

FRUIT GROWERS' ASSOCIATION OF ONTARIO.

FIRST DAY.—EVENING SESSION.

ORILLIA, Tuesday, December 4th, 1894.

President RACE : Ladies and gentlemen and members of the Ontario Fruit Growers' Association.—We have met together again after twelve months to compare our experience along the lines which we have been pursuing for years in this province. I feel like congratulating ourselves upon the very favorable auspices under which we have met here this year. We are in a beautiful town, and we find that there is greater enthusiasm manifested here than in most places where we have met in past years. We are also favored to-night with the presence of quite a number of ladies in the audience, which is gratifying to us. We hope that to-night is an index of better things. We desire to cultivate those features in our meetings which will reach the ladies and interest them in the beautiful in nature. I fear sometimes that we have neglected that side too much. We have some papers from ladies during our sessions and I believe that these will tend to revive the interest in that line. We have a very full programme, and more than we will get through with in four days, so we will try to get on as hastily as possible with these papers. I shall now introduce Prof. Pantton.

FUNGI.

Prof. J. H. PANTON, of the Ontario Agricultural College, Guelph, delivered the following address, in the course of which he made frequent reference to a chart of illustrations: The subject which was allotted to me for this evening is a discussion of the fungi, one of the most interesting and one of the most instructive groups in plant life at the present time. A few years ago very few knew anything about fungi, in fact it was almost an unknown word, and many even now may not understand what the word means. However, I hope that by the time I get through you will all have a true conception of the meaning of the word fungi.

This is a division in the plant kingdom the study of which requires the aid of a microscope. I have brought a microscope with me to-night. It does not seem a very large instrument, but is an excellent one for the size. I just mention this as some may think of purchasing one. It is made by Leitz, and magnifies up to six hundred diameters. An instrument like this would cost quite a sum a few years ago, but can now be purchased for about \$20. It is by means of a little instrument like this that I have been able to look into a great many of these obscure forms of plant life and bring out in detail on this chart how they appear under the microscope. You will notice that I have a chart before you, arranged so as to make my subject as clear as possible.

Rank. Where do the fungi stand in the plant kingdom? Now we find that when we look abroad in nature there are two large divisions of plants, viz.: the flowering and flowerless. Who ever saw a fern flower? You have never seen a mushroom blossom, you never saw a seaweed bloom. Fungi, too, never flower, and consequently they are what we call flowerless plants. Flowerless plants grow from what we call spores; flowering plants grow from seeds. All flowering plants started from seed; all flowerless plants started from spores. Among these flowerless plants I might mention seaweeds, ferns and mosses, but we shall not consider them. But there is another group called fungi, and this shall engage our attention this evening.

Fungi start from spores. Now what is the difference between a seed and a spore? A spore is invisible. Why, this room is full of them! The air is swarming with them—they are all around us. If I were to leave a piece of bread exposed in this room for twenty-four hours, there would be mould upon it.

Seeds are visible. I do not think you can name any seed which we cannot see. They are all sizes. But spores are invisible, and we require a microscope in studying them. You may have the liberty during the session of looking through the microscope and seeing the spores on the gooseberry, etc. Then there is another difference. The spore has a very thin covering, but the seed always has a distinct covering. There is still another difference. In the spore there is no embryo, while in the seed there is.

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