presence of a readily soluble nitrogen supply. In the first series (resting tubers), this has been supplied in the form of nitrates. In the second series (non-resting tubers) this has been supplied by the tuber itself. This presumably may take place by the hydrolysis of the proteins by enzymes in the tuber. The presence of a proteolytic enzyme in expressed juice of potato tubers has been demonstrated by the writer, using centrifuged milk as a substrate. A survey of the literature available shows no record of the existence of proteolytic enzymes in the potato, although the assumption is general that they are present.

The effect of available nitrates upon potatoes planted while still in their rest period furnishes an explanation of the results obtained by Gericke,[1] who found that potato plants grown from resting tubers had a longer growing period than plants from non-resting tubers. The slow growth due to the possible inability of the young plants to obtain a sufficient supply of nitrogen during their early stages of growth would tend to lengthen their growing period.

Appleman's[2] conclusion is opposed to the above view. He found no significant evidence of the hydrolysis of the proteins during the rest period of potatoes. The experiments under way by the author to determine the relative proteolytic activity of potato tissue at various stages of the rest period and its effect upon the condition of the nitrogen compounds of the tuber, and the effect of the various treatments known to break the rest period, may furnish the required evidence. It is of interest to note that as early as 1890 Johannsen[3] found that ether treatment shortened the length of the rest period in bulbs and that the treatment seemed to increase the amount of amid nitrogen, although no other important chemical change appeared to occur. The experimental data on the above will be published at a later date.

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## THE CANADIAN BRANCH OF THE AMERICAN PHYTOPATHOLOGICAL SOCIETY

THE fourth annual meeting of the Canadian Branch of the American Phytopathological Society was held in the biological laboratories and classrooms at MacDonald College, St. Anne de Bellevue, P. Q., December 7 and 8, 1922, in conjunction with the Quebec Society for the Protection of Plants. The address of welcome was given by Principal F. C. Harrison, and addresses were delivered by Professor William Lockhead, president of the Quebec Society for the Protection of Plants, and by G. E. McIntosh, Dominion Fruit Commissioner.

The following papers were read and discussed:

*La campagne contre les sauterelles dans Quebec in 1922:* G. MAHEUX.

*Plant diseases of western Quebec in 1922:* B. T. DICKSON.

*The natural control of the green apple bug by a new species of Empusa:* A. G. DUSTAN.

*Control of the onion maggot in 1922:* W. J. TAWSE.

*The Dominion entomological service:* A. GIBSON.

*Disinfection et parcelles:* O. CARON.

*The pollination of certain vegetable plants by insects:* R. C. TREHERNE.

*Wood v. fungi* (demonstration slides): R. J. BLAIR and J. D. HALE.

*The past and future of plant pathology:* MELVILLE T. COOK.

*Report of the plant disease survey:* F. L. DRAYTON.

*Cultural characteristics of certain root-rot fusaria:* T. G. MAJOR.

*The present status of the white pine blister rust in Canada:* A. W. MCCALLUM.

*Red branch of conifers:* J. H. FAULL.

*Two plant diseases new to Ontario:* J. E. HOWITT.

*Control of oat smut:* B. T. DICKSON, R. SUMMERBY and J. G. COULSON.

*Five years' experiments in the control of oat smut:* J. E. HOWITT and R. E. STONE.

*Control of raspberry mosaic:* J. F. HOCKEY.

*Balsam rusts:* H. P. BELL and J. H. FAULL.

*Peony diseases:* J. G. COULSON.

*Root-rot and wilt of canning peas:* R. E. STONE.

*Distribution of ribes and cronartium ribicola in Ontario:* G. H. DUFF.

*Soft rot of iris:* J. K. RICHARDSON.

*Blue-stem of the black raspberry:* J. F. HOCKEY.

*Plant pathology in public schools:* W. A. MCCUBBIN.

*Smut control experiments with copper carbonate dust and other substances:* P. M. SIMMONDS and W. P. FRASER.

*Treatment of wounds in tree surgery:* R. E. COSSETTE.

*The bronze birch borer:* C. B. HUTCHINGS.

*Preservative treatment of farm timbers:* J. H. CODERRE.

*A contribution to our knowledge of the tree-destroying fungi of the Vancouver forestry district:* N. L. CUTLER.

Abstracts of the papers dealing with plant diseases have appeared in a recent issue of *Phytopathology*. The address by Dr. M. T. Cook has appeared in full in the *Journal* of the Quebec Society for the Protection of Plants.

R. E. STONE,
*Secretary-Treasurer*

[1] Gericke, W. F., "Effects of rest and no rest upon growth in solanum," *Bot. Gaz.*, Vol. LXV, No. 4, April, 1918.

[2] Appleman, C. O., "Study of the rest period in potato tubers," Bulletin No. 183, Md. Exp. Sta., May, 1914.

[3] Johannsen, W., "Das Atherverfahren beim Fruhtreiben," 2 Auflage Jena, 1906.