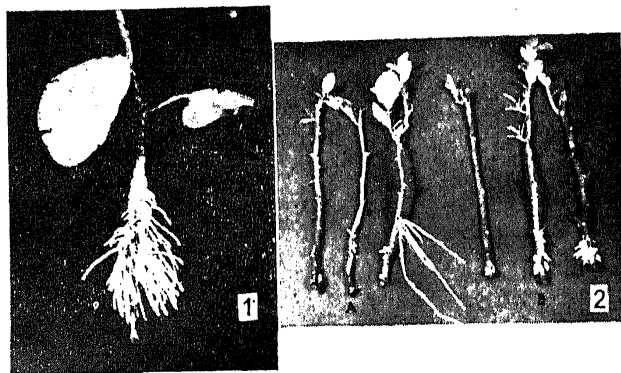


were dipped in 200 and 400 p.p.m. concentrations of alpha-naphthalene acetic acid for 24 hours, washed with water and planted in pots containing coarse sand.

Air-layers (5) examined two weeks after treatment demonstrated profuse root development with an average of 86 roots per gootee (Fig. 1). The longest root measured 4.8 cm. Control had no roots.



FIGS. 1-2

Fig. 1. Two weeks old Air-layer of *Ziziphus, mauritiana*, Lam. treated with 10,000 p.p.m. each mixture of indole butyric acid and alpha-naphthalene acetic acid.

Fig. 2. Three weeks old cuttings of *Ber.*

A—Alpha-naphthalene acetic acid, 400 p.p.m.

B—Ringed cuttings treated with NAA, 200 p.p.m.

Cuttings (5 from each treatment) observed three weeks after planting showed excellent root initiation. Unringed cuttings, treated with 400 p.p.m. NAA alone, recorded 100% rooting with an average of 16 roots per cutting. Length of the longest root in this treatment was 12.1 cm. (Fig. 2 A).

Vigorous root formation was also achieved in all the treatments with ringed cuttings, except control. NAA, 200 p.p.m. produced 22 roots per cutting on the average (Fig. 2 B).

Govt. Agricultural College, O. S. JAUMARI.
Kanpur, August 19, 1959.

OCCURRENCE OF *HETEROSPORIUM* BLIGHT OF ONIONS IN INDIA

DURING June 1957 a severe blight of leaf and seed stems of onions (*Allium cepa* L.) caused by *Heterosporium Allii-Cepae* Ranojevic was observed in an experimental plot at the Provincial Agricultural Research Farm, Shalimar, Srinagar. The disease was very conspicuous on some Panjab types obtained for experimental purpose, though it was also evident on other varieties grown for seed production. *Heterosporium* on onions has not hitherto been recorded from India but has been reported from Norway, Serbia, France and Britain.¹

The fungus was found attacking the leaves and the seed stems of the autumn sown onions grown for seed production. The spots appear first as small white elliptical depressed areas on the leaves and seed stalks. Later on they enlarge to form distinct greyish-white elliptical areas up to 3.5 cm. long and 2 cm. broad. The fructifications of the fungus appear as minute black dots in the centre of the lesions which later on turn into a dark-green mat. In badly affected plants spots coalesce and diseased parts wither.

The causal fungus has yellow-brown septate mycelium which ramifies through the host tissue. The conidiophores (Fig. 1, Cp) grew out

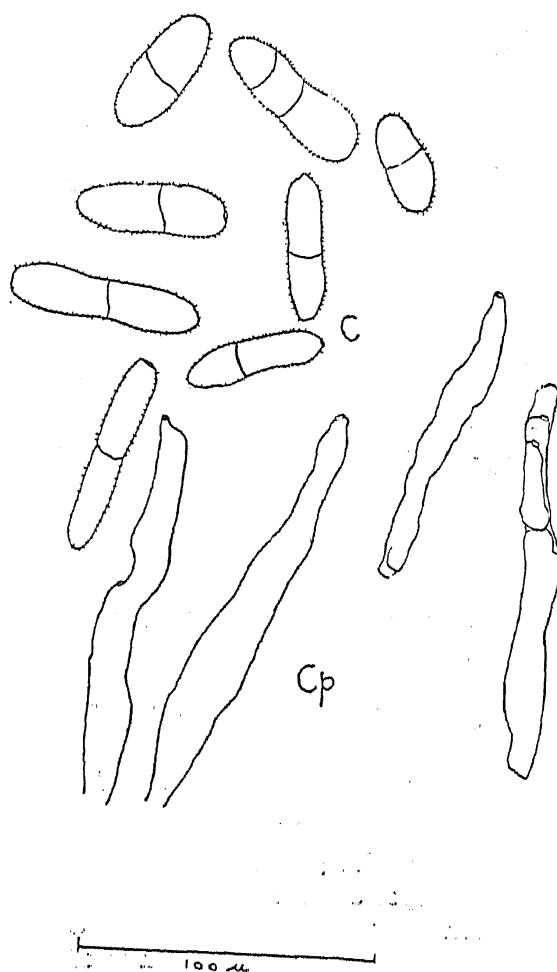


FIG. 1. Conidiophores (Cp) and conidia (C) of *Heterosporium Allii-Cepae* Ranojevic.

in clusters. They are yellow-brown, simple, septate, knotty and concolorous with the conidia, and are highly variable in size being 40-180 μ long and 8-16 μ broad. The conidia (Fig. 1, C) are yellow-brown with verrucose walls, 1-2 septate, straight, cylindrical or more usually constricted at the septa; rarely either one-celled, pear-shaped or three-septate. They are borne successively singly at the new growing tips of the conidiophores and are 30-80 μ long and