a half less, going to market. A pound of shrink or a pound of fill at the market are just the same as a pound of meat, when selling to the packer. If a farmer can fix his car so that his hogs will be comfortable and feel good when they arrive at market he will not have much shrink. The more nearly normal condition can be provided the less will be the shrink.

It has been found that a mixed lot of hogs obtained from several farms are liable to have a greater shrink than where the entire shipment has been obtained from one farm. This is due to the tendency of fighting. Fighting often proves fatal to fat hogs. A hot fattens from within and as he gains in weight he presses against the lungs. During the extreme exertion incident to fighting his "engine" (lungs) is not able to keep up with the demand and he suffocates inwardly. Hogs from different farms driven to town and yarded together frequently start a fight while in the yards that they renew when loaded in the car. The cramped quarters proves an added exertion and when taken out dead at the market it is a case of "smothering" which is another kind of shrinkage that could be avoided by keeping together in an open lot for a day or two.

No man may hope return for all the sows. Forcible not profitable to raise sows.

Poultry House Curtains.

When ordinary cloth curtains are used on the poultry house windows the supply of fresh air is soon diminished because of the curtains becoming dusty. Canvas soon becomes dusty and allows little air to enter. The burlap from old sacks is fine for protecting the windows as the material is coarse enough to stop draughts but still permit plenty of air to enter. Nearly every poultryman accumulates a supply of worn-out burlap sacks which can be pieced together for curtains.

If the curtain frames are hinged to the top of the window the usual plan is to hook them to the ceiling of the house when they are raised. They should be so arranged that the birds cannot roost on the frames. Of course it is not necessary to lower the curtains but a few nights each year and sometimes Leghorns will select the frames as a permanent roosting place. Then the curtains are soon ruined and they may become infested with mites. Burlap curtains that roll down from the top are very satisfactory. In some cases they can be placed in a slot and easily shoved back and forth. If the curtains swing back and fasten to the roof they can often be hooked so close to the ceiling that there will be scarcely any room where the birds can roost.

A combination of curtains and windows is the most desirable. Then if the curtains are closed on a stormy day, the glass still permits plenty of light to enter. If the entire opening is protected by curtains, the house is too dark if a severe storm from the south forces the poultryman to keep all of the curtains closed.

THE S. S. LESSON

JANUARY 16TH

Our All for the Kingdom, St. Matt. 12: 16-20. Golden Text—St. Matt. 19: 19.

Time and Place—March, A.D. 29; Perea, on the eastern side of the Jordan, during Jesus' last journey to Jerusalem.

To-day's lesson belongs to the so-called Perea ministry of Jesus. The fullest account of this ministry is given in Luke 9: 51 to 18: 34. Matthew begins ch. 19 of his Gospel with the statement that our Lord departed from Galilee. This was his final departure from that province. He crossed the Jordan, and in this more remote region where he was less well known, he resumed his work of teaching and healing. (Plummer) meanwhile slowly journeying toward the capital.

I. A Great Question, 16-20.

V. 16. Behold; introducing a striking incident. One Came. Compare Mark 10: 17-22 and Luke 18: 28-33. Luke says that he was a "ruler," commonly taken to mean "a ruler of the synagogue," but Plummer suggests that it may mean simply "a leading man in society," an inference from his great wealth. Mark says that he "came . . . running and kneeling." Good Master; (Rev. Ver. simply "Master," that is, "Teacher," "Rabbi," "Good," however, is found in Mark and Luke. What Good Thing. He thinks that eternal life is the reward for doing some special mysterious good thing. Have. Mark says, "inherit." The Jews commonly spoke of the blessings of the future as an inheritance. Eternal Life; "the life of supreme blessedness, divine in nature as well as endless in time because divine; and the favorite expression in the Fourth Gospel for what is usually called the kingdom of God in the Synoptic Gospels, Matthew, Mark and Luke.

V. 17. Why Callest Thou Me Good? This is what Mark and Luke say; the meaning is that Jesus would not accept the title "good" as a mere courtesy. In the strict sense only God is good; man is not becoming good. There may be a suggestion that he who calls Jesus good must consider what that means as to what Jesus is. But Matthew wrote: "Why askest thou me concerning that which is good?" (Rev. Ver.), that is, God is good, and the goodness which he requires is made known in the Commandments, which the inquirer knew. But; answering the question directly. Keep the Commandments; which reveal the character. It is not one good act, but a good character that can win eternal life, and the only good character is one which is like God's character as revealed in the Commandments.

Vs. 18-20. Which; a question of perplexity; the scribes reckoned 613 commandments, and tradition had added still more. Jesus said; quoting the Sixth, Seventh, Eighth, Ninth and Fifth Commandments, and adding Thou Shalt Love Thy Neighbor as Thyself, as the summing-up of the second table of the law which has to do with our duty to our fellow men. The Young Man. Only Matthew so describes him. All These Things Have I Kept; an answer given quite honestly. So far as the letter of the Commandments was concerned, the young man was blameless. What Lack I Yet? He knew that he did not enjoy the rest and satisfaction which go with the possession of the highest good, and yet he was not aware of disobedience.

II. A Great Demand, 21-26.

Vs. 21, 22. Jesus Said; accepting the young man's own estimate of his past life. Mark says (Mark 10: 21), "Jesus beholding him, loved him," a penetrating look, like that cast upon Peter (Luke 22: 61), seeing enough that was good and lovable in the young man's character to make him long to have him for a disciple. If Thou Wilt; a test to discover whether, along with a sense of want, there is a readiness to choose the highest things. Be Perfect; reach the goal of the true life and the rest which it brings. Sell . . . and Give. This would prove whether or not he cared supremely for the true life. Jesus is not here laying down a universal rule, but dealing with a special case. Treasure in Heaven; the eternal life for which he was seeking. Come and Follow Me; an invitation to join the inner circle of Jesus' disciples. Went Awry Sorrowful; turning away from "the high that proved too high, the heroic for earth too hard."

Vs. 23, 24. Then Said Jesus; disappointed, sad and pitiful as He saw the rich man departing. He draws from this incident a lesson on the perils of riches. Hardly; with great difficulty. Again I say; repeating his thought in reply to the surprised, perhaps incredulous looks of the Twelve. Camel . . . Needle; a proverbial way of describing the impossible, still current in the East.

Vs. 25, 26. Disciples . . . Exceedingly Amazed. Perhaps the disciples held the Old Testament belief that riches were a proof of God's favor. At any rate they saw nearly all men either enjoying wealth or striving after it. If wealth, therefore, shut people out of the kingdom, who could enter it? Jesus Beheld Them; another penetrating look. He sees that His words have been misunderstood. With God . . . Possible. Jesus means, not

that it is impossible for a rich man to be saved, but only that it is the tendency of wealth to hinder the divine life.

III. A Great Compensation, 27-30.
V. 27. Peter . . . Said; the spokesman as usual giving voice to the thought in the minds of all the Twelve. We Have Forsaken All, etc.; doing what the rich man had refused to do. What Shall We Have?; as a reward for following Jesus.

Vs. 28-30. Verily; an emphatic word. Reward is certain. In the Re- generation; the new heaven and the new earth, which the Messiah would bring. Sit Upon Twelve Thrones. "The disciples had shared the privations of the Messiah, and they would share the glories of his kingdom. Every One; not only the Twelve, but every follower of Jesus. Forsaken . . . For My . . . Sake; because of loyalty to Christ. Shall Receive an Hundred Fold . . . Inherit Everlasting Life; the true riches, which will abundantly repay the giving up of earthly wealth. First . . . Last . . . Last . . . First; a rebuke to the self-complacency of Peter. Sacrifice, he is reminded, is excellent, but along with it must go humility. Pride spoils everything.

How Much Corn Does Your Crib Hold?

Many farmers complain that their corncribs will not hold the manufacturer's rating. If this is true—and it is—there must be either misrepresentation or misinterpretation somewhere. The latter is probably the case. Cribbers are usually rated in terms of volumetric bushels—that is, they will contain so many Winchester bushels of 2,150.42 cubic inches each. The capacity of a crib in bushels is then determined by dividing its volume in cubic inches by 2,150.42. But this does not mean that it will hold this number of bushels of ear corn, or that the ear corn in it will sell out this number of bushels.

In order to get some idea as to what a crib can be expected to hold in terms of shelled corn, the following experiment was performed at Ohio State University: A large box was filled with yellow dent ear corn and shaken to compactness. The volume of the box by inside measurements was found to be 19,546.9 cubic inches. Then, by the above method, its capacity was recorded as 9.09 bushels. The weight of the corn in the box was next determined. By dividing this weight by 70 pounds, 4.2 bushels of ear corn (by weight) were obtained. So while the box contained 9.09 bushels by volume, yet it only contained 4.2 bushels by weight. The latter figure is the important one, since corn is sold by weight. Going farther, the shelling percentage was determined, and from it the weight of shelled corn was computed. Dividing this weight by 56, the legal weight per bushel of shelled corn, 4.3 bushels were procured.

Thus it required 9.09 bushels of ear corn by volume to make 4.3 bushels of shelled corn by weight, or a ratio of 2.1 to 1. Practical use can be made of this ratio. It offers a check upon a given rating of any crib. To find how many bushels of shelled corn can be obtained from a given crib when it is filled with ear corn, find the volume of the crib in cubic inches, then divide by 2,150.42, and then divide again by 2.1.



The Fairy Boat.

Once upon a time Love-Fairy went to live in the heart of a great pink Briar Rose, and oh, how she enjoyed this beautiful home with the sweet fragrance of the rose about her. "Here I shall live always, I shall never leave this beautiful home," said she. All went well for a while, but one morning the little fairy stretched and yawned and finally she sighed "Oh, dear, how tiresome it is to stay at home and do nothing! I must find something to do!" She decided to go out at once. As she climbed down the thorny stem of her home she noticed that it had been raining during the night. The ground was covered in patches with puddles of water, like fairy lakes, and she noticed that right in the centre of one, a little ant house had been flooded! Quantities of mother and ant father ants and little baby ants were trying their best to swim ashore.

Love-Fairy stood watching the ants and wondering what she could do to help them, when she heard a faint voice calling to her. It was Briar-Rose! "Take this petal of mine," she said as she dropped a beautiful great pink one, "and put it on the water like a little boat, then get into it and sail out and rescue the ant families." Love-Fairy was delighted with the idea and she soon found herself sailing out on the fairy lake! The weary ants soon forgot their fright and eagerly climbed into the boat.

When they came to shore, all the big ants scrambled out and soon began to build another house. But the baby ants remained in the boat, sailing over the blue water, for the good fairy had spread her rainbow-colored wings for sails. And finally, after Mr. Sun had dried the puddle, so that there was none of it left, the baby ants found their new home all ready for them. Imagine how glad they were to snugle down in their little beds and sleep that night! Then Love-Fairy carried the beauti-

Give Your Child a Thorough Physical Examination

Following the weighing and measuring, every under-weight child should have a thorough physical examination. Look the child over point by point as you would a colt. Not all the points can be judged by the parents, but many of those pertaining to growth can be spotted nearly as well by them as by a physician. Do all you can yourself, then make use of the expert here as you would in the other case in determining special needs.

The most serious physical defect you will find to be some form of obstructed breathing. This is most commonly caused by diseased adenoids or tonsils. The signs of this obstruction are parted lips, a small and nasal voice, membrane of the nose protruding or discharging mucus, projecting teeth, swollen glands, round shoulders, and habitual cough. Usually an operation is necessary; be sure that it is done thoroughly. Many children come to us with the work not completed, and little better, or even worse off, than they were before the operation.

Another line of observation which the mother can follow is to examine the child's teeth, and locate and count those which are decayed.

There are many cases of ear complications which require attention. The eyes should be tested to make sure they are not causing strain which af-

fects the child's general health. Do not omit any of the items in the examination sheet.

Every child should be "gone over" at least once a year, no matter how well he may be, but the child who is habitually seven per cent. underweight for his height needs to have every defect found and removed.

There has been a great deal of speculation over the causes of underweight and malnutrition. We find poverty, riches, diseases such as syphilis and tuberculosis, insufficient and improper food, and other conditions usually named to be secondary rather than primary causes. The essential causes are: Physical defects, especially obstructed breathing; overfatigue; lack of home control; and faulty food and health habits.

It will be seen how all of these causes focus in the home; their centre is at your bedside. It is not merely a matter of unnecessary discomfort and unhappiness for a third or more of your children. In many cases malnutrition has gone so far that they have become the prey of other better recognized disorders. All such children start life with a handicap and under conditions which later make them misfits and failures. The important consideration is that practically all of these children can be made well in their own homes. The remedy is in the control of the causes, and it lies in your own hands!

Green food, such as mangel-wurzel, sprouted oats or cabbage, should be fed during the winter. It is best to give it as the noon meal every day. A certified flock is one from which all low-producing hens have been culled out by an expert poultryman, and in which no fowl has Standard disqualifications. Each flock should be headed by a male from a hen with a record of 200 eggs or better.

Get rid of poultry lice by taking a dressed board, 1 x 6 feet, and putting a 2 x 4 inch scantling in the centre. This will leave four inches on each side of the scantling for a step. Bore eight three-fourth inch holes in the scantling and fill with tar and carbolic acid. Use this for the roost.

Yellow color in the shanks of fowls is not an essential breed characteristic and has no relation to the body fat, but is controlled by the amount of yellow pigment in the ration and by the egg production. By feeding colorless feeds the yellow pigment in the shanks can be entirely removed.

Ignorance is no excuse for failure as a dairyman. There are too many good books and papers published upon the subject these days.

A wise old owl sat in an oak; The more he heard the less he spoke; The less he spoke, the more he heard; We all should be like that wise old bird!

Raspberries are very attractive out of season, but regardless of scarcity there is a limit to how much the public will pay. When peaches and apples are on the market there is less necessity for buying raspberries. So we keep a few everbearing raspberries as a novelty but the regular commercial sorts like the Cuthbert prove to be the profit winners.

His car had collided with a telegraph pole. "I think my collar-bone is broken," he said to the policeman who bent over him. "If that's all, yer in luck," growled the officer. "Shure, 'twas breakfast speed ye was goin' at."

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THE MOTHER

If there had been an aeroplane hovering over the Belgian Congo several months ago, the observer would have seen a strange sight—thousands of black men streaming from every direction, many traveling for days over mountains, across waters to a certain town. Had the observer been near enough he would have noticed the signs of official mourning; the throngs were heavy with grief. He might even have heard the wild wailing of the death chants. Whom were they mourning, this great gathering? Was it some mighty chieftain?

Far from it. The honor was for a quiet Scotch woman whom no one of them had ever seen—the mother of their missionary. In a few paragraphs that are like searchlights across the past the son tells, in the Record of Christian Work, of God's leading their two lives.

The boy was born in the part of Scotland where the spirit of Livingstone still lives and works. In rain or shine he was sent to his Band of Hope meetings—the mother saw to that. The first foreshadowing of the unguessed future came when the boy, prowling about the docks, discovered his first black man, a ship's cook, and brought him home to dinner. That "mad meal," he declared, inaugurated their African alliance.

Then as if they might have missed the call came the warning that the boy was not made for the rigors of the Scottish climate. The terrible cough fastened upon him. Night after night the mother listened to it. She was a widow, and he was her only son. But—that cough! It was the way his father had gone. So she was led to the great surrender of her life. The two of them silently agreed not to say good-bye—"only a summer smile and an upward look."

Her boy left her standing at the window. So for twenty-two years he saw her in his heart. And in those years of endless dangers for the son, of long, anguished silences for the mother, when no letters could get through, the two worked together. Uncounted times he felt the power of her prayer, shielding him in dangers, strengthening him in difficulties, sharing his loneliness and his joys.

There came a day, after twenty-two years, when they stood face to face once more. The son has no words for that meeting. And now she has gone. The wild wailing of the death chant is stilled. The thousands of mourners have streamed back to their homes. But the spirit of that Scottish mother is still "marching on" in the great land her eyes never saw.

In School Days.

He saw her lift her eyes; he felt The soft hands light caressing. And heard the tremble of her voice As if a fault confessing.

"I'm sorry that I spelt the word: 'I hate to go above you. 'Because'—the brown eyes lower fell— 'Because, you see, I love you!'"

Still memory to a gray-haired man— That sweet child-face is showing Dear girl! the grasses on her grave. Have forty years been growing.

He lives to learn in life's hard school. How few who pass above him. Lament their triumph and his loss. Like her—because they love him. —J. G. Whittier.

Resolution.

Each even' ere the sunset fades I try and blot from out my heart The memories that cast deep shades. "The word or act that gave a smart. I try to think but tender things, And if a recollection nears, Intruding by the bloom it brings I blot it out ere day appears.

Forget the petty things that grieve. Each disappointment, cruel wrong; Live for to-day; let moments weave Your soul a peaceful perfect song. —Aileen Ward.

An Unsatisfactory Dinner.

The tourist sat down to his first dinner in a French restaurant. He did not know a word of the language, and so pointed to the first item after hors d'œuvre. They brought him soup. After that he pointed to the next. Again soup. Soup a third time. In despair he pointed to the last of all. They brought him toothpicks.

Breakneck Speed. His car had collided with a telegraph pole. "I think my collar-bone is broken," he said to the policeman who bent over him. "If that's all, yer in luck," growled the officer. "Shure, 'twas breakfast speed ye was goin' at."

Explanations in Order. Boy Scout (on night guard)—"Halt! Who goes there?" Y-see—"Officer of the day." "Advance, officer of the day, and explain what you are doing out at night." What you can do, or dream you can, begin it; Boldness has genius, power and magic in it.