

the spring wheat of the United States. It is found in practically all the states of the Union. Marquis, however, is not resistant to rust nor is as early as we would like to have it. It is a fine quality wheat, and enables Canada to maintain her reputation, but still we are always looking for something better and we believe we have something now that may possibly be better than Marquis, in at least some districts.

*By Mr. Warner:*

Q. Did you say 70 per cent of the United States crop?—A. Seventy per cent of the spring wheat raised in the United States, not of all the wheat they grow. The greater percentage of the wheat in the United States is autumn sown, but still they grow a large acreage of spring wheat, and, of that, 70 per cent is Marquis. It is rather interesting to note in this connection that Prelude, a wheat we do not speak of very much now, a wheat originated at Ottawa, is grown down in the southern states to patch up areas of fall wheat of such varieties as Kanred which is sometimes killed out in patches. They find that our Prelude wheat can be sown in the spring on these patches and will mature with Kanred. They find it yields fairly well. I was quite pleased to hear Prelude spoken of so well in Nebraska last year.

In our search for still better varieties, we are prosecuting our crossing and selection work with the greatest vigour. We hope to have a greenhouse this year in order to test out our new productions and to continue our crossing work during the winter. We also are working on many crosses which Dr. Charles Saunders left behind him and which are exceedingly promising.

I would like to speak particularly of two of these. You have heard of them before, so they are no particular secret now. One we call Garnet, and the other Reward. Garnet is a crossing made between Preston, one of the wheats I mentioned before, and Riga, a wheat from Russia. Preston is an early, good yielding wheat, possessing fairly good straw, but its outstanding feature seems to be its relative ability to withstand drought. Unfortunately, it does not produce the best type of flour for export trade, and it shatters rather badly. If the drought resistance of Preston could be combined with the good qualities of a wheat like Riga, we might get something valuable and in Garnet we seem to have obtained that combination to a very considerable degree.

*By Mr. McMaster:*

Q. What does "shattered" mean?—A. It means that when the wheat becomes ripe, it shells easily in the handling. It shatters off the head. Marquis is very outstanding in its ability to withstand shattering, while Ruby is a wheat that shatters quite easily.

*By an Hon. Member:*

Q. Will you explain what happens to a wheat like Ruby when a windy day comes along when the wheat is ripe?—A. Yes. When such a variety is ripe, it will very easily shell out in a wind and you may lose quite a percentage of the wheat on the ground. The ability to resist shattering is an important character in wheat, as all practical growers know. That is one thing we are watching for and one reason we are interested in Garnet, because we believe that it will take the place of Ruby. Ruby is about ten days earlier than Marquis; Garnet is eleven days earlier than Marquis, or one day earlier than Ruby. Ruby has attained considerable popularity because of its earliness, although it is not a very good yielder and shatters. Garnet is one day earlier, and does not shatter, and on the average of seven years at three of our leading experimental stations, it has equalled Marquis in yield.