24 hr. gave optimum germination. The 4,000 p.p.m. concentration was no more effective than the 2,000 p.p.m. concentration. At the optimum concentration the majority of treated seeds had germinated in 15 days. The gibberellin treatment accelerated germination in seeds which had little dormancy and in seeds approaching the end of their dormancy period. Seeds of *S. demissum* Lindl., U.S.D.A., *P.I.* 160227 and of a *S. chacoense* Bitt. × *S. phureja* Juz. et Buk. derivative exhibited no dormancy. Similarly, Odland[7] reported immediate germination in a number of seed lots of *S. tuberosum*.

Plants were grown to maturity from the gibberellin-treated seeds, and in all cases growth was normal. The above method has been used in our work with *Solanum* species and allows us to grow many more plant generations in a given period of time.

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## Pollen Germination in Some Gramineae

I. K. Vasil, in his communication under this title in *Nature* of September 24, p. 1135, states that "this is the first report of a successful germination of the pollen of Gramineae *in vitro*". May I point out that the germination of pollen of different varieties of *Saccharum officinarum* was carried out as a routine practice by the Sugarcane Research Station in Mauritius as far back as 1930. The methods used are described by Glendon Hill[1] and de Sornay[2]. Germination tests were discontinued later, as it was found that there was poor correlation between germination of pollen *in vitro* and number of sugar cane seedlings afterwards produced[3].

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## A Selective Medium for the Formation of Ascospores by *Aspergillus nidulans*

Little is known about the ascospore composition of the Ascomycetes, partly because of the difficulty of obtaining a massive production of such cells. During an investigation of the nutritional requirements of a strain of *Aspergillus nidulans* obtained from the Botany School Collection, Cambridge, observations were made that led to the recent development in this laboratory of a method for obtaining satisfactory yields of ascospores without interference from the conidiospores. This fact has enabled fractionation studies on *A. nidulans* ascospores to be undertaken, as well as other biochemical investigations which are now in progress.

Microscopically and culturally the strain used in these studies is similar to that described by Thom and Raper[1]. This organism, when cultured in Czapek's agar, produced colonies characterized by a dense vegetative mycelium spreading quickly on the agar, with abundant green conidial heads freely distributed on the surface of the colony, and relatively few perithecia scattered through the different areas of the colony; ascospore production lasted several weeks.

When the mould was cultured on a medium with the following composition: Urea or ammonium oxalate, 3 gm.; dipotassium hydrogen phosphate, 1 gm.; crystalline magnesium sulphate, 0·5 gm.; potassium chloride, 0·5 gm.; ferric sulphate, 0·05 gm.; sucrose, 30 gm.; agar-agar, 15 gm., and distilled water, 1,000 ml., colonies were formed with very different general morphology from those obtained on Czapek's medium. Under these conditions perithecia developed separately within or on the conidial layer with a dark reddish purple coloured envelope of scattered hyphæ bearing a considerable number of Hulle cells. On ripening, these became a mass of eight-spored asci which broke down quickly, releasing the ascospores. When a preparation of this material was examined under the microscope an enormous number of purple-red lenticular ascospores, with two equatorial crests, were observed, with very few contaminating conidiospores.

Another characteristic was particularly marked when plates were viewed in reverse, namely, an intense purple pigmentation extended through all the medium marking the under-surface of perithecia and ascospores. This pigmentation was absent after growth on plain Czapek's agar.

We are indebted to Mr. J. Bean of the Botany School, University of Cambridge, for sending us a culture of this mould.

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## Degeneration of Flight-musculature in the Corixidae and Notonectidae

Within the New Zealand species of the families Corixidae and Notonectidae (Hemiptera-Heteroptera), two distinct forms, depending on the development of the wings and the wing-musculature, have been recognized. In these species a proportion of the population is composed of flightless animals in which, apart from *Diaprepocoris zealandiae*, the indirect flight-musculature is reduced even though the two sets of wings are not significantly altered from the normal condition. In *D. zealandiae* the meta-wings are greatly reduced and the meso-wings differ in having a reduced membranous portion.

The differences in the musculature are obvious immediately the mesothoracic tergite is removed, for in place of the solid blocks of yellow fibre the flightless form contains either a pale white, loosely compacted