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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.



R. G.—Will you kindly explain in what way muck soil differs from upland and the best way to fertilize muck land?

Answer:—Muck soil differs from upland soil in many ways. The upland soil is the product of weathering, both the weathering of rocks, and of vegetation that has fallen on them, while muck soil is composed chiefly of decaying plant matter, whose decay has been greatly hindered, in many cases by water standing on the soil. On examination, virgin upland soils contain a medium amount of nitrogen, and if clay predominates, contain a medium amount of phosphoric acid and potash. Muck soils on the other hand, contain a large amount of nitrogen in the available form, a small supply of phosphoric acid and a very small supply of potash. Much soils are therefore best adapted for garden truck, which is harvested when the plant has made greatest vegetative growth, or for hay crops. Speaking generally muck soil is slow in spring and crops growing on it tend to prolong their growth and do not ripen, in sufficient time to escape frost. If potato-loving crops such as potatoes, sugar beets, etc., are grown, after the first crop or two, there will be a tendency for the vegetables to be poorly filled out, and the plants to be susceptible to disease. In fertilizing for general crops on muck soil, use a fertilizer with a small amount of nitrogen in order to start the crops off vigorously; a large amount of phosphoric acid, 10% to 12%, and a medium to abundant supply of potash, under normal conditions as high as 3 to 5%. This of course, should be worked into the soil thoroughly at the time the crop is being planted.

M. F.—What is the cash value of well rotted manure, by the manure spreader load, allowing seventy bushels for a load? This being well rotted stable manure.

Answer:—It is very hard to state the cash value of well-rotted manure, by the manure spreader load. If the manure has been exposed, the probability is that it will carry no more than 5 to 6 lb. of nitrogen to the ton, probably not more than 2 or 3 lb. phosphoric acid, and 4 or 5 lb. potash. It is not fair to value this at the price you would have to pay for it in fertilizers, because in fertilizers these plant foods are in a readily available and concentrated form, whereas in manure the probability is that the material which remains contains a considerable amount of plant food in the unavailable form. Well-rotted manure is highly valuable, but it should always be kept in mind the quality of manure is directly dependent upon its storage, and the handling of the farm animals from which it was obtained. Director Chas. D. Woods of Matre, says as follows:—

"Manure in manure is not so quickly nor so completely available as the better forms of chemicals, but after much balancing of pros and cons, it has become generally accepted that the commercial value of the plant food contained in a farm manure by which we can measure its agricultural and commercial value."

His opinion is supplemented by that of Director Thorne, for 25 years

Requirements for Green Steers at Different Periods of Fattening.

	Av. Wt. during period	Dry matter	Digestible protein	Total crude protein	Dig. Nutrients	Nutritive ratio
First 50 days	1,020	22.4-25.5	2.04-2.35	18.4-20.4	1.7-0.17-8	
Second 50 days	1,140	23.9-27.4	2.17-2.62	19.4-22.2	1.7-0.17-8	
Third 50 days	1,260	22.7-27.7	2.27-2.65	20.2-23.3	1.7-0.17-8	

The ocean occupies three-fourths of the surface of the earth.

Fertilizers PAY

Experimental Tests show that Fertilizers Increase Wheat Yields

Location	Yield (bushels)
Ontario Agricultural Experimental Station	8.3
Ontario Agricultural Experimental Station	8.3
Ontario Agricultural Experimental Station	8.3

Soil and Crop Improvement Bureau
1111 Temple Bldg., Toronto

\$1,000.00 CASH PRIZE COMPETITION

FOR MAKERS OF BEST MAPLE SYRUP AND SUGAR

Champion Evaporator

THE GRIMM MANUFACTURING COMPANY
58 WELLINGTON ST. MONTREAL

The dark hen laid 636 eggs with a total value of \$29.46; cost of feed was \$21.00. This gave a balance over cost of feed of 8.37. The cost per dozen eggs was 39.8 cents.

In 1917-18, the yields were not high in either case, and the total difference in egg yield in the six months was by no means large, but the forty birds with light gave a better revenue than the forty without light. This difference was made up in the time that the eggs were received. Those with the light gave their heaviest yields in December and January, while by far

The Sassafras School

INTERNATIONAL LESSON
FEBRUARY 2

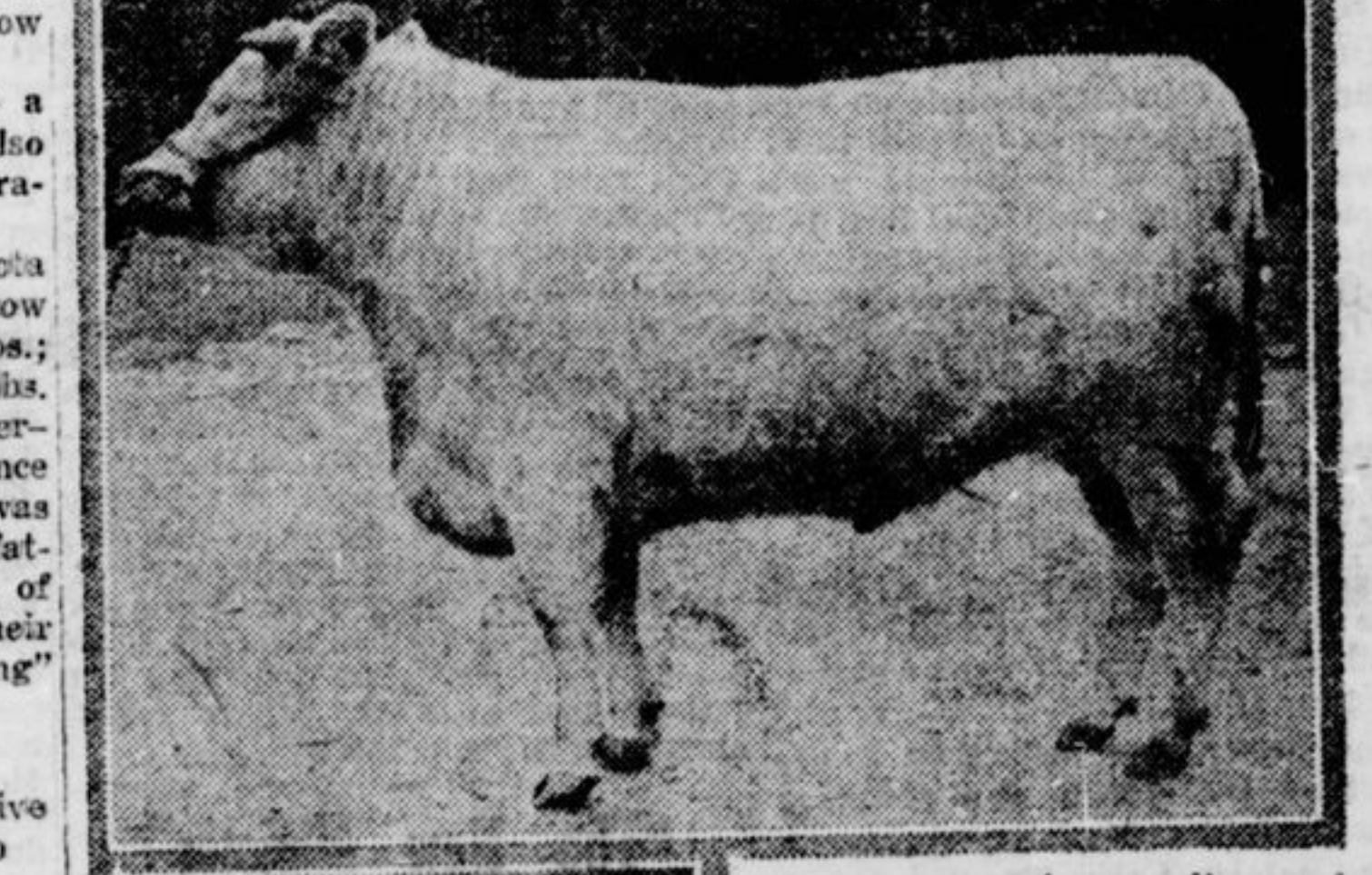
Lesson V. The Giving of The Manna, Exodus 16: 1-36. Golden Text, Matt. 6: 11.

1-10. Hunger in the Wilderness. The exact location of the "wilderness of Sin" is unknown, but it must have been a barren plain or valleys near Mount Sinai. At the best it was a hungry land through which the fugitives were passing, very different from the abundance of Egypt. Long years of subjection and slavery had sapped the manhood of Israel, and the people had no spirit to brave the privations and hardships of such a journey.

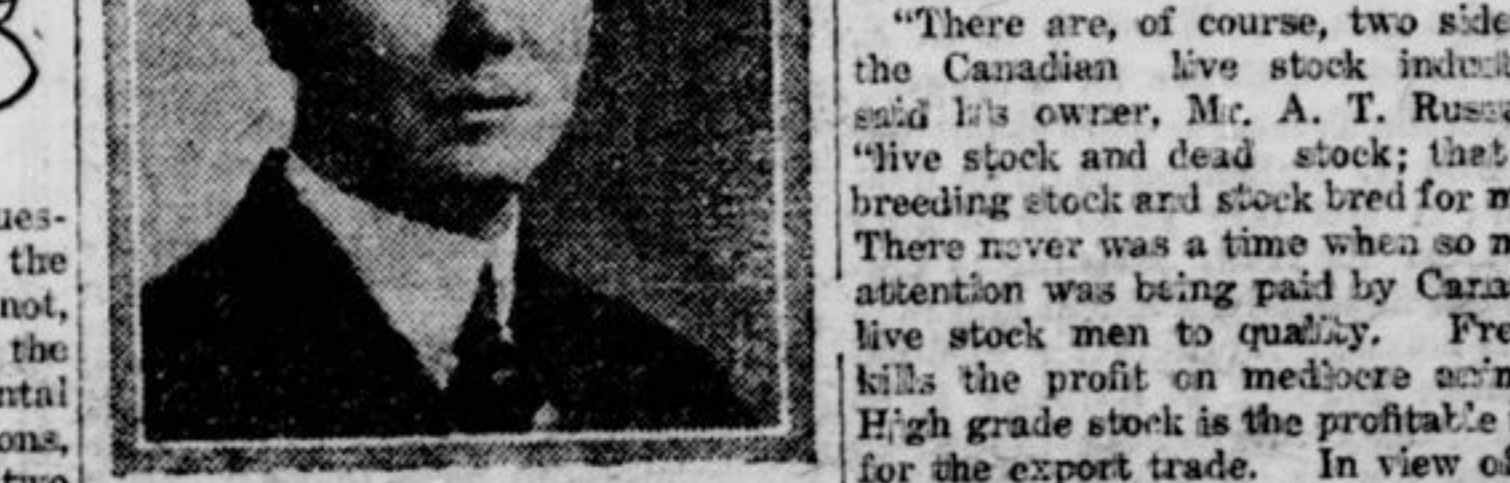
11-18. Bread from Heaven. "At even ye shall eat flesh." The flesh came to them in the form of flocks of quails. These birds are still common in great numbers across the Gulf of Akabah, and are often so fatigued after their long flight that they can easily be caught or killed.

19-24. Compare also Num. 11: 31-34. "In the morning ye shall be filled with bread." In the morning they found "a small round thing, small as the hoar frost on the ground." It was "like coriander seed, white; and the taste of it was like wafers made with honey" (v. 31). Coriander seed is a small fruit, straw-colored, about the size of a pepper corn; Num. 11: 17 the manna is also said

THE BEEF THAT EUROPE WANTS



class as a senior yearling and was champion steer in Grades and Crosses of any Breed in the Guelph Show. "Clear the Way 2nd" was sired by Sylvan Power and bred by R. O. Hunter of Exeter, Ont. He was finished to the top bloom when shown.



"Clear the Way 2nd" Grand Champion Steer at the Guelph Winter Fair, exhibited by Mr. T. A. Russell of Toronto.

"Clear the Way 2nd" is the perfect type of steer for beef. He was awarded the Grand Championship for steers of all classes at the recent Live Stock Show at Guelph, Ont., where he competed against some of the best animals produced in Canada. He was also Grand Champion at the Canadian National Exhibition, Toronto, and took third prize in the class for Shorthorn-sired steers at the Pat Stock Show in Chicago, and was one of a herd of three animals which won a prize there as the best Shorthorn-sired herd. He was also first in his

YOUR PROBLEMS

BY MRS. HELEN LAW

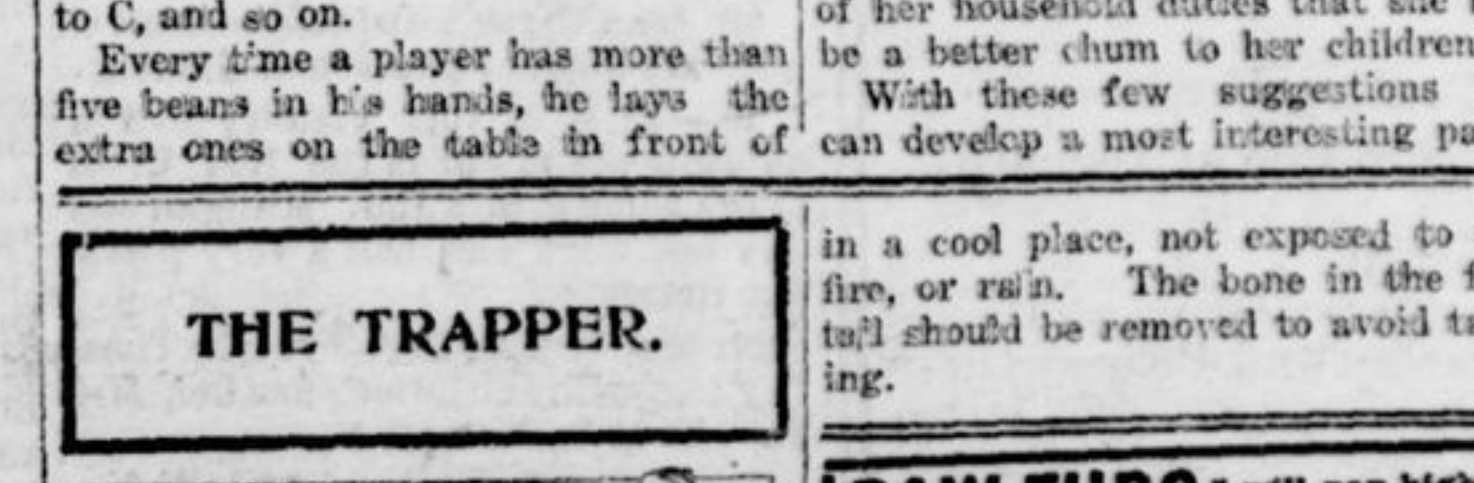
Mother and daughters of all ages are cordially invited to write to this department. Initials only will be published with each question and its answer as a means of identification, but full name and address must be given in each letter. Write on one side of paper only. Answers will be mailed direct if stamped and addressed envelope is enclosed. Address all correspondence for this department to Mrs. Helen Law, 233 Woodbine Ave., Toronto.

Progress:—Thank you for your kind letter. This department has been crowded out for several weeks because of lack of space. Letters have not been answered by mail. All thoughtful persons are looking forward to the coming of a new era in the history of mankind. The past year was thronged with social-spirited events, but 1919 may witness tremendous changes. As you say, things can never return to the old plane. People are demanding more of their communities now than ever before. They want better schools and more convenient homes. They are asking for social centers, halls and places of amusement. They are asking upon better roads and marketing facilities. Above all they are demanding that their community give them some of the advantages of the city, in order that a farm life may have a little less drudgery, and a little more wholesome enjoyment in it. What is your community doing to meet the growing demands? Have you a social center where your people may go for entertainment? Have you a public playground suitably equipped for your children in school? Do you ever have a municipal holiday and general get-together? If you live in one of these communities that is doing things for its people, please write and tell us all about it. You may thereby start others along the road to progress.

Maid Marion:—Try the pot-of-beans game some evening. It is played thus:— From two to four is the best number of players for the pot-of-beans game. Place fifty beans on the table and call it the pot. Arrange the players around it and let them draw a municipal holiday and general get-together. If you live in one of these communities that is doing things for its people, please write and tell us all about it. You may thereby start others along the road to progress.

Evangeline writes: "I have to write a paper for our club on this subject: 'My Second Chance—My Children, Can you help me?' Our suggestion would be that you show how you can teach your children to avoid making the same mistakes you have made in your own life; how you can instill in them your own high ideals. Perhaps there are things that you yourself have learned to do? You can help your children to attain these things and thus be satisfied through their own balanced reason, your children may grow up to be strong and healthy. You can teach your children how to take care of their health. Have you not problems in your community that you can help with, such as better schools, clean amusements, and so forth? Wouldn't this mean that you were helping your children to keep their hearts and minds clean? Suggest how you can make your home attractive to the boys and girls. Show how a household duties that she may be a better chum to her children. With these few suggestions you can develop a most interesting paper.

THE TRAPPER.



An absolute necessity in trapping fox is a good trail scent which the trapper must rub on the soles of his shoes and on his gloves when working around the traps. The fox is perhaps the hardest of all wild animals to trap and is very suspicious of the human odor. The trail scent helps to kill this odor. Traps should be sprinkled with blood to which the trail scent has been added, or should be tolled in hemlock water. Traps should be set along the fox runways or where they are most likely to travel. The traps should be set about two feet from a fairly large tree; they should be well covered and the surroundings made to look as natural as possible. About five feet up the tree trunk a dozen drops of the best fox bait should be sprinkled, directly above the traps. In jumping for the bait the fox will be caught in the traps.

RAW FURS

I will pay highest prices for RAW FURS and GINSENG ROOT

The Highest Price

RAW FURS

Send your RAW FURS

To S. J. Alexander

My office closes at six, and any evening at that hour, during the first week in February, 1918, I might have been seen hurrying along the road to where, on the site of a discontinued fertilizer plant, was the blackest, richest, most promising-looking earth imaginable. I would fill a 10-pound paper sack with this earth, and take it home with me, neatly tied up in an outside wrapping of heavy paper. No matter if people did think I was taking home my marketing that way. When I did get such earth as I needed, I did not need to look for boxes; for some time I had been accumulating about paste-board cartons such as are used to enclose ink and mangle for office supplies. These were about one foot square, and exactly suited to my purpose. At a used store I bought for five cents a pack of early tomato seed. Perhaps it would not mean much to you—a five cent paper of seed. To me it suggested a long vista of splendid possibilities. There was a tiny square of land yard below my room window which I had the right to use if I desired. I filled the boxes with a mixture of yard dirt, dark with decayed leaves from a neighboring tree, and rich mold from the phosphate plant—not too much of the latter at first. The earth was sifted, pulverized, and packed; then I planted my seeds, two in each "box," a quarter of an inch deep, and covered the boxes with some panes of broken glass I found cast aside. Thus, on sunny days, I had a little hot house for my seeds. When it was stormy, cold, and dark, I tucked an old awning over them, like an extra coverlet. In due time they came up—250 splendid seedlings. I watered, sunned, and sheltered them. As soon as they were an inch high, I carefully drew one from each hill and planted it by itself. I spaded up the bit of backyard almost two feet deep. It took me a long time to do it. Every chip, root, and bit of rubbish was carefully raked out. It was very small, so I had to sell my surplus plants. They were great, stocky, luxuriant green beauties. I sold them at 16 cents, at 25 cents a dozen—to neighbors. The first I planted for myself, except a few that I gave away. I looked at them the last thing every morning before I went to work, and the first thing when I came in at evening. At last they began to bear. I sold the first choice specimens, first at 10 cents apiece, and later at 5 cents, to the best restaurant in town. Later I used them myself for salad and sauce in soup, etc., and sold some to my neighbors at 20, 10 and 15 cents a dozen as the season advanced. When my crop was up to its height I began canning. I put up 50 quarts of tomatoes and 20 bottles of catsup. October, threatening a light frost, found my bushes covered with green fruit. I gathered it and made up a quantity of preserves and chopped pickles. Of course, there is no way of calculating the exact amount of pleasure I received from my work, nor the probable improvement in health and efficiency I gathered from a getting "down on the farm" after a fashion. I know that in this way alone my profits were highly satisfactory. But as to the mere cash profit from my nicked investment—

ABBEY FUR COMPANY

310 St. Paul W. Montreal, P.Q.

SOLDIERS AS PROPHETS

British Generals Who Worked on an Exact Time-Table.

WHAT I DID WITH FIVE CENTS CAPITAL

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Plants sold (15 dozen at 25 cents) 3.75
Early tomatoes sold at fancy prices: Three dozen at 10 cents each. 3.00
Pivo dozen at 5 cents each. 3.60
What I used myself through the summer I could never have bought (at lowest market prices) for less than 6.00
50 quarts of tomatoes, worth 25 cents a can, less expense of canning and cans 10.00
20 bottles of catsup, worth 25 cents a bottle 5.00
(I had the bottles on hand)
10 pints of chopped pickles, worth 30 cents a pint, less cost of vinegar and spices. 2.50
(I used old pint jars.)
12 quarts of superior preserves, worth 75 cents a quart, less cost of 12 jars and tops, sugar and lemons, also treat for preserving (\$2.00) 7.00

Net profit \$41.10
—Martha S. Ballentyne.

SOLDIERS AS PROPHETS
British Generals Who Worked on an Exact Time-Table.

It would be interesting to hear Sir Douglas Haig's prediction as to the end of the war. Some of his predecessors in command of British troops have been as good prophets as fighters.

Lord Wolsley said he would hoist the Union Jack at Compienne on February 24th, but he did it on the 4th; the end of the campaign, however, he predicted exactly to the day. In 1882 he said that he would break Arabi Pasha's power on September 15th, but it was on the 13th that he attacked and beat him at Tel-el-Kebir.

Lord Kitchener, too, worked to an exact time-table in his Sudan campaign, and Lord Roberts predicted that he would enter Pretoria on May 15th, but was unavoidably delayed until June 15th.