PAINTING EXPOSED ROOTS *IN SITU* FOR PHOTOGRAPHING.

A method of painting plant roots for photographing described by Hass and Rogler (1953) has been modified to suit soil conditions at the Ayr Regional Experiment Station of the Department of Agriculture and Stock.

A pit approximately 5 ft. x 4 ft. is excavated to the desired depth and the side to be photographed is scraped vertically with a spade to provide a smooth face. The area is then sprayed with water, using moderate pressure, to remove about $1\frac{1}{2}$ in. of soil and expose the roots. In the light alluvial soils, root damage by hosing is negligible.

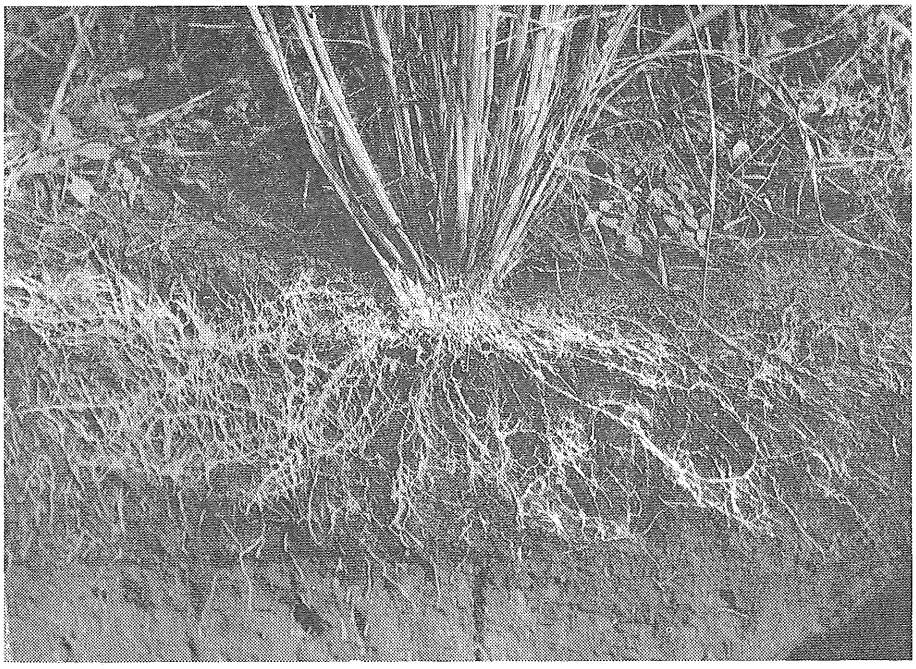

Fig. 1.

Root System of Guinea Grass Photographed After Spray-Painting.

A good white paint was tested in dilution with boiled linseed oil, acetone or white spirit. White spirit was most satisfactory. The linseed oil was too heavy and slow-drying, and the acetone dried rapidly, causing clogging of the spray and uneven distribution of the paint. The paint was applied with a continuous atomiser.

It was found that if the soil surface was allowed to dry before spraying, the paint was difficult to remove. Better results were obtained by spray-painting while the soil surface was moist and then removing the paint-covered soil. Where paint was removed from roots, the area concerned was re-sprayed.

It is desirable to photograph the roots while the soil surface is damp. Should drying occur, a light damping is recommended to provide greater contrast with the whitened roots.

REFERENCE.

HASS, H. J., and ROGLER, G. A. 1953. A technique for photographing grass roots *in situ*. Agron.J. 45:173.

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