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 suthority 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

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Crop Improvement Burgau. Delivered were fit for seed." refore Ontario Corn Growers' Ass'n, Chatham, Thursday, Jan. 26, 1922.)

(Concluded from last week.)

The second means of improvement "On the plot receiving no manure and no fertilizer ears were produced at the disposal of the crop. In all probability the kind and quantity on the plot receiving 50 lbs. to the acre. On the plot receiving 50 lbs. of the appearance of plantfood would have very little of plantfood would have very little of plantfood would have very little of plantfood modification of certain 4.200 lbs. On the plot receiving 100 wars had not the Assurians kent the acre. The consequences might have prayer was that they might be manifested upon modification of certain 4.200 lbs. On the plot receiving 100 wars had not the Assurians kent the acre. The consequences are unveiling of what always are upveiling of what always are produced were. effect upon modification of certain 4,200 lbs. On the plot receiving 100 wars had not the Assyrians kept the ary unveiling of what always was." characteristics of corn, such as color lbs. fertilizer 4,800 lbs. of ears were kingdom of Damascus busy defending The mountain. This was the hill on of kernel, height of ear, dimensions produced. On the plot receiving 150 their own borders. In the following which Dothan stood. The Syrian host story it was not a regular war but a had crept up the hill during the night food and the quantity available, to a very large extent determines the yield, the guality of that yield and the earlimeter of maturity—three points of receiving manure only there were 2. ness of maturity—three points of receiving manure only there were 2, such a place let us set "an ambush." thought that Jehovah, as Lord of importance in the improve- 800 lbs. of ears. I should have added If that reading be correct the refer- Hosts, had a great heavenly army and

food which the plant gets from the the fertilized plots."

es growth of stalk or straw.

riers that will dissolve in soil waters, the unfertilized plot. 86 lbs. is natural organic earrier. The a crop of wheat and this year the knew of Elisha's extraordinary facul- against us?" Paul encountered diffi-

test shows:

Fertilized corn yield 47 to 63 manured. Moreover this could be V. 14. If the Syrian king had rea- eyes and touch with our hands. Or gain from fertilizers of 17 to 33 seen with the eye."

cently. In some sections the idea is manure for ensilage corn. prevalent that all that is necessary Such findings are of great import- Risen early, and gone forth. "Appar- full harvest. This is in line with the to do is to return what the crop takes ance, especially for the dairying sec- ently he had gone out of the city be- insight of Jesus himself: "I, if I be out of the soil. The Indiana Station tions of Ontario. Too frequently dairy fore he discovered the besiegers and lifted up, will draw all men unto Me." ount of plantfood removed by the corn water and fibre rather than with good erop, and reported as follows: "It is to be noted that in this in-

vestigation the corn plant when suptook up about the same amount of phospheric acid, about 35 per cent. more nitrogen and more than twice as much potash as authorities usually state that the crop contains." These figures would indicate the

necessity of much more liberal fertilizing of corn if largest yields of best quality are to be obtained. New as to farmers' results:

In 1920 Mr. Henry Hartley grew

fertilized at different rates—five with- of 200 to 300 pounds of fertilizer per too. You get the potatoes washed and

"The plot manured and fertilized is example. by all odds the best. The corn was very tall, and nearly all of it ripe. The plot not fertilized at all shows the stalks very uneven in height, and Britain's Wise Foreign Policy. emall in size. Where 250 lbs. were A distinguished British commentator applied, the stalks are more even in in a recent book of cutspoken essays length. The plot both manured and says that the Americans have made Educational Aims of the Rural Home- overlooked that were it not for what fertilized was by all odds the best, Cuba for the first time a really Spanthis being decidedly noticeable at a ish island by driving out its incomdistance. The greatest difference of petent Spanish governors and so at gram chosen by the Standing Commit- These buildings may be made to all between the plots was in the ma- tracting immigrants from Spain. He tee on Education and Better Schools render further service by improve- branch belong to this. turity of the corn, and the yield of also finds that in hauling down the of the Ontario Women's Institutes in- ments which, while costing very little ears. On the unfertilized piot, most of the ears were simply nubbins, with moted the only flourishing French of the interest taken in this line of the interest taken in this line of the weather is favorable. I do not session to the only flourishing french of the interest taken in this line of the weather is favorable. I do not session to the only flourishing french of the only flourishing french of the interest taken in this line of the only flourishing french of the interest taken in this line of the weather is favorable. I do not session to the only flourishing french of the only flourishing flourishing french of the only flourishing flourishing french of the only flourishing flourishing french of the only flourishing flourishing french of the only flourishing french of the only flourishing flourishing french of the only flourishing flourishing flourishi noticeably more ripe ears, but these of Egypt. were small. In the 500 lb. plot, the ears were still larger and more mature, and in the 750 lbs. plot there was this country would fare if there were Councils. A branch may have among built conform to all requirements of still a difference in both the yield of no forests—no wood to supply the its membership women from two, health and education. If Institute

(By Henry G. Bell, Director, Soil and very large percentage of the ears

that the weights given are for acre ence would be to a raiding band rather in this there would be a muster of To fully appreciate these facts it yields. I wish to say that the differ- than to a large army. necessary to recall that there are ences in maturity of the ear for silage V. 9. The man of God; that is, the dwell in a fiery light and his army three important constituents of plant- purposes were distinctly in favor of well-known man of God, Elisha. In resembled, in appearance, this fiery

iters, each of which has its own indiment been evident in test plots, but could see what was taking place in vant who saw the invisible are the last to secure the best results. It is is a pleasant informal social evening, vidual part to play in the growth of general crops have shown similar the distance. (See I Sam. 9: 1-10, 20.) Syrian host who, stricken with blind-manifestly wrong to spend money on during which all interested in educa-

of starches and sugars in the ear of tained four acres and I applied the corn, and strengthens it to resist fertilizer at the rate of 250 lbs. per These three plantfood are never ten days earlier and produced twenty- stratagem had repeatedly miscarried, mercy and kindness. used in their pure form. Suitable car- five bushels per acre more gain than Called his servants; because he sus-

the of pure nitrogen. The remaining was sown with clover, in 1920 it had ites.

manure, it is highly valuable. fertilizers with ensilage corn. Mr. were being foiled. In their agitation races like the Greek, and finally he Fertilizers increase corn yields and Fred. W. Warnice, Allendale, last at Elisha's strange power, they credit- met his end as a prisoner of Rome. hasten the ripening of corn crops. To summer made a test of 3-8-3 fertilizer ed him with a good deal. He could 2. The most powerful forces in the substantiate these claims allow me to on Ensilage Corn, making a gain of even tell what the king of Damascus world are hidden from our earthly present results obtained by agricul- 1.7 tons per acre with fertifizer alone, Such a man was dangerous. such a man was dangerous.

Such a man was dangerous.

Such a man was dangerous.

III. A King's Revenge, 13-17.

V. 13. The Syrian officers kept

This is true even in the realm of the and the matter receiving little on no Ohio Exp. Sta.—25-year test shows: per acre. Mr. Warnica's experience is themselves informed by some means. This is true even in the realm of the and the matter receiving little or no Bus, per sere, especially interesting, since it shows of Elisha's whereabout. He is in physical world. Who has seen the life further attention is dropped, to the Fertilized corn yield 40 to 47 tening the ripening of corn when the that Dothan was twelve miles north flower, or a leaf, or a stock of wheat? injury of the child and the nation. Or gain from fertilizers of 12 to 19 corn is grown fairly well to the north- of Samaria "in a small plain through Who can measure with a yard stick

siderably better than the one heavily Gen. 37: 17.)

due to fertilizers of 19 bushels per fertilizer to have made such a showing of a larger army? Yet in his agitaacre. And so I could go on, but the in comparison with heavy manure. He tion the Syrian king felt that so dan-knowledge that God cares, and that he (a) Retarded children. foregoing figures will show you that is quite satisfied that a little manure gerous a man must be put out of the is very near. large increases are being obtained and some fertilizer is much better way. They came by night. Their plan 4. Faith sees the rich harvest of our than a whole lot of manure and that was to make a surprise attack. But present efforts. How often have Chris-Purdue Experiment Station publish- a liberal application of fertilizer is that was the very kind of an attack tian missionaries like Morrison, Lived an exceedingly interesting find re- equal to the heavier application of

> was brought out by Purdue Experiment Station in their bulletin No. 175. This publication claimed that the matured corn held 30 to 50 per cent. more A Generous Pie.—"My little boy of two from each section who would (a) Dr. Waugh, in charge of this protein and one and a half to two and little girl came home last night visit their own school, gaining a work, says the Dept. of Education de-

phase of improvement to the wider want enough to go around the school of their committee conditions in and tion with rural betterment permits is an easy matter to figure the cost to the Institute meeting to-morrow, obtain in the next few years. fertilizers. The report on his test the gain. Positive results are so ap- can heat it on the school stove." acre and compare it with the value of peeled and I'll make a big pie and you

HENRY G. BELL.

Have you ever stopped to think how organizing separate Home and School (b) To see that schools now being

The Sunday School Lesson

FEBRUARY 26

Elisha's Heavenly Defenders, 2 Kgs. 6, 8-17. Golden Text -Ps. 34: 7.

Place-Dothan, ten miles north of

of Elisha's extraordinary power as a guardians. prophet. In those lessons he used that V. 16. Fear not. This would be the power beneficently for certain indi- counsel of a braggart if it were not

I. A King's Plan, 8-10. V. 8. The King of Syria; the king of

this instance Elisha shows the faculty Substance. (See ch. 2: 11, Hab. 3: 8; they will be ready when discussion on teachers of all the schools, the trus-Not only has this great improved faculty of the seers, like Samuel, who In contrast to Elisha and his ser- to guide the planning in such a way of the Institute are invited. The object gains. Mr. Walter Holmes, of Eberts, With this remarkable faculty "the ness, did not see even the visible. In an improper building when the same tion may get acquainted. This leads foods are the ones which are most offen leaking on the form toble. Why Nitrogen or Ammonia—which causreports on an extensive fertilizer test prophet was more to Israel than an this condition they were led from Doexpenditure could mean greater effito much fine community co-operation often lacking on the farm table. Why

acre and found the corn matured fully here suggests anger rather than agree anticipated the Christian treatment than agree and found the corn matured fully tation. He was enraged that his one's enemies—to conquer them with pected treachery among them. He nasupply them in fertilizers. For in- "The soil was a good clay loam and turally thought that one of them was stance, 100 lbs. of blood carries 14 the fertilizer 2-12-2. In 1919 this field playing into the hands of the Israel. odds were against him.

was saying in his private chamber. eyes.

Purdue Exp. Sta., Indiana—12-year ern limit of the corn belt. The report from Damascus to Egypt." Joseph tricity We see the proofs of life. was in Dothan when his brothers sold tricity. We see the proofs of life. Bus. per acre. Two plots fertilized were con- him to the Midianite merchants. (See But our richest beliefs are about

Pennsylvania Exp. Station—35-year
test shows an increase in corn yields hever have believed it possible for fertilizers of 10 bushels per fertilizer to have made such a showing.

Mr. Warnica stated that he would have sent this great host. divine; and an evil man surrounded with the diabolical. In the lesson pasfied the matter out perhaps he would not have sent this great host. divine; and an evil man surrounded with the diabolical. In the lesson pasfied the matter out perhaps he would not have sent this great host. divine; and an evil man surrounded with the diabolical. In the lesson pasfied the matter out perhaps he would not have sent this great host. divine; and an evil man surrounded sent have a group of schools?

(c) What about having a duly qualified teach have a group of schools?

5. Education for: they could not make on Elisha.

Time-Between B.C. 833 and B.C. then rushed back in terror." The early rising of the servant spoiled the element of surprise in the Syrian's attack. How shall we do? a most na-Connecting Links-In the two pre- tural question for one who saw merely vious lessons we have had instances the visible foes and not the invisible

viduals. In this lesson he used it for for the statement which follows. "The Israel as a whole. We should note the expulsion of a reasonable fear is gaingrowing importance of the prophet's ed only through a reasonable trust." position in Israel. In moments of They that be with us, etc. What grave national danger he helped his Elisha meant, of course, was not that people, and thereby he won their res- the Israelite army was larger han the

Syrian army, but that the people of God were surrounded by heavenly guardians, while the Syrians were not. Mr. F. F. Davidson, Winchester, Dundas Co., conducted a similar test. The report of his test reads as folall probability Benhadad is referred phant claim: "If God be for us, who

Prosphoric Acid—which causes root am pleased to give you the result of my experiment with special fertilizer on corn herewith. The field in the fiel

Application. One is reminded of Paul's victorious

plant, but as carried by blood and A fourth instance has contributed with the Isrealites they had doubtless own fellow-countrymen, the indifferown fellow-countrymen, the indifferown fellow-countrymen, the indifferown fellow-countrymen are detrimental to the health
in the indifferown fellow-countrymen are detrimental to the health

things that we cannot see with our

ingstone, Chalmers and many others, V. 15. The servant; the successor to sown the seed of the gospel and been enable them to live comfortably.

nutritious ensilage. The value of corn being matured beyond the glazing For Home and Country

The Women's Institutes and the Schools

parent it is unnecessary to figure an This is the simple wholesale way in which hot lunch is provided for one

day, and children and teacher unite

1. Co-operation between Institutes for scholastic accomplishment here. and schools through Home and School and often-too often-the foundation Committees this rather than by for future ill-health.

times as much carbohydrates as did demanding meat pie for their school friendly co-operation between teacher, pends on the Women's Institute to be lunch to-morrow," said an Eastern pupils and Institute (instance several eyes, ears, hands and feet in helping If corn ripening can be so hastened Ontario secretary at a recent Insti- cases: games, soap, towels, etc.). to carry out their program. This is and the quality of feed from it im- tute meeting. "Well, I'll make you Mainly we want the mothers to see so familiar to all members now that proved, we would recommend this one each," said I. "But, mother, we either through their own eyes or those only its importance and close connecconsideration of Ontario dairy farm- -twenty of us." "Well, we'll have around the schools and perhaps the mention here. ers. As to whether or not it pays, it to co-operate them, for I want to go next plank will not be as difficult to (b) School Nurse: the most logical 2. School Improvement.

It would not be wise to scrap all the perhaps by having a woman who lives months, while others carry out the mot hesitate to cultivate. little red one-roomed school houses. nearby prepare soup, cocoa, or what-reverse extreme by keeping their They have served a purpose in our ever is being served at her house, cows out in the yard all day. Both country school in an Institute com- national education and for financial bringing it to school, or in securing practices are extreme, and both inand other reasons, it is impossible to a woman to go to the school, prepare calculably impair the productive effireplace them at once with buildings the hot dish and act as supervisor ciency of the dairy herd. Good judg- of the astronomers who are sailing to conforming more nearly to our during the teacher's absence at noon ment is necessary in handling dairy we have already had we could not go

future citizens who lay the foundation boards.

factor in carrying out follow-up work 9. Hot Luncheon,

10. Educational Associations.

11. University Extension.

To establish these courses.

SMOKE

The Tobacco of Quality 1/2 LB. TINS and in packages

conducted last summer as follows:

| The result of land in the conducted last summer as follows: | Con

(b) Home girls and boys should replaced as far as is reasonable by Statistics show that farm children, they have rather a difficult row to creations.

4. Competent Teaching:

(a) Of necessity school work and alfalfa, unthreshed pea straw, roots Dandelions are usually plentiful that rural schools should not be made and silage. If thin, grain should be enough without planting them in the (b) Of agriculture, household sci- | plied liberally and regularly. As the early in the spring. ence and manual training-not in all

5. Education for: (b) Illiterate.

(c) Non-English speaking. 6. Teachers' Salaries. These should be large enough 7. Teachers' Boarding Places.

try-reports difficulty in securing a for this purpose excel oats, bran, oil- worth having. suitable, if any, boarding house for cake and good fine clover hay. Make I cannot too often urge the planting the teacher. "If country districts wish all changes gradually from winter of asparagus. There is not any betgood teachers, in addition to giving quarters to pastures, both for ewes ter eating. Moreover it comes at a ing houses are provided." 8. Medical Inspection and Follow-up

(a). Of buildings now in existence. Wherever possible to promote this, tinuously throughout the winter cut much if any the first year. Do These are being formed throughout lows the practice of turning his cows the various counties and it might be into the yard to water and exercise. well to have a member from each I have followed both methods of water enced in favor of women on school think it a good practice to allow the in the area to stand at night

AN EARLY START IN THE GARDEN

It is very often desirable to start a few plants, such as tomatoes, egg plants, peppers, cabbage, lettuce and celery in the house before it is safe to try them in the open garden. You may not want enough of them to make a hotbed worth while or even an elaborate cold frame, but no matter how few you have, they will be enough to be a pesky nuisance around the house.

I saw at least one man last spring who had successfully solved the problem. He had swung his storm window out about two feet and had built a shelf from the bottom of the storm sash to the window sill. The shelf was double with an inch space between the two thicknesses. This space was of course closed on the three outer sides and left open into the house. The triangular spaces between the sides of the storm sash and the house were boarded up. This provided an excellent hot-house of sufficient size for the starting of all the plants needed for a small garden. It was out of the way, received all the sunlight there was, and could be warmed up or cooled off at will. Such a hotbed costs little, is easy to make and answers the purpose admirably.

To the city dweller salads and greens are one of the greatest joys of summer. He looks forward to the time they will begin to appear regularly on the table. Summer would not be summer without them. They may get more than their just share of credit because they are the first fresh things available after a long siege of canned goods but they manage to retain their popularity pretty well all

izer on corn herewith. The field in which I conducted the experiment conthat Elisha showed the Syrians when Branches can secure from the Dept. Sear has been the passing of the fol- impractical. To be sure, you can get V. 11. Sore troubled. The Hebrew and then dismissed. In this Elisha Consolidation of Rural Schools and Inasmuch as there is a tendency to not forget those little vitamines. The he ordered that they be given a meal of Education copies of the pamphlet, lowing resolution by the Institute: | more beans in the same space and get here suggests anger rather than agi-tation. He was enraged that his one's enemies—to conquer them with of the Act and Amendments relating. multiply parties, entertainments, and fresh green stuff may not produce (d) To look into the matter of con- organizations for children of school fresh green stuff may not produce tinuation schools. A step toward both age, it is resolved that we as an In- many calories but they are loaded with 1. A prophet unafraid, though the consolidation and Rural High Schools. stitute and as individuals use our in- these important vitamines and there-3. Attendance to 16 Years of Age at fluence to have these recreations con- fore they play a wonderful part in fined to Friday nights and Saturdays. | maintaining health. That dandelion (a) Children of resident parents -- and fatigue of frequent parties and "spring medicine" has long been a It is resolved that since excitement greens and lamb's quarters are a good of the child, we endeavor to have them tific foundation.

receive more attention as too often outdoor exercise and quiet home re- in spite of their out-of-doors life, purer air and less congested living conditions, are not as healthy, as a class, as the children of the cities. This is undoubtedly partly due to the lack of variety in their food. The green vegetables, just the thing which they Sheep dividends depend on the care have the best opportunity to get, are given the flock at lambing time. A most often wanting. In the cities we good winter ration for pregnant ewes can get lettuce and celery all the year is composed of good hay, clover or round.

to bear all the inexperienced teaching. added. Salt and water should be sup- garden and they make good greens ewes approach lambing time reduce Sprinkle some watercress seed on

all feeds, especially roots and silage. the wet ground back of the watering During the first twenty-four hours trough or around the spillway of the the feed should be light, after lambing. pump. All it needs is plenty of water A warm drink with a light feed of and rich soil. Once established there pulped mangels and grain is good. you can keep on picking it to the end Within three days the ewe may be of time. brought back to the full ration, then | Corn salad, kale, mustard, spinach

fed milk, as well as hay and roots. and beet tops all make good greens When the lambs are eight or ten and can be had all summer by plantdays old they will nibble fine hay and ing a succession of them as suggested grain, and thereafter should be pro- for the lettuce. They all require very vided with a separate trough and rack rich soil because their tenderness de-Almost every place-town or coun- where they may learn to eat. No feeds pends on rapid growth. They are all

better salaries they must see to it and lambs, avoiding scours, bloat and time of year when very few fresh vegetables can be had. It is, of course, Ewes lambing in cold weather must a perennial, and once established rehave comfortable quarters. The floor quires very little care. It can be grown must be dry, well bedded and level, very successfully from seed but time It is often best to have individual can be saved by planting two-year-old lambing pens which may be made by roots. the hinging together of two four-foot | Select an out-of-the-way corner

gates and adjusting in the corner and where it will not interfere with the cultivation of the other crops or be plowed up by accident. It is best grouped with the horse-radish, rhubarb, parsley, strawberries and other small fruits. Dig trenches about a How much outdoor exercise should foot deep and fill them in a foot with the dairy herd have during the winter manure. Plant the roots so that the months? Some dairymen confine crown will come three or four inches their herds to the stable almost con- below the surface. It is not safe to

First Woman Astronomer.

Christmas Island to prepare for Sep cows in winter in order to obtain best tember's total eclipse of the sun, is to results. The average dairyman fol- accompany her husband on his journey, and will undertake important duties during the moments of totality.

cows to stay out in the yard until in the open air from dusk to dawn gazthey become chilled, as this impairs large yields of milk and increases the saw to his sister. She wrote down his still a difference in both the yield of ripe ears and the maturity. In the thousand and one necessities of domembers at the meetings study a number of plans for whool buildings, October of each year, to which all scientific instruments. Dundas Women's Institute give an er indications of the coming of bad Sometimes the cold at Slough was so

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