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STUDIES IN THE SUBSTITUTION ON WINGED BEAN FLOUR (*PSOPHOCARPUS TETRAGONOLOBUS*) IN BREAD MAKING

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The feasibility of fortifying wheat flour with winged bean flour in bread making was studied. Winged bean full fat flour (WBFF) was prepared by soaking mature seeds overnight in a mixture of 1 per cent sodium bicarbonate and 1 per cent citric acid solution, and boiling for 30 minutes before hand peeling. The dehulled seeds were roasted and ground to flour.

WBFF was substituted at 5, 10, 15 and 20 per cent levels into wheat flour and the rheological properties studied on the Farinograph, Extensograph and Amylograph. Incorporation of WBFF caused a decrease in the dough strength properties as indicated by measurements of development time, stability time, weak point and arrival time on the Farinograph. Water absorption increased from 56.7% for wheat flour to 68% in the 20% WBFF substituted composite flour. Dough stretching characteristics of elasticity and extensibility decreased with increased levels of substitution indicating a progressive weakening of the dough framework. The amylograms showed that the pasting temperature increased from 60°C for wheat flour to 64.5°C for 20 per cent level of substitution. While peak viscosity decreased, the peak temperature did not show marked change as the levels of substitution were increased.