

Author: Carmen van Niekerk

Co Author: Hettie Schönfeldt, Hall, Nicolette (University of Pretoria)

Topic: Food and nutrition security

Title: Contribution of different potato cultivars to dietary diversity

Presentation Type: Oral

Introduction: Carbohydrates should comprise between 45%-65% of total dietary energy it provides a mixture of nutrients and other elements that may have a synergistic effect on human health. Potatoes are a diverse species and have a unique carbohydrate structure and contribute to the consumption of minimally processed starchy foods.

Methodology: Eleven different cultivars were planted and harvested under the same agronomical conditions. Three potatoes from each sub-specie was randomly selected, and analysed, with and without the skin, for nutrient content.

Results: A significant difference was seen in the nutritional content between the different sub-species. Differences were observed both in macro and micro nutrients with noticeable differences seen in phosphorus ($p \leq 0.001$) (35.6-65.6mg/100g), potassium ($p \leq 0.001$) (370-537mg/100g) and protein ($p \leq 0.001$) (0.883-1.75mg/100g) content.

Conclusion and Recommendations: There was a significant difference in the nutritional content of different sub-species of potatoes. Differences were seen in the nutritional value of tubers with and without the skin as well as significant nutrient leaching observed due to different cooking methods. The promotion of a dietary diverse diet in developing countries, such as South Africa where a low intake of fruit and vegetables is seen, is essential. This diverse staple crop can form part of a nutritionally sound diet that can contribute to food security and the alleviation of hunger as an affordable, nutrient dense staple. The data will form part of the FAO/INFOODS biodiversity database, which promotes production and consumption of different species of one type of food for better nutrition and environmental sustainability.