OF INTEREST TO FARMERS

DAIRY FARM WINTER NOTES

Feeders need to remember that half the winter is ahead of us at the time of writing this (February 2nd). On this day the bear is supposed to come out from his lair and if he sees his shadow, he goes back for another six weeks. He could see his shadow all right in the vicinity of Guelph. Another proverb says, "On Candlemas Day, we should have half our oats and half our hay." These remind us that where feed is scarce, it is not wise to be lavish at the manger in February because we happen to have a little mild weather at the beginning of the month.

If the ice house has not yet been filled, this should be attended to at the first opportunity. The month of January has been a favorable one for harvesting ice. We may have more ice but it is possible that the ice harvest is over for 1922. Those who have missed storing a supply of ice will regret it in the hot weather when milk is turning sour and the cream is fermented so as to almost lift the lid from the can. This means preventible losses.

Cream grading may be put into operation during the season of 1922. Some of our leading creamerymen have said, "This we will do in the year 1922." If they do, those who have facilities for cooling and keeping cream sweet, will profit thereby, as the probabilities are that a differential of three to five cents per pound fat will be made in favor of sweet, clean-flavored cream. This is the difference between profit and loss in these days of close margins of profit.

Now is a good time to give the calves a little extra attention. The future cow depends largely on how the calf is reared. In cheese factory and condensery sections the caves ought to get a good start on milk before the season opens. Nothing will take the place of milk for young calves. Where cream is sold, there is a splendid opportunity to raise good calves in winter is the best time to grow thrifty young stock. H. H. D

HOW MUCH DOES A HEN EAT

Many farmers know in a general way what it costs them to feed the flock of hens, and they may also know how many eggs have been laid and what the eggs brought on the market. From this information many farmers have been able to determine that a well managed farm flock pays well. A more important point, however, is to find out how many pounds of feed are required to produce one dozen eggs. A hen that requires only a few pounds of grain to produce one dozen eggs is an efficient hen while one that requires many is an inefficient hen.

The Poultry Department of MacDonald College, Que., has been keeping records on the amount of feed consumed by flocks of hens for the various months of the year. It has been found that Rocks and Reds require about 7 1-2 pounds of grain per month, or the average Rock or Red consumes between 85 and 90 pounds of grain in one year. The consumption during the winter months was found to be slightly higher than during the summer months. Of course, besides the grain the average hen consumes in one year about 10 pounds of green food, five pounds of oyster shells and two pounds of grit. The amount of grain consumed is the important factor, however, because the prices for the other three articles mentioned remains fairly stable, while the price of grain fluctuates considerably. Taking the amount of grain consumed as a basis, if your hens average 12 eggs each in December your flock is producing one dozen each at a feed cost of 7 1-2 pounds of seed. Now, if you know the cost of feed and the price of eggs you can readily determine your profit over feed. The higher the egg production the fewer the pounds of grain required to produce one dozen eggs. Since eggs are worth much less in the spring and summer than in the fall and winter it takes more eggs to pay for a pound of feed. A hen laying 141 eggs in a year and consuming 90 pounds of grain uses just 7 1-2 pounds of grain to produce one dozen eggs. A hen laying 240 eggs in a year and consuming 90 pounds of grain uses just 4 1-2 pounds of grain to produce one dozen eggs. The second hen is a much more efficient hen than the first one. M. A. J.

Rosy Cheeked Healthy Women

Know the Full Value of Rich, Red Blood

Robust, healthy, red-cheeked women seldom worry. Their condition of mind and body is such that they can rise above the causes that bring melancholy and brooding. It is the woman with weak, watery blood who is thrown into nervous unrest by little annoyances that grow so great in the imagination that it seems as if she must scream to relieve her feelings.

A woman's health quickly fails her when her blood becomes thin and weak. The stomach is disordered and all appetite vanishes. The nerves lose their strength and sleep is not regular and does not refresh the body. A state of weakness arises that increases gradually and gives further cause for worry. Good blood is necessary to every woman who has grown pale and weak, and in this condition Dr. Williams' Pink Pills will be found of great benefit, because they enrich and purify the blood. Women who are anaemic, suffer from indigestion, palpitation, headaches, and nervous attacks, will find new strength through a fair use of these pills. Among the women who have proved the value of this medicine is Mrs. Enos Levy, Hackett's Cove, N. S., who says: "About two years ago I began to fail in health and was very weak. My constitution was all run down and my blood as weak and watery as was manifest every month. I had heard of Dr. Williams' Pink Pills, and what they would do for the blood, and being in such a low condition, I decided to try them. By the time I had finished the fourth box I found to my great delight that I was a great deal stronger, and my blood a deep red color. I have a lot of work to do besides taking care of my little one, and with my health I enjoy it, and I can truthfully say I owe this condition to Dr. Williams' Pink Pills."

Dr. Williams' Pink Pills can be obtained through any medicine dealer, or may be had by mail, post paid, at 50 cents a box or six boxes for $2.50 from The Dr. Williams' Medicine Co., Brockville, Ont.

THE COST OF BROODINESS

As the relative importance of a high egg yield is taking on new significance it becomes apparent that the number of days lost through broodiness is an important economic factor. Many poultrymen know in a general way that if a hen is broody for two weeks her production is cut down, but they have not considered sufficiently the amount of money lost each time a hen goes broody; and some hens go broody two or three times a year. Some breeds are more inclined to go broody than others and the same is true of some strains of a breed as compared with other strains.

Broodiness decreases egg production, and therefore affects financial returns. Information gained from the records of the Vineland laying contest shows that Rocks, Reds and Wyandottes go broody about two and a half times per year, and Leghorns one one one half times. Of the total number of heavy breeds from 60 to 70 per cent of them went broody, while only about 100 per cent of all the light breeds went broody. The average number of days lost per hen per year for the heavy breeds was about 21 and for the light breeds about three days. Practically all of the broodiness occurred from March to July, and figuring on the basis of 60 per cent production for that time of the year, the loss through broodiness has been determined for the different breeds. The loss per 100 birds was found to be $39.71 for Plymouth Rocks, $45.23 for Wyandottes, $51.71 for Reds and $6.49 for Leghorns. The moral to be drawn from these figures is to break up the broody hen as quickly as possible and try to breed out of your flock the tendency of broodiness.—M. A. J.

REMOVE BULL'S HORNS—USE CAUSTIC ON CALVES

In the last issue of Canadian Countryman, "Canuck", Prince Edward Co., opens the discussion "Should all bulls be dehorned?" I am of the opinion that no bull should be allowed to wear those useless ornaments. Where a stock bull is kept on a farm, it often happens that he has to be handled in the evenings, when it is growing dark in the stables, and, in tying or untying, the attendant is in danger of getting a nasty knock, perhaps in the face, that the animal never intended; while with a dehorned bull this could not happen.

My experience with bulls has been that no matter how quiet and docile they may be, they are liable to have off days and may happen to go up in the air just when the attendant least expects it. We all have either seen or read about the serious and fatal accidents that go to support this argument.

In regard to the show ring bull, it is to be hoped that, with the many different classes and short courses held throughout the country for the benefit of our young men in live stock jundging, in the near future our younger judges in the ring will become expert enough to determine the merits of one bull over another, without having to resort to the less important points which are brought out in the horns, and the same might aply in all classes of cattle.

I do not wish to take up much more space in this discussion, only to say that I strongly favor having all cattle without horns. However, I have not very much use for the dehorning clippers, being a strong advocate of using caustic on the calves.

I keep eight or ten cows, raising all the calves, and have not had accasion to have a dehorner used in the stable, nor have we any cattle with horns. A good many stockmen use the caustic potash method of doing away with them, though there are, no doubt, some who have never tried it and hesitate because they have never seen it done.

For the benefit of those who may feel like trying it, I will give my way of doing it, and I may say, there is nothing about it that an amateur or inexperienced person need be afraid to try.

Having secured caustic sticks from your drug store, 10c. worth being enough for from 20 to 40 calves. First, take a piece of caustic, two or three inches long and roll it in paper, leaving about one inch uncovered, so that you can hold it in your hand in the paper and not burn your fingers. Second, have an attendant hold calf securely enough that it cannot throw its head around. If you are alone, lay calf down on some clean litter or straw and tie its legs with a cord. Third, with a pair of scissors, cip the hair away from the little horn just so that you can see it plainly. Fourth, dampen the horn with the end of your finger dipped in water, but do not put on enough to let water run, or it may carry caustic down the head, where of course, you don't wish it to go. Fifth, rub the caustic point of stick on the little damp horn and around the root of same for about a minute, or until the little horn begins to show red and get scaly, then your job is completed. In a few week the little horn will fall off of its own accord, leaving a nice round, smooth head, the same as seen on a natural polled animal. The proper time to do this is when the calf is two or three weeks old. I have done scores o them, and have never had an evil result, not missed stopping the horn from growing, and I find it vastly more humane than the cruelty that goes with the dehorning clippers.

F. Richardson

Simcoe Co.

HOUSE PLANTS

Fortunately house plants usually thrive especially well in a farm house, where there is less gas, dust and lack of ventilation than in a city home. There are many plants which can be grown in a house, but comparatively few are wholly satisfactory. Among the latter there are none better than the small flower begonia, the Chinese primrose, the geranium, impatiens the cyclamen, and the heliotrope.

In recent years greatly improved form of certain house plants have been put on the market, and while they may not be quite so easy to obtain as the old time favorites, they are well worth getting acquainted with. Among the best is the dwarf type of the calla. It is called the Godfrey calla, and while the blossoms ordinarily are not so large as those of the old fashioned kind, they are produced much more profusely, and are very decorative. Sometimes this is called the ever blooming calla because of the long season over which it flowers. It gets along very well even though not rested at all although it is better probably on the whole to turn it on its side under a bush out-of-doors when spring comes and leave it until fall. The Godfery calla will eventually make quite a large plant, but for a long time it occupies comparatively little room, and is an ornament to any home.

While the Chinese primrose and the kind known as Primula obcaniica are among the most delightful of all house plants because of their continuous blooming quality, there are other primroses worth growing at least by way way of variety. Among them is the baby primrose, so called, which has small flowers, but produces them in bewildering profusion. They appear at the top of long stems, and are very charming during the flowering season. These primroses are called by the florist Primula malacoides, and an improved kind now to be obtained is a variety known as Townsend, the principal merit of which lies in the fact that the individual flowers are much larger of the baby primrose. Another kind which is a welcome addition to the window garden as Primula Kewensis. It blooms periodically rather than continuously, but the small yellow flowers are a delight as long as they last.

If you have awindow which gets the sun all day long, you probably will succeed wel with you geraniums provided you do not make the mistake of keeping them too wet or giving them too large a pot. The geranium blooms best when pot bound, and likes to be kept rather on the dry side, and it must have sun. If your windows get only a little sun you will have much better results with the small flowered begonias. To be sure, they never have as fine color in a shady window, but they will bloom freshly even if they get only a littel direct sunlight.

Ladies! Secret To Darken Gray Hair

Bring Back its Color and Lustre with Grandma's Sage Tea Recipe

Common garden sage, brewed into a heavy tea, with sulphur and alcohol added, will turn gray, streaked and faded hair beautifully dark and luxuriant. Mixing the Sage Tea and Sulphur recipe at home, though, is troublesome. An easier way is to get the ready-to-use preparation, improved by the addition of other ingredients, a large bottle, at little cost, at drug stores, known as "Wyeth's Sage and Sulphur Compound" thus avoiding a lot of mess.

While gray, faded hair is not sinful, we all desire to retain our youthful appearance and attractiveness. By darkening your hair with Wyeth's Sage and Sulphur Compound, no one can tell, because it does it so naturally, so evenly. You just dampen a sponge or soft brush with it and draw it through your hair, taking one small strand at a time; by morning all gray hairs have disappeared. After another application or two your hair becomes beautifully dark, glossy, soft and luxuriant, and you appear ...

MUST LOVE SHEEP TO BE SUCCESSFUL.

A veteran sheep raiser places love for sheep as the first essential to success with them. He says a man who does not get more pleasure and recreation from salting the sheep than from going to the movies may as well quit raising sheep and produce pictures.

How valuable the intangible sympathy between man and animal may be is a matter of conjecture, but it is true that most grand champions are the recipient of a kind of care and attention not to be explained in books or given by one who does not care for the animal in more than a monetary way. This applies to sheep raising more than any other kind of live stock. Sheep "do well" for the man who likes them, while they often disappoint the man who "does not like sheep."

FOR POULTRYMEN

The second annual report of the Record of Performance for Poultry "Section A" will be issued about March 15th, and will contain much information valuable to poultrymen.

The 1920-21 entries totalled 7,511 birds entered by 81 breeders and of the 7,463 birds handed 1,942 qualified for Record of Performance and earned certificates, and 287 are Record of Performance advanced certificates. These figures show a considerable increase over 1919-20 when entries were 4,436 birds representing 67 breeders, 681 of which qualified for certificates and 50 for advanced certificates. The figures show an increase of 90.9 per cent in the number of breeders and 69.5 per cent in the number of birds entered.

All provinces were represented with the exception of Nova Scotia. Ontario led with 2,576, British Columbia a close second with 2,488, Quebec third with 1,503, New Brunswick 400, Saskatchewan 365, Prince Edward Island 111, Alberta 45, and Manitoba 25. The general quality of the birds entered was good, due to the fact that a higher percentage of the breeders were found to be doing pedigree breeding. This fact is reflected in the increase in the number of birds qualifying, and the decrease in the number withdrawn. Last year 36 per cent of the birds entered qualified for certificates, compared with 17.2 per cent the previous year. The birds withdrawn in 1920-21 were 43 per cent of those handed compared with 54.1 per cent the previous year.

During the past year 26.1 per cent laid from 150 to 224 eggs, and 3.9 per cent laid 225 eggs or over in the year; 18.5 per cent finished their year but failed to qualify, and 8.5 per cent died during the year.

In the mater of percentage qualified by provinces British Columbia led with 1,148 birds qualifying or 46.1 per cent of the birds handed; Manitoba second with 40 per cent, Saskatchewan third with 36.2 per cent, Ontario forth 23.9 per cent, New Brunswick 22.2 per cent, Prince Edward Island 17.2 per cent and Quebec 16.8 per cent. Mortality was lowest in Ontario, the province with the largest entry.

The standing of the breeds is as ways interesting and the report shows that of a total of 1,017 Wyandottes handed 36 per cent received certificates, in Leghorns 30.9 per cent of 3,425 birds qualified, Plymouth Rocks, 27.6 per cent of 2,152 birds, Rhode Island Reds 22.3 per cent of 774 birds and other breeds 2.9 per cent of 35 birds.

Outstanding individual efforts were British Columbia White Wyandottes 293 and 284, White Leghorn 297, Barred Rock 281, Ontario White Leghorns 293 and 282, and Barred Rock 277.

The entries for the present laying year 1921-22 number 11,573 compared with 7,511 for 1920-21 and 4,436 for 1919-20.

The report will make interesting reading for poultry breeders in all parts of the Dominion, containing as it does atabulated record of all breeders and the birds on their plants lying 150 eggs or over in 52 weeks. Copies of the report and full particulars regarding this work may be had on application to the Dominion Live Stock Commissioner, Ottawa.

POTATO CANKER

(Experimental Farms Note.)

Potato Canker or "wart disease" of the potato is a disease happily only known to most Canadian farmers by its name, perhaps to some few by its notoriously dangerous character to the potato growing industry in other countries.

Some ten years ago the Federal Department of Agriculture succeeded in averting the very near danger of its introduction into Canada from abroad, principally from Europe. The Department then placed an embargo against the importation of potatoes from Europe with the usual emphatic objections generally resulting from such measures. Today Canada has every reason to be grateful for the foresight of the Department. In Great Britain, notwithstanding every effort towards the eradication of the disease, some 22,000 cases and more have been reported during the period of one (recent) year. The disease affects potatoes in various degrees of severity; either there may be slight infection or wholesale destruction

TO THE POULTRYMAN:

A Weekly Letter Containing Practical Pointers in the Management and Care of Standard Bred Poultry, Taken From the Daily Log Book of Sunny Crest Poultry Farm, Bear River, P. E. I. by the Manager.

At the present time a great many experiments are being carried on in an effort to determine whether the male, or female have the greater influence in transmitting the high producing qualities to the female progency, and, just as soon as someone or other brings along what appears to be conclusive evidence that the male is the chief factor in transmitting this quality, Bidy of 300 eggs fame quietly produces eight or ten daughters that all manage to give her a close run for highest honors in the family, thereby knocking the fruits of man's scientific research in that direction into a cocked hat, she may even go a step further than that and prove that her better half? was just a common no account rooster without even a suspicion of a trapnest or a R. O. P. chart meant.

Without going too deeply into things scientific, there are several points which must be considered before one can make anything like a fair estimate of the relative values of the male or the female in mating, and I would particularly caution the reader against the breeder who frequently advertises a certain mating headed by 96 point cockerel and forgets to mention the wives, and while he does not tell you outright that the females used in mating have no trapnest records he words his advertising in such a manner that you are liable to conclude that as long as the cockerel is a prize winner and with "egg breeding" behind him (often a long distance behind) it is of very little consequence what he is mated to.

Prepotency is the name given to the predominating influence of the male or female in mating, and breeders who form conclusions according to the results attained usually credit the male with being one half the mating as far as the transmission of tendencies are concerned, this I think, is a very safe estimate for anyone to work on providing all other things are equal but equal rights here is where the fellow who makes all the extravagant claims as to the breeding value of his cockerels, gets his material.

We will suppose you have a flock of fowls of shapes and colors that have been bred without any definite purpose in view and in which inbreeding has been practiced for years, you read of the wonders of such and such a breeders cockerels and decide to give one a chance to put the lay into your flock, mate him up to a dozen of your best hens, and nine chances out of ten ninety per cent of the chicks hatched will resemble the male, and will carry his strongest points. You immediately conclude that the cock or cockerel really is the main point to be considered in the mating which is very seriously wrong for you do not take into consideration the fact that that cockerel was bred to a certain type for a number of generations, while the hens were just allowed to go as nature's laws made the easiest and no attempt was made to check the tendency to decline or retrogression nor efforts put forth to improve.

Prepotency is greatest where either the male or the female have been line bred to type for a number of generations, I think I could safely go a step further and say that fowls to be prepotent or in other words to be able to stamp their qualities on their progency, must be line bred to a certain type for a number of generations, you are simply depending on the hereditary influence handed down through a line of ancestors to the individual or individuals with which you are working, and to say that it is possible to transmit the desirable qualities of past generations which were manifest in both sides of past matings, through the male line and not through the female, seems to me to be the greatest nonsense imaginable.

I cannot say here that the male DOES NOT transmit the prolific tendency to the offspring but, I do know and can say that where heredity is the deciding factor in so far as the transmission of prolific tendencies are concernedd, the best bred cockerel that was ever hatched would never be able to produce high producing pullets if the female in that mating were not healthy, vigorous, of good digestive capacity and properly fed and maintained.

The very most that we can say on a basis of results obtained in actual practice would be that a chick hatched from eggs of prolific parentage on both sides starts life with a greater tendency to become more than normally prolific than chicks of chance breeding. The male paren undoubtedly, should be of prolific tendency but the female parent should have no less attention in this regard, for, here I will ask the reader to carefully note that the life germ in the egg is the joint product of the male and female, but the feed that the chick while in the egg is o be developed from, is solely the product of the female parent. Is it not reasonable to assume then that the female especially, must be strong, healthy and have the qualities that are necessary in the high producer. Experience will show you that results are always in line with that view and I think it will take more than the preponderance of any male to change them.

A pullet of inherited prolific tendencies will prove to mature of just such quality as her rearing makes possible.

A very high bred bird may turn out a very poor layer from faults in her maintenance while growing, no proof of this should be necessary for the pullet is dependent on her upbringing for any high producing tendencies she will ever manifest and the requirements of high production are, health, vigor, digestive capacity, and proper food. Fowls degenerate very rapidly, both individually and as a flock if badly maintained and proper maintenance is not solely the seeing to ample supplies of food, keeping fowls warm and such like coddlings as are often practiced by the well meaning novice, these items of maintenance are worse than useless if you buy fine birds you must keep them regidly, to keep them fine and to do that successfully you must go a great deal deeper than the immediate wants of the bird.

The point that I want to emphasize is that heredity is commonly and often erroneously credited with influence far greater than belongs to it, and also that failures in results due to mismanagement and misplaced maintenance are oft times charged up to faults in past generations which have been handed down thru succeeding lines and intensified in the process.

At the very most, heredity is merely transmission of tendencies which are far less deeply grafted in than general characteristics are. General characteristics are not specially in line with man's desires, "eternal vigilance is the price" always.

efforts to harvest a yield. Moreover, the disease persists under certain conditions in the soil for 0 or 15 years, always re-infecting a crop even when planted after an interval of so many years' duration. The presence of this disease has caused Great Britain and other European countries serious losses, not alone within their own borders but also in the valuable export trade in potatoes. Canada is quite free from this disease which causes such serious losses in other countries; but the danger once more looms on the horizon, since this disease has been discovered in certain areas of the United States.

Canadian farmers are well advised to continue their vigilance, especially as potatoes imported from the States are concerned. The person who through neglect on his part causes the disease to become established in Canada, will cause this country serious injury, probably of a lasting and irreparable character.

DIVISION OF BOTANY,
Central Experimental Farm

Girls! Use Lemons To Whiten Hands

Press the juice of two lemons into a bottle containing three ounces of Orchard White, which any drug store will supply for a few cents, shake well, and you have a quarter pint of harmless and delightful lemon-bleach lotion to soften and whiten red, rough or chapped hands. This home made lemon lotion is far superior to glycerine and rose water to smoothen the skin. Famous stage beauties use it to bleach and bring that soft, clear

He Has No More Pains In The Back

NOW SINGS THE PRAISES OF DODD'S KIDNEY PILLS

Saskatchewon Man Who Has Found New Health and Gained Twenty Pounds in Weight Recommends Dodd's Kidney Pills.

Wakaw, Sask., March 3rd, (Special)—Simon Gawluk, a well known and respected resident here is a sworn friend of Dodd's Kidney Pills. He has tried them and found them good.

"I am more than thankful that I was led to use Dodd's Kidney Pills Mr. Gawluk states. "I had backache and after using Dodd's Kidney Pills I grew much stronger, and I gained twenty pounds in weight.

"Now I am very thankful to say I have no more backache and I recommend Dodd's Kidney Pills to everyone."

That Mr. Gawluk's trouble came from the kidneys is evidenced by the relief he got from Dodd's Kidney Pills. They are purely and simply a Kidney remedy. They heal and strengthen the kidneys and put them in shape to strain all the impurities out of the blood. Sound kidneys mean pure blood. Pure blood means good health.

Ask your neighbors ...

Sunday School Lesson

Lesson X. March 5, 1922.

JEHOVAH'S MERCY TO A HEATHEN CITY

The Golden Text:— "Let the wicked forsake his way, and the unrighteous man his thoughts; and let him return unto Jehovah, and he will have mercy upon him; and to our God for he will abundantly pardon."—Isa. 55: 7.

The Lesson Text:—Jonah, ch. 3. For entire lesson, see Jonah, chs. 3, 4.

LESSON TEXT ILLUMINED

1. Thee word of Jehovah came A second time, to Jonah. Cf. ch. 1: 1. Jonah was the prophet of a second chance. God did not reproach him for his former refusal and disobedience. Whether or not he went to Jerusalem beween his calls to fulfill his vows, ch. 2: 9, is not said.

2. Arise, go unto Nineveh. A definite and explicit call to foreign missionary service. Jonah was as Dean Stanley observes, "the first apostle to the Gentiles." He had refused to go the first time because he had no special love for Nineveh, and was "jealous of God"; Elijah, whom he resembles, was, as C. A. Smith remarks, "jealous for Jehovah." When first called Jonah was commanded to go and cry "against" Nineveh; at the second time "unto Nineveh;" but the difference in prepositions should not be pressed. The two calls were probably identical in their purpose and significance. That great city. The site of ancient Nineveh covers it is said some eighteen hundred acres. And preach unto it. Literally "Cry against it," as in ch. 1: 2. There is a sense in which every true prophet is against prevailing conditions. The business of a faithful preacher is always first to uncover sin, and then to point to Christ. The preaching that I bid thee God only has the right to dictate what kind of preaching shall be preached. And the preacher, if he only realized it, has no more right to alter the message God gives him than a telegraph boy to change the message he is expected to deliver.

3. So Jonah arose. This time obeying his call. He had learned through shipwreck his moral kinship with the Ninevites. An exceeding great city. The author pauses to emphasize again the immense size of Nineveh. The expression used here is literally, "a city great even for God." Of three days' journey. According to Diodorous, the circumstances of the ancient city was four hundred and eighty stadia, or about sixty miles; but the author is not here especially concerned with the circumference of Nineveh. Besides, the ancient city was four hundred urbs, is reputed by archaeologists to have been but a little over seven miles in circumference. More probably the author is thinking of the crowded streets. Ask a native of Syria today, as the writer did a few years ago, which city Nazareth or Beirut, is the better; and the answer will be returned, "Oh Beirut is a city of three days;" meaning that it would require three days to see it satisfactorily. The parase is an Orientalism.

4. Yet forty days, and Nineveh shall be overthrown. This is the only sentence of actual prophecy in entire book. Yet the whole of Jonah is regarded as prophecy by the Jews; just as the biographies of Joshua and the Judges, of Elijah and Elisha are classified by them as "prophecy;" the books of Joshua, Judges, Samuel and Kings being labeled by the Hebrews as "The Former Prophets." There is only one sentence of real prophecy in The Book of Jonah, and that is an announcement of judgment But it brought salvation to the Ninevites.

5. And the people of Nineveh believed God. This is the greatest miracle in the book. Miracles of grace are always the greatest. Yet there is nothing incredible about it when it is remembered how superstitious Eastern peoples are. They believed "God," not Jehovah. Jonah very probably passed energetically through the crowded thoroughfares of Nineveh and cried loudly in his own language, Hebrew, that Nineveh would be destroyed within three days. He wore the aspect of one who had risen from the dead— and he had. Few comprehended what he said till his words were translated for them; thereupon, they became panic-stricken, and being superstitious, they feared God and repented. Layard, the archaeologist, tells how a Christian priest once frightened a whole Moslem town by announcing an earthquake. King Harold the Great, we are told, "was troubled, and all Jerusalem in A. D. 70, it is said that a man stalked through the streets of the holy city crying, "A voice from the East, a voice from the East, woe to Jerusalem." As A. B. Bruce observes, "The world is ruled not by truth but by opinion." Proclaimed a fast. The Ninevites did so on a subsequent occasion, as we know from their own records, just prior to the downfall of Nineveh in 606 B. C.

6. The tidings reached the king. Possibly through his well appointed spies. Sat in ashes. Even the king shared in the nation's penitence and mourning. Our Lord commends the penitence of the Ninevites to the unbelieving Jews of his day. Matt. 12: 41; Luke 11: 32. Who the king of the Assyrians at this time was we do not positively know. Hommel Winckler points to the Adadnirari III (812-783 B. C.) as the probable contemporary of Jonah; and calls attention to the fact that as king of Assyria, he advocated a kind of monotheism. "Put thy trust in Nebo; trust not in another God," which was a complete break with the old religion.

that even the animals wore sackcloth was indicative of the nation's penitent fear. Let them cry mightly. Both men and beasts. "I knew you were a Protestant, but I didn't know your camels were, too,' said a Moslem sheik to a Christian convert in Egypt who refused to work, or even to let his camels work for the sheik on the Lord's Day. Cf. Joel 1: 18. Violence. Of all nations the Assyrians and Babylonians were the most cruel. Cf. Hab. 1: 6-9 2: 8; 17.

9. Whether God will not turn and repent. God threatens in order not to be required to punish. Indeed, God's threats are in a very true sense promises; for they are intended for our salvation. The older theologians used to say, "God is not obliged to fulfill his threats, but he is obliged to fulfill his promises." Cf. Amos 7: 3; Ex. 32: 14. In God, as the author speaks here, as a being possessed of a human temper and disposition. We call such descriptions of God anthropomorphisms. The value of such descriptions is that they emphasize the personality of God. God's threatenings are always conditional. Cf. Jer. 18: 7-10; Ezek. 33: 14-16.

10. And God repented of the evil. In other words, God forgave the Ninevites. Judgment may ever be exchanged for salvation — through humble repentance. The Book of Jonah emphasizes forgiveness; and especially does it emphasize the fathrly love of God, to a point approaching Christianity.—By Prof. Geo. L. Robinson, Ph. D., D. D.

PLAGUE PREVENTION

By H. ADDINGTON BRUCE,

The repeated warnings by health authorities this winter urging all householders to exterminate rats as a preventive measure against bubonic plague go to emphasize a fact which too many people do not seem to appreciate. This is the fact that, in order to be successful, plague prevention always requires the hearty co-operation of the individual citizen.

Public health officials may be as zealous, conscientious, and progressive as it is possible to be. They may plan scientifically perfect campaigns for plague prevention. But unless the general act on their recommendations, their ablest planning is likely to come to naught.

And it is chiefly because the recommendations of those whose business it is to protect the public health are ignored that plagues of various kinds still harass the so-called civilized world.

To be sure, they are not in the main plagues that dramatically sweep through countries as the bubonic plague does. But they are plagues nevertheless, in that every year they claim hundreds of thousands of people as their victims.

There is the white plague of tuberculosis, the gray plague of cancer, the red plague of syphilis—who for a moment will dare deny that these are truly plagues?

Yet all of them in large measure are preventable, if only people will take to heart and personally apply the findings of medical science as regards means of combating them and lessening their occurrence.

In the case of cancer, it is true, physicians and laity alike are handicapped by ignorance of its true cause or causes. But conditions which, for whatever reason, contribute to its development are well known. Known, too, is the fact that if medical aid is sought when its first warning signs become evident, a cure may reasonably be expected.

The occurrence of any sore that will not heal, of puzzling lumps, particularly if in the breast of a woman, of bleeding from the bowels, of marked menstrual irregularities—these are suspicious signs which, lest they really mean cancer, should be promptly investigated by a physician.

As to syphilis, the one great preventive is the simple device of purity of sex relations. Not always, to be sure, is syphilis a sign of sexual laxity. It may be, and often is, innocently acquired. But so long as impurity is rampant syphilis is certain to take a heavy toll of the sons and daughters of men.

Then there is tuberculosis.

Tuberculosis will persist while men continue to disregard the first principles of hygiene relating to the needs of the body for rest, for exercise, for fresh air, for sunlight, for nourishing food. Also while men wilfully deprive their fellows of opportunity to meet these needs. As is not infrequently done even in this twentieth century of "progress."

No. We cannot rely wholly for plague prevention on preventive action by our duly constituted health guardians. We must do uor part, too, or go on suffering as the morbidity and mortality statistics show us to be lamentably suffering today.

THE FARMER'S FRIEND

Relieves caked bag, garget, spider or infection of the teat, also thrush in horses' feet, fistula, etc. Stops bleeding at once. Removes proud flesh, soreness and swelling.