

EDITED BOOK ON SPORTS AND NUTRITION

A TINY RESEARCH OF SPORTS AND NUTRITION



INSTITUTE OF LEGAL
EDUCATION

EDITED BOOK ON SPORTS AND NUTRITION

A Tiny research of sports and nutrition

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STANDARDIZATION OF VALUE ADDED PRODUCTS FROM SELECTED MILLETS

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Abstract

Millet is a generic term used for small sized grains that form heterogeneous group and referred along with maize and sorghum as 'coarse cereals. Millets are nutritionally rich and occupy an important place in the diet of people in many regions of the world. The aim of the present study was to standardize various food products viz., Papads and Vadagam by incorporating Millets flour. Pearl millet (*Pennisetum glaucum*), Foxtail millet (*Setaria italica*), little millet (*Panicum sumatrense*) and Kodo millet (*Paspalum scrobiculatum* (L.) Were made into fine flour and incorporated in papads at the level of 10, 20 and 30% respectively. In pearl millet incorporated vadagam, the incorporation was at the level of 25, 50, 75 and 100% respectively. Hundred percentage of foxtail millet, little millet and kodo millet flour were used in the preparation of vadagam. These food products were evaluated by a panel of judges using nine point hedonic scale rating. The sensory attributes like appearance, colour, flavor, texture, taste and overall acceptability of control and millets incorporated papad and vadagam were assessed. Results revealed that the highest scores were secured by 20% pearl millet incorporated papad and 30% foxtail millet, little millet and kodo millet incorporated papad respectively. Seventy five per cent pearl millet and hundred per cent kodo millet, foxtail millet and little millet incorporated vadagam were highly acceptable in all the sensory attributes.

Key words: Millet, Papad, Vadagam, Sensory Evaluation, Hedonic scale

1. INTRODUCTION

Millets are of minor importance in the west but a staple food in the diets of African and Asiatic people. Their agricultural importance arises from their hardiness, tolerance to extreme weather and could be grown with low inputs in low rainfall areas. Bajra or pearl millet (*Pennisetum americanum*), ragi or finger

millet (*Eleusine coracana*), navane or foxtail millet (*Setaria italica*), samai or little millet (*Panicum malware*), haraka or kodo millet (*Paspalum scrobiculatum*), panivaragu or proso millet (*Panicum miliaceum*), barnyard millet (*Echinochloa frumentacea*) are the important millets cultivated largely in the Asian and African countries. The world total production of millet grain was 762712 metric tons and India top ranking with a production of 334500 tons in 2010.

India is the largest producer of many kinds of millets, which are often referred as coarse cereals. However, realizing the nutrient richness of these grains, they are now considered as “nutri-cereals” (Michealraj and Shanmugam, 2013). Millets are major food sources for millions of people, especially those who live in hot, dry areas of the world. (Adekunle, 2012). Millets is nutritionally rich and occupy an important place in the diet of people in many regions of the world. Millet grains are now receiving specific attention from the developing countries in terms of utilization as food as well as from some developed countries in terms of its good potential. Millets are rich sources of phytochemicals and micronutrients and play many roles in the body immune system. Millets have nutraceutical properties in the form of antioxidants which prevent deterioration of human health such as lowering blood pressure, risk of heart disease, prevention of cancer and diabetes. (Pradeep and Guha, 2011).

Pearl millet (*Pennisetum glaucum*) is a tall, warm season and an annual grass belongs to family Poaceae. It is locally known as Bajra which is an important dual-purpose summer crop grown for both fodder and grain. It can grow up to height of 6 to 10 feet as conditions of high temperatures and favorable moisture prevails. (Faridullah et al., 2010). Foxtail millet(*Setaria italica*)ranks second in the total world production of millets and it continues to have an important place in the field of agriculture all over the world providing approximately six million tons of food to millions of people, mainly on poor or marginal soils in the Southern Europe and in the temperate subtropical and Tropical Asia.