PHYTOHAEMAGGLUTININS IN THE WINGED BEAN : *Psophocarpus tetragonolobus* L.

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Though the presence of phytohaemagglutinin in the winged bean, *Psophocarpus tetragonolobus* was recorded by some workers (Renkonen, 1948; Schertz *et al*, 1960) the varying levels in the different cultivars have yet to be reported (NAS, 1975).

This study reports the phytohaemagglutinin levels in some different edible portions of the winged bean — namely the seeds, tubers and leaves. Phytohaemagglutinin activity was studied in the winged bean extracts, with washed human erythrocytes, by a modification of the serial dilution technique of Liener & Hill (1953). Phytohaemagglutinin activity in the raw mature seeds ranged from 3,200-25,600 haemagglutination units/g. sample, in the eleven cultivars tested. On the contrary, the dried leaves (at 60°c) and fresh tubers showed, comparatively low values of 800 HU/g. and 100 HU/g. respectively. These phytohaemagglutinins were found to be thermo-labile, and were inactivated considerably by the normal moist-heat cooking methods.

Biological significance of the phytohaemagglutinins is manifold, according to Toms and Western (1971). These include, toxicity, inactivation of tumour cells, a therapeutic effect on aplastic anaemia, protection of lymphocytes against nitrogen-mustard, and depression of the immune response in rodents

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References:

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