

carried up to orchards on the top by the north and north-west wind. I am undecided how to account for so much disease in this particular locality; whether it is climatic conditions or soil conditions I am not prepared to say, but am inclined to think climatic conditions the chief factor accountable for so much disease in this district. I am fully satisfied that where diseased trees are promptly removed and burned the disease will not spread very badly, and on the other hand, if affected trees are allowed to remain standing for a month or more there are nearly double the number of diseased trees the following year than there would have been had the diseased trees been removed promptly.

From experiments carried out at the Vineland Experiment Station, it has been proved that diseased buds inserted in a tree will require two years before the disease will be visible in the tree, and from this evidence I would think it would be better to have an inspector examine the tree from which buds are being procured.

After the most careful investigations carried out by those who have made a study of the diseases of peach trees, none can tell us at what particular stage of development the disease spreads to other trees. As yet there is no proof that Yellows can be transmitted to healthy trees by bees carrying the pollen from one tree to another. It has often been said by fruit-growers that diseased trees cut down and dragged through an orchard would spread the disease to other trees. I have never seen proof that such is the case, for I have taken badly diseased branches and brushed and whipped them against the foliage and branches of healthy trees, and failed to inoculate the tree with disease.

One large peach-grower seems to be of the opinion that Yellows is more prevalent following a season after a bad attack of Peach-Curl or Curl-Leaf. If this were true, we would expect to find more disease in Elbertas than other varieties because Elbertas are more subject to Leaf-Curl than most other varieties. However, we do not find Elbertas more subject to disease than other varieties; all varieties are subject to Yellows, seedlings as well as others. If there is any variety more susceptible than another to disease it is the Triumph, and it is more difficult to identify Yellows in the Triumph when determined by the fruit alone than any other variety I know of.

In 1911 there were nearly 60,000 diseased trees in Niagara and Fonthill districts; in 1912, 25,000; in 1913, 5,901; in 1914, 3,000. The decrease from 60,000 in 1911 to 3,000 in 1914 is due to the splendid co-operation of the peach-growers with the inspectors in promptly destroying diseased trees.

WALTER E. BIGGAR.

Chief Inspector of Orchard Pests for Ontario.

### Watch the Young Trees.

This is the season when mice and rabbits are liable to do their injury in the young orchard. When the snow is banked high around the trees and no damage is visible above, the field mice may at that time be girdling the tree and rendering it useless, and perhaps lifeless for all time to come. It would be wise to tramp around all of them. If there is any danger such a practice would break up their runs and divert them from the trees. If it is possible though, where the snow is not too deep or where the trunks are accessible, to protect them with something substantial it is wise to do so. Building paper, veneer or wire netting will serve the purpose, and it is against the depredations of rabbits that they are most necessary. Not only do the rabbits chew the trunks, but in reaching for the tender bark of the lower limbs they scrape the trunk of the tree with their paws in their endeavors to reach the branches.

Most varieties of small fruit trees require pruning, and it has been found expedient during the winter months to cut off some of these fresh twigs that would be removed in the spring and let them lie on the ground. They are devoured by the vermin while the trees are spared, and many plantations have been saved in this way. This is the season when most damage is being done. Growers should beware.

### Bad Taste.

Editor "The Farmer's Advocate":

The people of British Columbia are good at barring entrance into their Province, one thing being the good Northern Spy apple of Ontario. Having shipped a barrel of Spys to a friend in Vancouver this fall, he writes me that all Ontario apples are prohibited and are condemned by the B. C. Government. They don't know what's good for them.

Middlesex Co., Ont.

N. Y. Z.

## POULTRY.

### Meat and Vegetable Food for Hens.

A short time ago a discussion took place in this office over the feeding of meat and vegetable food to poultry. To clear the matter up we wrote to Prof. W. R. Graham, of the Ontario Agricultural College, who advised that best results would be obtained from cooking the meat food if this could be done at reasonable cost. The best plan he believed would be to boil some of the meat along with pulped roots, and then use about five to ten per cent. by bulk of the meat with one-third cooked roots and this dried off with barley meal or middlings, or in fact whatever chop may be at the feeder's disposal. The original argument was whether it was harmful or not to feed meat food raw. Very often on the farm an animal dies from no contagious disease or is accidentally killed, and the meat in winter may be utilized for the poultry. Many feed this raw, hanging it up in small chunks in the poultry house where the birds may pick at it at will. It was argued that this was a dangerous practice and where there is any disease in the meat it is, but Prof. Graham states that there would not be much fear of feeding raw meat in fairly liberal quantities provided it comes from healthy animals, and it would do very little harm unless fed in fairly large quantities to birds being held for breeding purposes. Somehow or other meat food in unlimited quantities works against fertility and hatchability in eggs.

Prof. Graham also stated that the most convenient form of feeding raw meat at this season is to freeze it and then put it through a bone cutter and feed it in this state. However, he believes that maximum results could be obtained from boiling roots, boiling the meat and mixing all in with a meal or chop in the form of a mash. With regard to feeding meat it may be said that the harm done to breeding fowls may be counteracted by feeding a liberal supply of vegetable food, such as cabbages, mangels, or green food of some kind.

## FARM BULLETIN.

### The War.

By Peter McArthur.

During the past few weeks a number of correspondents have asked me to write about different phases of the war, and above all to "Tell the truth about it." To that challenge I do not hesitate to respond. To me the outstanding truth is that Canada is most horribly at war and many Canadians do not realize it. No matter what our opinions may be about the causes of the war, its justice, or our duty as loyal citizens of the Empire, all that we are, all that we have and all that we hope for are now at stake. With Germany triumphant we might expect terrible reprisals for the part we have already taken. To look for protection to the United States and its Monroe Doctrine is neither brave nor dignified. If the British Empire should be destroyed in this war the existence of Canada as a free nation would be impossible. With militarism triumphant in the world our fertile and undefended fields would be too rich a prize to be overlooked. We must fight to crush militarism or be crushed ourselves. The position of Canada at the present time seems to me to be like that of a son who is in business for himself, but still living under the home roof. He may be paying his own way and showing proper respect to his father, but if the house is set on fire by an enemy of his father he cannot stand aside and say it is his father's business to put out the fire. Both filial duty and self-interest will urge him to do all in his power to put it out. If the home is burned down he will be homeless as well as his father. He must act even though he may be convinced that his father should not have had that enemy. Though he had no part in the enemy that caused the fire he is involved in the disaster, and must play his part like a man. No matter what motive inspires a man's temporal actions, whether loyalty to Canada, loyalty to the Empire or the narrowest personal selfishness he must support this war and do all in his power to bring it to a successful issue. We have chosen our course, and there can be no turning back either in safety or honor.

Ever since becoming a writer for the public press I have written against war, trying to do a little towards educating my fellow men out of the delusion that war is either desirable or necessary. The fact that I have written the above paragraph does not mean that I have changed my attitude. Although a man may devote much of his energy to educating people to prevent fires, it does not mean that he will not fight a fire when it breaks out, or that he will be without the necessary appliances to put it out. War is still horrible to me, and I have faith that all the world will soon realize that it is so horrible

they will make an end of it forever. At present it is futile to discuss such questions as whether preparedness for war causes it or prevents it. That all belongs to another era. Instead of reasoning against war we must fight against it, since there is no other way of ending it. I have faith that it is no part of Canada's destiny to be destroyed in this conflict, and that the peaceful conquest of the wilderness by our fathers is not to give place to an armed conquest, but to-day the fate of Canada is in the balance. I cannot find it in my heart to urge any man to enlist, since I do not myself fall within the limits prescribed for those who may shoulder arms, but I cannot refrain from stating the gravity of the present crisis. The battle for our freedom which is being fought in France and Belgium is still far from being won, and it is not for us to stand by idly while the result is in question. The native-born Canadian has everything at stake in this war as well as every other citizen of the Empire. Even though he may not have the opportunity of serving his country in battle he should still feel the urgency of the call, and do his part with whatever means he has at hand. If food should prove more necessary than soldiers we must provide the food and provide it freely. We must do all in our power whenever the opportunity offers. That is the truth about the war as I see it.

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At last I have found the ideal subject for debate in the country. At the literary societies they are debating the relative merits of war and peace, of country and city life and similar subjects, and I may remark in passing that I have long since stopped trying to give assistance to debaters who write asking for it, whether they enclose a stamped envelope or not. The chief value of a debate lies in the individual work done by the debater, and even if I were able to furnish winning arguments, which is by no means probable, I would be doing more harm than good. Besides I am kept fairly busy digging out ideas for my own use. Of course, I appreciate the compliment of being thought able to help, but even that appeal to my vanity no longer moves me. But to get back to my subject. I have found a subject which I should like to see debated to a definite conclusion by the readers of "The Farmer's Advocate." To-day we killed a beef, and the question has risen whether the value of the meat should be set down in the family accounts at the cost of production or at its present market value. I contend that as this yearling cost me only its pasture and a moderate amount of feed I am out only the cost of production. But I am told that I might have made a good profit by selling the beast, and that I should add that possible profit to the cost. Who is right? In the meantime I am going on drying part of the meat, making corned beef and force meat of more of it, and keeping the roasts in cold storage for immediate use. Judging from the present state of the argument I am inclined to think that the beef will all be eaten before the question is settled unless someone comes forward with an authoritative pronouncement on the matter.

### The Annual Meeting of the Experimental Union

The Annual Meeting of the Ontario Agricultural and Experimental Union will be held at the Ontario Agricultural College, Guelph, on the 12th and 13th of January. One of the most important features of the Experimental Union is always its co-operative work amongst farmers. These experiments have become very general throughout the Province, and it is through the medium of this organization that some of the best varieties of farm crops have been introduced, and are now grown extensively, as for instance, the O. A. C. No. 21 Barley, the O. A. C. No. 72 Oats, etc. The co-operative work of the past year has been carried out along six different lines, and the results should be of much interest and value.

Particular attention will be given this year to the increased production of food stuffs. There was never a time in the history of the British Empire when such close attention was needed to increase production of the real necessities of life. The following are some of the subjects which are to be discussed at the Annual Meeting: "Ontario's Opportunity in Food Production Under Present Conditions"; "Bean Growing in Ontario"; "Canada's Chance in Heavy Horse Breeding"; "Some Important Ways in Which Farm Life in Ontario Might be Improved"; "Agricultural Information Gleaned on a Recent Trip to New Zealand, Australia, China and Japan"; etc.

All sessions of the Experimental Union to be held on Tuesday and Wednesday, January 12th and 13th, are open to any person interested in agriculture, and every one is welcome and invited to take part in the Meeting. Cheap rates have been arranged for on the certificate plan. For fuller particulars and a copy of the program apply to the Secretary, C. A. Zavitz, Agricultural College, Guelph, Ontario.