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FATTY ACIDS OF WINGED BEAN
(*Psophocarpus tetragonolobus* L)

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Seven varieties of winged bean grown on an experimental basis at Angunukolapellesa and Peradeniya were examined. The content of lipid in the beans (as a percentage of dry weight) varied from 16.2 (U–62) to 20.4 (U–53 and L–133).

The component acids of the oil were examined by Gas Liquid Chromatography before and after subjecting the methyl esters to hydrogenation, urea fractionation and silver ion thin layer chromatography.

The fatty acid composition of winged bean lipid differs from that of common oilseeds in that it contains appreciable quantities of the longer–chain acids 20 : 0 (1.5–2.3%, mean : 1.9%), 22 : 0 (13.2–18.2%, mean : 15.2%) and 24 : 0 (2.3–4.9%, mean : 3.5%). It is also atypical in the presence of the longer–chain monoenes 20 : 1 (2.3–3.0%, mean : 2.6%) and 22 : 1 (0.6–1.3%, mean : 1.0%). The major fatty acids of winged bean are 18 : 1 (32.5–38.0%, mean : 34.2%) and 18 : 2 (23.6–30.8%, mean : 28.1%).

Although Cerny *et.al* previously reported the presence of a 18 : 4 acid, which they considered to have antinutritional properties, we do not find evidence for occurrence of 18 : 4 acids in any of the seven varieties examined by us. However, the presence of linolenic acid (18 : 3 *n*–3, range : 1.0–2.0%, mean : 1.4%) is noteworthy as this acid is thought to be responsible for the beany flavour in soyabean oil.

Fatty acids are reported in shorthand—the first figure shows number of carbon atoms in the chain and the figure after the colon denotes the number of double bonds.