NOTE ON THE OCCURRENCE OF DOUBLE EMBRYOS IN WHEAT GRAINS.

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With Plate XV.

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In the course of investigations dealing with rust in wheat, very many germinations of wheat grains of different varieties are being carried out.

In June 1923, amongst young seedlings of the variety of *Triticum vulgare* known as "Yandilla King," one was noticed in which two plumules very close together were emerging from the soil. The young plant was removed from the pot and examined. Both shoots arose from a single wheat grain. There were present six seminal roots. The plant was photographed and then replanted.

Shortly afterwards, Mr. H. J. Hynes, Walter and Eliza Hall Agriculture Research Fellow of this University, found a second case of this nature. In germinations of the variety of *Triticum vulgare* known as "Federation," one grain was present from which two shoots and six seminal roots arose (Plate XV). It was photographed and then replanted.

No attempt was made in either case to cut sections in order to determine the relation of the parts in these seedlings. It was thought to be more important to try and grow the plants to maturity. Both plants are growing in an apparently normal manner, and it is hoped that they will
mature grain and thus make possible a genetical study of this double embryo character.

The seed of both the varieties was pure line seed supplied by Mr. J. T. Pridham of the N.S.W. Department of Agriculture. It was grown and harvested at Cowra in 1921.

The occurrence of two embryos in a wheat grain is apparently rare. It was not expected that so soon after finding the first, the second would appear. It is an occurrence which will doubtless supply a full explanation of certain cases in which it has been stated that from a single grain of wheat, two distinct kinds of ears have developed. For this reason it has been deemed worthy of record before the genetical behaviour of the two individuals can be reported.

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