

Nutritional quality of vegetable and seed from different accessions of *Amaranthus* in South Africa[#]

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Abstract

Amaranthus vegetable and seed are highly nutritious, but in many parts of South Africa they are hardly utilised as food. Assessment of five accessions of *Amaranthus* available in South Africa was carried out to select the best accession for vegetable and seed. Seeds were planted in pots in a glass house and leaves and seed were harvested. Leaves were analysed for ascorbic acid, crude protein, nitrate and minerals. Seeds were analysed for protein, fat and minerals.

Ascorbic acid content in the leaves varied between 630 and 496 mg/100g. V2 contained significantly higher amount of nitrates (1 474 mg/100g) while VOP and AMA17 had the lowest (729 mg/100g). AMA 17 leaves had the highest concentrations for all the minerals that were determined in leaves. The seeds of AMA17 contained significantly higher amounts of manganese, calcium and zinc than the seeds from all other accessions and it is therefore most recommended, especially in view of the more favourable health aspects thereof. VOP seed would probably be more acceptable to the local population as food because of the cream colour compared to the black colour of the other accessions.

Keywords: *Amaranthus* accessions, nitrates, nutrient content, manganese, calcium, zinc