Conducted by Professor Henry G. Bell

The object of this department is to place at the ser vice 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.



about a bushel of each per acre, for be that a more rapid growth of wood jug of water to the field with him; it field. late to sow clover in your rye this such conditions, growth of oats as a scoured and that forty or fifty minutes There is no good reason why the Controller at Ottawa for a useful litfall. However, very satisfactory re- cover crop would tend to rob the soil of the day spent in the field must be oats that are to be used for seeding the book entitled "Eat more fish: How the very finest organization to which sults have been obtained by scattering of some of the nitrogen which it may used in digging the rubbish and acthe clover seed over the rye field be- be advantageous for the trees to use. cumulated dirt off the plowshare; or and treated for smut during the win- fish, and so conserve Canadian beef of the Women's Institute's ubiquitous fore the frost leaves the soil in spring. Under such conditions, I would advise it may be that a burr comes off and ter. Fanning the oats has been shown and bacon for the soldiers at the branches. Speaking recently at the As the frost goes out, the opening of a legume crop such as vetches or any loosens a bit of machinery, to fix to be a good practice because it re-As the frost goes out, the opening of a legume crop such as vetches or any the cracks provides for the burying of kind of clover rather than the growth which will require the greater part of sults in a quicker growth in the spring inform you that the reports received Toronto. Mr. Hanna said that the wocatch frequently results. You can E.H.:—1. Can you advise me about minutes spent in going over the marks. The treating can be done just at the Food Controller's office regardmen of the Institutes could do a great land a satisfactory of oats. make more sure of a satisfactory catch planting cedars for a hedge? Best chine each morning would keep it up as well during winter, the only pre- ing the saving in restaurants through deal to encourage the increase of hog if you top-dress the rye with 150 to time of year, soil, size of trees, etc? to standard and would make it possible caution being that the oats should be beefless and baconless Tuesdays and production, which is of the utmost im-250 pounds of fertilizer carrying about 2. What is the best mixture for seed- for the operator to spend all of his put back into sacks that have been Fridays are most encouraging. Re- portance at the present time. cent. phosphoric acid. This should be Answer:-1. Cedars for a hedge around after old bolts and nuts. applied after the frost is gone out and can be planted most any time of the This year it will be necessary for ing the winter. It has been proven out of the 16,500 public eating places, conservation. when the ground is dry enough for the year. However, since the young the workers on the farms to be as to be a worth while practice to allow show a saving for October, 1917, of Mrs. L.R.F.:—There is nothing like horses to walk across the rye field transplanted trees require a consider- busy during the winter as through the cut seed potatoes to sear over before 263,000 pounds or 131½ tons. The asking for specific information on with a minimum of injury to the crop. able amount of moisture, early in the summer, and there are a number of they are planted and these potatoes saving in bacon for the same 33 questions over which you are in doubt. 3. Sub-soiling is the stirring of the fall or early spring is probably the jobs which are ordinarily done in the may be cut with no appreciable loss establishments was no less than 40 1/2 If one lump of sugar instead of three, soil below the depth at which the aver- best time to set out the hedge. The summer that will perforce have to be during the winter. This will save tons. age plow stirs it. This is accom- soil should be well prepared and rich done this winter. plished by an attachment for the in its plantfoods, since the young ordinary plow which stirs the furrow tree's pruned roots will not be able to underneath that turned over, but does reach out into the soil after more not bring the under soil to the sur- food for a considerable length of fore, well nigh impossible to do any face. 4. As a rule a medium clay time. Barn manure and fertilizers field work in the winter, the conditions loam is best for alsike. It should be will be of material benefit in increas- of this winter will force us to think a fairly rich soil since the roots of ing the chances for a rapid growth otherwise.

orchard?

has been in this water for a few minutes, transfer it to another barrel in this water for about ten or fifteen minutes, after which pull the bag out

L.F .: -1. Is wheat, oats and barley a, of the barrel and allow it to drain. Answer:—1. Ontario Agricultural is too rich in nitrogen there will be have been accomplished by the laborer. to be sharpened up and used judicious- and induce him to bring unfamiliar ship in their organization. The Upper College is reporting good results from too rapid growth of wood. However, It may be little things, such as the ly during the days of winter when it is varieties on the market in increasing Sackville Women's Institute, N.B., a mixture of wheat, oats and barley, if the soil is relatively poor, it may fact that the man does not take the possible for a man to be out in the quantities. If you want to know all goes one better and makes all school summer pasture. 2. It is of course too would be desired in the trees. Under may be that the plow has not been

of a handful of medium rich fertilizer spring-this year this job must be Reader:-Kindly describe the hot -say one carrying from 2 to 4 per done through the winter in order that water treatment of barley for smut. cent. ammonia, and 8 to 10 per cent. the busy days of spring may be oc-Is oats a good crop for a young phosphoric acid-where each tree is to cupied with such essentials as plowing .. be planted will materially help the and caring for crops that are to be Answer:-The hot water treatment growth of the trees. As to size of harvested. Further than that, it is for killing the smut of barley is as fol- trees, a more even growth can be ob- good business management of relows: Place the grain in a bag and tained by planting trees not over two sources to put the manure on bag in water which has or three feet in height. 2. For seed- winter time since larger loads can been heated to about 115 to 120 de- ing low land which tends to be damp, usually be hauled with the only incon-After the grain the following mixture is recommend- venience of it being a little harder

Timothy							4	lbs.
Red Top						1	0	lbs.
Alsike .							4	lbs.

Total 18 lbs. per acre.

morning and early at night Avoid the hen that on the roost

Avoid a cockerel that is not up to If the object is to improve the egg weight. Avoid any cockerel that is qualities of the flock, it is important constantly being driven by other cock-Too many males are used that have or, vitality and strength, and these

Avoid any male bird that crows lit-Avoid using the hen that moults the or seldom, because the very act of early, because these hens lay but very crowing shows the masculinity of the bird, and to be a good breeder he

Do not use a male bird that is not Avoid the hen that is constantly good, upstanding, deep, wide-chested sunning herself, roosting late in the broad-backed and proud bird, because if he does not possess these characteristics he will never do to head any mating pen.

An authority says that his secret of making new blood is to pick out a pen of females as nearly unrelated as possible, and put them in a pen and mate to that pen two cockerels; these cockerels should be entirely unrelated to these hens, and entirely unrelated to each other. Use one cockerel on the pen of hens for five days; then take him out and put in the other one for the same length of time; and in that way blood is manufactured that 220 St. Paul St. W. Montreal, P.Q. | is marvellous for mating to almost

> Join with neighbors and order fertilizers, lime, spraying materials and any implements that may be needed next spring. If carload lots can be ordered the delivery will be made more quickly than on small lots. Goods ordered now may not be delivered before they are wanted for use in the spring, and if delivered sooner the feeling of security resulting from having these things on hand is worth the slight interest lost on the money drawn from the bank to pay for them before they are needed. The railroads are blocked with freight, and though conditions in this respect may grow better it is best to take no chances. Order goods way in advance of the time they are wanted, otherwise it may be necessary to go without them when they are needed. This advice applies to seeds quite as much nation and of humanity called the peoas to fertilizers and tools.

Profitable Winter Work on the Farm

By T. J. Mathews.

Heretofore it has been customary be spread through the winter upon or us to talk about the planning of those fields only that have been plowthe summer work on the farm, but we ed last fall. have not spent any particular thought | Even fences may be made through more efficiently be spent in the sum- in other cases it will be perfectly posmer. In the face of the present lab- sible to dig the holes during the winter or situation the one word that has season. The wire can easily be

come to the front more than ever be- stretched and staples put in some of fore is "efficiency;" another word, the good days.

is fairly rich in nitrogen. If the soil find some way in which more could sharp, and so the pruning knife ought them. Then approach the middleman as a wedding gift a year's member-

While we have thought it, hereto

make maximum use of the plantfood the trees has been dug, the scattering manure has been left until the rush of to get into the field, but one season about as easy to get onto a field in the winter through the snow as to get onthrough the mud or soft plowed ground. Occasional fields here and life of the tool. there cannot be covered with manure this winter because of their rolling nature, but all level fields should by

will be done when the rush of spring during the entire year. The fields "Will you please carry a message "Yes, it is time to say good-bye," fore the material is wanted and then bushels of the different kind of seeds way. have to delay the planting season or necessary to do the year's planting work the ground unnecessarily a sec- can easily be arrived at and these playroom. First, the dolls and Teddy "We will. Santa Claus, good-bye!

venience and inefficiency. Fences and Orchards

this year to use limestone to correct reserved until the last. The head work whenever they turned their heads to store was opened for the work of the soil acidity and thus make it possible necessary to run the farm through an- one side, and horses that fairly pranc- day, no one would have guessed that to grow more clover in order to add other year should occupy considerable ed along on their rollers. more organic matter to their farms. attention and after this has been thor- Next they saw a marvellous mili- party in Toyland. If the freezes and thaws are kept well oughly settled such perennial jobs as in mind this limestone may be hauled oiling harnesses, making pig troughs, which hurts them continually, so they the consciousness of universal from the station in the winter and painting wagons and buggies, fanning propitiate their gods by bloody sacribears hard upon us, when it seems as spread upon the field exactly where it seed grains and cutting seed potatoes fices, even offering their children upon if there were no outcome to the strugis wanted. In this connection, how- should come in for attention. Great the altar. From such a religion men gle of humanity, here is a ground for ever, it should be said that the best re- efficiency as well as satisfaction will turn to skepticism. Then the heavens confidence. The Eternal Love is greatsults have invariably been secured by result if these matters are completely are brass. There is no answer. The er than the needs or weakness of men. spreading ground limestone upon out of the way when the rush of spring wise man is but an infant crying in Here is plenteous redemption, grace fields that have been already plowed work takes precedence over other the night and the universe ignores his more abundant. It is a challenge So year by year will pass away and for this reason the limestone can jobs.

INTERNATIONAL LESSON DECEMBER 30.

Lesson XIII. God's Redeeming Lov -(Review) -Psalms 123 and 124. Golden Text, Psa.

The confidence of the prophets. large part of the message and work of the prophet statesmen who have been studied this quarter is summarized in the topic: "God's redeeming love." Those great leaders of their ple to justice and righteousness in

neath their iron heel. The prophets humanity to be achieved through the hide. saw them turning to God and included working out his great purposes with Grubs them in the great fellowship that him should dwell with him. Have we that message and attitude for our foes? It is essential to the building of a new

A great advance. To call the peo- still cleaves to the sinner. After taken to crush all the grubs remov- that is to support the family next ple from immoral idols who could be he had denied it, Peter well knew its ed, preventing their further develop- year; to read and study the subject so order that they might know God and bribed to a God of righteeusness and nature and says, "the long suffering of ment and transformation into flies. gardens will be fully prepared and The cause of milk fever is frequent- experience him by thus expressing justice was an immeasurable progress the Lord is our salvation." Redemp-



upon the winter's work with the posthe winter. In some cases it may be department. Initials only will be published with each question and its answer sible exception that we have indicated necessary to have the post poles dug as a means of identification, but full name and address must be given in each a few things that might well be done and the posts set in the autumn before letter. Write on one side of paper only. Answers will be mailed direct if in the winter so that the time might making the fence in the winter, while stamped and addressed envelope is enclosed. Address all correspondence for this department to Mrs. Helen Law, 235 Weedbine Ave., Toronto.

I have ten acres of fall rye on a light keep it stirred occasionally until it is through exercising such supervision on the brambles which have passed finding it hard to secure them. Fish Charlottetown, P.E.I.

Even seed potatoes may be cut dur- restaurants throughout the Dominion, ferences and to co-operate for food

some hours of time when it comes to A.A.R.: Better late than never! were used by the people of Canada the You are by no means the only country saving would greatly help out the de-Then, of course, the seed corn should woman who has repented her decision mands of Italy, Great Britain an be gone over, the cull ears thrown out not to sign the food pledge card. A France. Italy's per capita consumpand the remaining ears tested for number of tardy people have come to tion before the war was 12 pounds; vitality. Certainly it will not pay to see that perhaps there was some rea- that of France was 18 and of Great spend good time planting and caring son underlying the pledge card cam- Britain, 28. In North America each for corn that is only fifty or sixty paign after all. You can get these man, woman and child consumed 90 per cent. of what it might have been cards by writing to Mrs. Gurnett, pounds of sugar a year.

R.S.B.:-Ask your dealer to get the secretary of the Women's Auxiliary

about them and the best way to cook teachers, as well as brides, members an hour's time, where two or three and early oats are usually freer from inform you that the reports received Toronto, Mr. Hanna said that the wotime operating rather than running soaked in the treating solution. ports from only 33 large hotels and urged the women to forget minor dif-

or one teaspoonful instead of three

A Christmas Party in Toyland.

It was at twelve o'clock one shortly before Christmas when taken into the tool house or work shop have a Christmas party. The miniature Santa Claus who stood on the counter, thought of the plan, and he said: "Let us have a Christmas party tools look better, not to mention the here in the children's big playroom and have one last romp together beinsurance and will pay in the extra fore we are sold."

Then Santa Claus called the toy policeman and asked him to help man-Head work is essential also during age the party. The policeman went preciable leaching away and the job distributed that help may be hired ing out for his midnight spin.

Soon the toys were in the large children. year, since it results in so much incon- season draws on. This will make for slide. Then they all rode on the toys.

was the helper and defense of men.

tary parade and all the dolls clapped

Punch and Judy show, and they all dolls seemed to have quite enough, adult has passed upon it. ters was always the same.

Then Santa Claus told the toy musicians to play, and they took hold of read when they are somewhat older, hands, and Santa Claus danced with but which are not suitable for them them around a tall Christmas tree until the policeman said:

"See, the day is dawning; I am the all means have the application during the winter. Crop rotation systems out on the floor and suddenly stopped Toyland. Each one must go to his enough to enjoy and appreciate it place at once and be ready for this more."

should be gone over carefully with re- for Santa Claus?" he said. "He said Santa Claus; "but remember Moreover, there are on every well ference to their past history and a de- wants all the toys in this Toyland to wherever you go it is your duty to ordered farm ,some fertilizers neces- finite outline should be made out to come to the children's room for a make the children glad, for that is sary in raising the crops and these be followed during the next five or ten Christmas party. So go as fast as why we toys are made. You dolls fertilizer order to go until a week be- one year hence. The numbers of work machinery as he rushed on his fill; and you will be happy in your new life by bringing happiness to the

ond time, will certainly not do this should be at hand when the planting bears coasted down the toboggan Merry Christmas!" shouted all the

better use of the labor of both the merry-go-round until they were diz- Then, by train, trolley, automobile, zy and tired, and later they visited the fire engine, patrol wagon, and airship, All of the field work possible should toy farms. Here they saw woolly all the toys were carried safely back A great many farmers are deciding be done in time, the indoor work being lambs that said "Baa-baa-baa-baa-baaa!" o their places, and when the great there ever had been held a Christmas

cry. But the prophets proclaimed not to idle trust, but to renewed effort. Until my wife and I are gray

The lumps or swellings which may Underneath this preaching of right- tion of God was fulfilled in Jesus's be found under the skin on the backs sin is a confidence in the lovingkind- men to live in a new world with a God April contain grubs. If these grubs ness of Jehovah. Even in his anger whose name is love. Small wonder that are allowed to remain, they will comthey saw a beneficent purpose. It the English abandoning his conception plete their growth, drop to the ground was not vegeance, but restoration that of God, cried out, "The great compan- and transform into flies which may and his household self-supporting rethey proclaimed. The climax of this ion is dead." Those to-day who feel reinfest the cattle during the spring lieves the demand upon the stock of message included the powerful en- a personal fellowship with God are and summer. The grubs weaken the food that is available for the nation." emies of Israel—those great conquer- called to develop a similar fellowship cattle, cause them to fall off in flesh —R. E. Prothero, Minister for Agriors who were about to grind her be- on the part of the community and all and milk, and decrease the value of culture, Great Britain.

TRAINING YOUNG BOOKWORMS

By Irene Stillman "That's the sixth book Willie has read this week," said a mother to me in great exasperation. "I don't know what I'm going to do with him. He has some studies which he should brush up before the new term, and there are so many little things, errands and the like, that he could do if he would to save my steps. Public libraries are nuisances," she ended

Of course the mother was wrong. With a little trouble she could have firmly limited the boy to two books a week, at the most, during vacation; one a week is sufficient for a child overindulged similarly knows the sen-

A youngster's interest in a book smuggle the book into all sorts of unexpected places because of the in defend the lady of his heart. Needless to say, these youthful gobblers of "literature" require carefu land sympathetic watching. This I know from verp personal experience. From eight to eleven years of age it was almost impossible to rouse me in the mornings in time for school. This my adult world was much puzzled to understand, as I was sent to bed fair ly early. And no one knew until I too, became an adult and told the tale upon my little self that I smuggled a book to bed with me and frequently, after the household was sound asleep, lit the lamp and read until 3 and 4

Therefore, I repeat, limit a boy or girl to one or two books a week and see that your edict is observed. Furthermore, supervise not only the number of books read, but their contents Young people cannot safely be allowed to browse unguided in the field of carefully censored before being admitted to the shelves. When an oc casional book is got from the shelves laughed and shouted. Then the dolls of the adult department, stipulate that went to a big supper party. But the it must not be read by your young peoqueerest part was that, although the ple until you or another informed

And there we'll live together.

And flowers will bloom about us Sweet blossoms for her golden hair, Sweet blossoms that will be her care. All other flowers outvying.

A little girl, a little boy, Each dearer than the other. But happy still as on the day That sees our first home-going,

O little home! Your apple trees, Your garden, flowers and honeybees Will flourish well, but more than these Will love find place for growing. -Gorton Veeder Carroth.

The Food Question.

ONTARIO ARCHIVES TORONTO

that sires be purchased that have been erels, or a cockerel that won't fight bred from hens with high egg records. Any bird that will fight has good vignothing but their "looks" to recom- are essential.

few eggs in the year. Avoid the hen that is not a busy should be strongly sexed.

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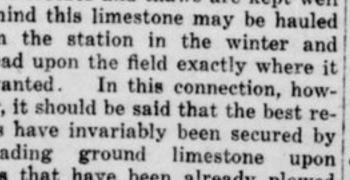
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any hens, and marvellous, too, for lay-Do Spring Buying New.

alsike are comparatively shallow and of the hedge. When the trench for On most farms the job of hauling

night has an empty crop



world order.

Then, too, there is the matter of overhauling the machinery and wag-All parts that are broken or bent should be listed and these sent for at once. The broken ones may then be replaced and the supplies will be on hand when the bent part gives way. The wheels and parts can be toys in the big top shop agreed and repainted and even though the average farmer is not a professional painter, he will be able to make his fact that the repainting is a form of

Head Work

had a few hours been taken in the

winter time to be sure that the seed

out in historic consequences. They who was the friend and comrade of correctly interpreted the moral nature their struggles, who was on their side of the universe. This was a great when they were seeking justice and advance in religion, but there was righteousness because they were then something more in their message, expressing his nature. This concepeousness and of the consequences of declaration of the Father which calls of many cattle from January until

The cause of milk fever is frequently attributed to milking the cow out clean soon after calving. It is advisable not to empty the udder the first day or two.

They proclaimed the terrible wrath of Jehovah upon those who worked injustice and unrighteousness. They described the anger of God working the cow out clean soon after calving. It is advisable not to empty the udder the first day or two.

Electrical apparatus operated by a keyboard like that of a piano has been invented for ringing church bells either as chimes or continuously.

"service," is now rapidly coming for- If it has not been possible previous- peace until he has brought them on Committee, Parliament Buildings, kind of fish you want and give him no to the Organization of Resources ward. It will be necessary now to ly to get at the berry bushes and the do the work of the farm with one orchard trees on the farm, here is the market. There are hundreds of of the Food Control offices at Winnihand, where before it was done with another field job that ought to have women like yourself who are willing peg, Regina, Edmonton, Vancouver, good mixture to sow for pasture? 2. Spread the grain on a dry floor and through two, and this can only be possible attention before spring. The old canes to try the new varieties of fish but are Montreal, Fredericton, Halifax and piece of land. Would like to seed it dry. The high temperature of the wamoments of the working day will be moments of the working day will be ter will kill the spores of the disease moments of the working day will be cut out and the new shoots trimmed and bacon that are being extensively a wedding present? Well, what do to clover. What is the best time to which adhere to the surface of the bar- spent to greater advantage.

| back | It is a saying among orchard struck off the menu. The fishermen you think of this one? The Women's sow clover? 3. What is meant by sub- ley seed. The use of oats as a crop in There is not a single man but who men that the only good time to prune are ready to supply you with all the Institute at South Tilley, N.B., has hit soiling? 4. What is the best soil for a young orchard is advisable if the soil can go back over a day's work and trees is when the pruning knife is fish you want. You are ready to use upon the scheme of giving all brides

should be ordered at once for Jan- years. The first of the year should you can to the departments and invite must consent to be hugged and loved

Next Santa Claus took them to a

uary or February delivery so that see an inventory taken of the farm all the toys." And the toy motorthey may be on hand when they are business so that the total assets of the cycle man broke all the speed laws in march and drill for the little boys, and march and drill for the little boys, and The wedding bells ring sweet and high, wanted. The matter of allowing the farm may be compared with its assets Toyland, and nearly broke his clockeach toy has its place in the home to Oh, there we'll go, my bride and I,

Grubs may be pressed out through Every man who can make his house-The basis of redemption. With the certainty of the lovingkindness of God A sharp knife and a pair of tweezers food his family would otherwise concomes the possibility of redemption. will often make the work of removing sume for Canada and our allies. Now It is Love that bears all things and the grubs easier. Care should be is the time to begin to plan the garden

Of course, the censoring must be done diplomatically. Children may often select books that they may well just at that time. Under the circumstances one might say, "Yes, that is a

And we shall have a hive of bees, A garden, too, and apple trees. To keep the world from spying.

And hedges holding all of these And Time will heed our earnest claims To greater joys and higher aims And grant us title to the names Of father and of mother. So blossoms winter can't destroy Will keep our home abrim with joy-

The above is equally true in Canada.

o'clock in the morning! their hands and cheered and stood up books. If you find that you have not to watch the soldiers as they marched. time to censor their books, allow only After that they went to the sand box those from the children's department where the toy battleships were drawn of the library, because they are all