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Strategies for Conservation and Sustainable Use of Biodiversity for Food and Nutrition in Sri Lanka

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The project funded by GEF, with the goal of mainstreaming biodiversity conservation and sustainable use for improved human nutrition and well-being (BFN), shows a great promise in Sri Lanka. Baseline surveys in 3 pilot sites revealed a rich level of utilization of the available agro-biodiversity by the households but poor consumption of a balanced diet. The study also revealed the prevalence of food secure, food insecure without hunger, food insecure with moderate hunger and food insecure with severe hunger as 40%, 57.4%, 7.1% and 1.4% respectively. As project interventions, BFN started collection of existing nutritional data and started composition analysis of 64 priority, local, agricultural biodiversity species/varieties in collaboration and development of information portal on BFN in comply with INFOODs data base. Several awareness programs on BFN have being planned and conducted at selected pilot sites including establishment of school home gardens, promotion of diversity and food fairs. At the national level several activities are underway; to establish marketing strategies for under-utilized, traditional crop varieties including local root & tuber crops; the development of demonstration plots; traditional knowledge documentation and dissemination; production and marketing of novel value added products; empowerment and self-employment programmes for women to popularize the use of nutritious herbal food and beverages; festivals of under-utilized fruits; increasing local fruit and vegetable consumption of Sri Lankans through 'helabojun' sales centres; and development of a model urban home gardens. The policies encompassing biodiversity, food and health are being also currently reviewed in addition to integration of BFN concerns in to NBSAP document for 2016-2022.

Keywords: Agrobiodiversity, Dietary diversity, Local food, Nutrition

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Little Millet, *Panicum sumatrense*, An Under-utilized Multipurpose Crop

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Little millet is a native crop of India, and well adapted to varied soil and environmental conditions, short duration with considerable within species diversity, and has huge potential to produce good grain yield and high biomass with limited water supply under marginal lands of Indian condition. To assess the grain and biomass yield potentials, 200 accessions, including core collection (56) were evaluated in an alpha-design using two replications. The residual maximum likelihood (REML) analysis indicated that variance due to genotypes was significant for important traits including grain and biomass yields. A large variability was observed for days to flowering (range 38 to 97 days), plant height (94 to 198 cm), basal tillers (7.8 to 13.32), grain yield (5 to 12 g plant⁻¹) and dry matter yield (23 to 159 g plant⁻¹). Accessions belonging to race *robusta* were late flowering (79 days after sowing), taller (167 cm) and having higher dry matter yield (88 g plant⁻¹) and slightly greater grain yield (7.8 g plant⁻¹) than that of race *nana*. Accessions producing higher grain yield (>10 g plant⁻¹; IPMr# 1021, 841, 1017, 1063, 983, 712, 1040) and for higher dry matter yield (>133 g plant⁻¹; IPMr# 858, 1043, 1070, 1063, 877) were identified. Due to its short duration and high biomass yield, little millet an under-utilized crop has potential as bioenergy crop besides providing food and fodder. Research is in progress to assess sequence variations linked with grain and biomass yields, and other important agronomic traits.

Keywords: Biomass, Dry matter yield, Grain yield, Little millet