

FOOD SCIENCE AND TECHNOLOGY FOR IMPROVING NUTRITION, UNLOCKING POTENTIAL AND ACCELERATING CHANGE (PRESENTED BY THE SOUTH AFRICAN ASSOCIATION FOR FOOD SCIENCE AND TECHNOLOGY (SAAFOST))

'SMART Foods to Tackle Malnutrition in Africa' – Professor Mohammed Naushad Emmambux, Department of Consumer and Food Sciences, University of Pretoria, South Africa

The triple burden of malnutrition in Africa including South Africa are (i) macronutrient deficiency leading to protein energy malnutrition in children (ii) micronutrient deficiency (iii) and over consumption of energy dense food that lead to diet related non-communicable diseases for example obesity and type 2 diabetes. The presentation will show how research in the production of SMART (acronym for safe, marketable, affordable, ready to eat and tasty) foods can potentially tackle the triple burden of malnutrition. The research includes importance and modification food matrix and food biomolecules by energy efficient processing technologies to increase nutrient density and reduce energy density of local and indigenous foods. Most indigenous food are not suitable as complementary foods except orange fleshed sweet potato. Technologies such as infrared with added monoglyceride can reduce starch digestibility to create a lower glycaemic index maize porridge due to increase in slowly digestible starch and resistant starch. Infrared can also reduce the viscosity of porridge suggesting that it can be used as complementary foods. Extrusion cooking is versatile technology to structure design (i) instant complementary baby foods that is nutrient dense due to reduction in viscosity (ii) high fibre foods with better satiety for adults.

'Initiatives undertaken by the food industry to improve the availability of foods with improved nutrient profiles' – Linda Drummond, Registered Dietitian and Nutrition Consultant, Johannesburg, South Africa

Over the past two decades, several regulations have been promulgated in South Africa which have led to the reformulation of pre-packaged foods, as well as the development of new food and beverage products. At the same time, the food industry has also undertaken voluntary initiatives to improve the availability of foods with improved nutrient profiles. Both have led to shifts in the nutrient composition of foods and ultimately the diets of South Africans. Given the significant diet-related public health challenges facing South Africa, there is a need for improved collaboration between food scientists working with or within the food industry and registered dietitians/nutritionists to ensure that the food supply is changing for the better. Further to this, there is a need for ongoing research to assess both the changes in the food supply, as well as the dietary intake of South Africans, as part of a continuous monitoring and surveillance programme.

'How Food Science and Technology Can Assist Dietitians' – Nigel Sunley, Sunley Consulting, Johannesburg, South Africa

The presentation will discuss how dietitians, particularly those providing technical information to the public, need to have at least a basic understanding of food science and technology and their role in nutrition. While some elements of food science and technology are incorporated in university courses in nutrition and dietetics, dietitians often lack understanding of many of the key principles involved and this can have repercussions in terms of the quality of information provided to the public. Dietitians also have a role to play in bridging the knowledge gap between the food science & technology disciplines and the public health nutrition community with regard to often misunderstood topics such as food processing, food additives and technical factors influencing nutritional quality and food safety. Suggestions for useful information sources and better communication practices between the food science & technology and dietetics professions will be discussed.

