

**FURTHER STUDIES ON THE NUTRITIVE VALUE OF EDIBLE  
PORTIONS OF 16 CULTIVARS OF WINGED BEAN  
(*Psophocarpus tetragonolobus* L)**

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Sixteen cultivars of the winged bean *Psophocarpus tetragonolobus*, grown in Sri Lanka, have been chemically analysed, with respect to the protein content of its edible portions. Moisture content of the edible parts as well as the oil content of the seeds were also determined.

The protein content of seeds, ranged from 29.8 to 42.5g/100g fresh weight, with a mean of 36.0g/100g. The protein content of fresh tubers, ranged from 2.27 to 8.05g/100g, with a mean of 5.56g/100g. Dried tuber flour of 12 cultivars, when analysed for protein content, showed values ranging from 4.27 to 26.3g/100g, with a mean of 11.52g/100g. The range of protein values exhibited by fresh leaves falls between 4.55 and 11.81g/100g, with a mean of 7.35g/100g. The protein contents of fresh pods and flowers range from 1.31-2.73% (mean 2.02%) and 1.25-2.65% (mean 2.13%) respectively.

The oil content in the seeds, range from 11.0-23.0 g/100g, with a mean of 17.81g/100g. The fatty acid profile of the oils show that, oleic (18:1 and linoleic (18:2) formed the major fatty acid components with mean values of 40.21 % and 31.57% respectively.

As it is known that the levels of cholesterol in the blood are lowered when the fats consumed are those containing a high proportion of poly-unsaturated fatty acids, especially linoleic acid (Vergroesen, 1972), winged bean seed could be a good source for reducing the blood cholesterol level.

Aminoacid composition of the winged bean tuber flour had also been determined. It is rich in Lysine; the other essential aminoacid values are lower, with reference to the aminoacid pattern of whole hen's egg. Sulphur containing aminoacids seem to be the limiting ones.

From these findings, it is recommended that cultivars SLS<sub>7</sub>, Chimbu and 25-01 be considered for large scale propagation in Sri Lanka.