After having dispensed the antibiotic in or on the plates, the latter are incubated at 43° C. for 3–4 hr. This incubation time is enough to produce firm bacterial growth, which is easily visible. Inhibition zones are clear, and zone edges are defined. A further advantage is that this microbiological method does not require a special assay procedure or a standard curve.

Of the compounds examined in various concentrations, DL-aspartic acid (0·0014–0·0002 per cent), folic acid (0·0020–0·00002 per cent), indoleacetic acid (0·0014–0·00002 per cent) and lactose (0·02 per cent) promoted spore germination and stimulated growth without disturbing the effect of the antibiotics on bacteria. The growth-stimulating effect of DL-aspartic acid in absence of caramelized glucose seems to be inconsistent with Hachisuka's report[1]. It is possible in this case that the caramelized sucrose components of agar–agar serve as substitute for glucose.

The possibility of employing growth factors to reduce the incubation time opens the way for similar short microbiological assay methods for antibiotics.

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Dissemination of *Verticillium albo-atrum* through the Atmosphere

IT is usually considered that spread of disease due to *Verticillium albo-atrum* is either by growth of the pathogen from diseased to healthy susceptible plants by root contact or by the dissemination of infected plant material such as leaves, root stocks, etc. However, the possibility, in some cases, of the disease being spread by airblown spores became apparent when Isaac[1] trapped colonies of *V. albo-atrum* on Petri-dish plates of Dox's agar exposed approximately 2 ft. above a stand of lucerne infected with this pathogen, and also when Davies (unpublished results) isolated *V. albo-atrum* from house dust from Edinburgh and from the atmosphere in a garden in urban London. It should be pointed out that in diseased lucerne plants, even when they are still alive and green, the fungus grows from the vascular tract in the lower basal regions of the stems out into the cortical tissue and from there superficial hyphæ bearing conidia develop; and it has been shown by Isaac that these conidia will cause infection when placed upon recently cut surfaces of mown, healthy lucerne.

Since this disease is becoming of considerable economic importance, an investigation has been initiated to make quantitative estimates of the number of spores of *V. albo-atrum* in the air, within and above, both diseased and healthy lucerne crops and above meadow land at various sites, namely, Norfolk, Cambridge, Berkshire and Swansea. Efforts were also made to isolate the pathogen from the air near lorries unloading lucerne from an infected crop. The apparatus used to obtain these volumetric determinations was the slit sampler, described by Davies[2], the suction being provided by a hand-operated pump unit similar to that of Gregory[3] except that the pump was driven through gears. For each sample either 50 or 25 l. of air were impacted on to each of a series of plates of Dox's agar in 9-cm. Petri dishes, the intake orifice of the apparatus being 25–26 cm. above ground-level. The results are summarized in Table 1.

Table 1. NUMBER OF COLONIES OF *Verticillium albo-atrum* ISOLATED FROM THE AIR AT EACH SITE

Area	Sampling site	No. of colonies of *V. albo-atrum*	Total vol. (litres) of air sampled
Berkshire	In diseased lucerne crop	6	150
	In healthy lucerne crop	0	150
Cambridge	In mildly infected lucerne crop	1	150
	In healthy lucerne crop	0	150
	Near diseased lucerne straw being turned over	4	150
Norfolk	In diseased lucerne crop	12	150
	In open field 150 yd. down wind from disease crop being mown	12	200
	In "Green shed" of lucerne drying factory	3	50
	In "Green shed" as lorry tipped load of infected lucerne	30–40*	50
Swansea	In diseased lucerne crop	6	180
	In meadow	0	180

* Plate overcrowded with bacteria and yeasts

V. albo-atrum was never isolated alone but developed on plates in competition with the more ubiquitous constituents of the airborne fungal flora such as *Cladosporium*, *Pullularia*, *Penicillium*, *Phoma*, *Mycelia sterilia*, *Sporobolomyces*, yeasts, etc.

The results in Table 1 indicate that the number of spores of *V. albo-atrum* in and above infected stands of lucerne is sufficiently high to suggest that the spread of the disease in this crop may occur by means of wind-blown spores. Further investigations are proceeding along these lines.

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The Giant Rat of East Africa

SIX specimens of the giant rat, *Cricetomys gambianus* Waterhouse, one male and five females, were trapped at Amani, a forested area at about 3,000 ft. in the Usambara Mountains of Tanganyika. The rats were trapped in cage-type traps which had been baited with maize. They were killed with chloroform, after which their parasites were removed; then the rodents were weighed and measured.

	Measurements	
	Male	Female
Body-weight	1,250 gm.	1,000–1,400 gm.
Head/body	350 mm.	335–380 mm.
Tail	400 ,,	340–400 ,,
Ear	40 ,,	40–45 ,,
Hind foot	75 ,,	70–75 ,,

Mammary formula: $2 - 2 = 8$

The only ecto-parasite found on the six specimens of the giant rat was the dermapterous parasite