produced is very much smaller. Details of one experiment are given in Table 1.

It would thus appear that, while susceptible and field-resistant potato varieties may differ in several characters, two of the most important differences, both of which may be due to a relatively slow growth of the fungus in the leaflets of field-resistant varieties, are the length of the incubation period of the fungus and the number of spores produced.

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Aphelenchoides sp. destroying Mushroom Mycelium

DAMAGE to mushroom mycelium, by eelworms, leading to diminished crops or crop failures has been known for about fifty years[1]. The eelworms responsible for the damage have been reported as *Ditylenchus* sp. by Lambert, Steiner and Drechsler[2] and by Bovien[3], as *Ditylenchus destructor* by Seinhorst and Bels[4] and as a new species of *Ditylenchus* by Cairns[5]. Cairns[6] has also stated that species of *Aphelenchoides* feed upon, injure and destroy mushroom hyphæ.

Populations of *Aphelenchoides* sp. have frequently been encountered in samples of compost from poorly cropping mushroom beds.

Early this year at Wye, bottles of sterile compost already spawned with mushroom mycelium were inoculated with a mixed population of *Aphelenchoides* sp. and *Panagrolaimus* sp. At the end of four or five weeks the mycelium in the inoculated bottles had largely disappeared, and the population of eelworms had greatly increased. Some of the material was sent to Rothamsted. There one set of pots each containing 300 gm. of compost was inoculated, at the same time as spawning, with fifteen hand-picked specimens of *Aphelenchoides* and another set with fifteen similar specimens of *Panagrolaimus*. A further set of pots constituted a control. Cropping began four weeks later, and continued up to the eleventh week in the control pots and those inoculated with *Panagrolaimus*. In the pots inoculated with *Aphelenchoides* cropping ceased at the end of the sixth week. Examination of the compost showed the reason for these differences. Mycelium was present and undamaged in the control and *Panagrolaimus* series; but in the *Aphelenchoides* series it had largely disappeared. From an original inoculum of fifteen specimens of *Aphelenchoides* there were approximately 3,000,000 present at the end of six weeks. On the other hand, there were only 72,000 *Panagrolaimus*.

The identity of the *Aphelenchoides* is still under investigation. It is not true *Aph. parietinus*, as recently redescribed by Franklin[7]; both sexes are

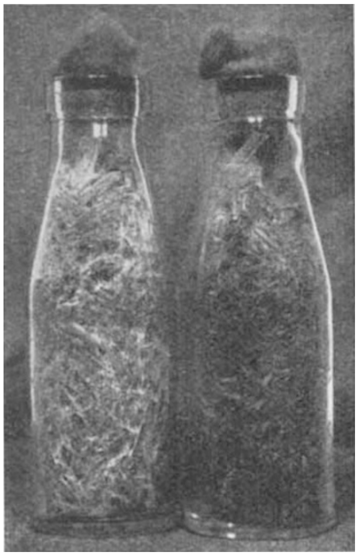

Fig. 1. Mushroom mycelium on compost after eight weeks: left, control; right, inoculated with *Aphelenchoides* sp.

present and there are distinct morphological differences which clearly separate it from this species, although it is similar in many respects.

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Control of Seasonal Variation in the Egg Production of Hens

THE discovery that artificial light will improve winter egg production by hens is said to have been made about a hundred years ago by Spanish farmers[1]. It was later established in a number of laboratories that it will prevent moulting in pullets brought into lay in the autumn. Little progress has been made in defining the light stimulus except for some experiments on the effect of breaking the night[2]. More than twenty years ago it was suggested on the basis of field records that the seasonal change in day-length as opposed to the absolute day-length was mainly responsible for the seasonal fluctuations of egg yield[3]. This suggestion has never been followed up.

I have tried to examine the effect of the change in day-length in late summer and early autumn on the production of pullets already in lay. Two groups, each of twenty-one Brown Leghorns from an inbred line, were reared from the age of eight weeks, the first in a 23½-hr. and the second in a 12-hr. day-length in artificial light. The birds were kept in