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Growth and Productivity of Finger Millet (*Eleusine coracana* L. Gaertn) as Influenced by Integrated Nutrient Management

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ABSTRACT

Millets have been re-recognized during recent times as nutri-cereals because of their nutritional qualities. Among different small millets, finger millet (*Eleusine coracana* L. Gaertn) is having enough importance in India in terms of acreage and production. The crop responds well to added nutrients to enhance yield and integration of different sources of nutrients is considered as the best option for sustainable production. Considering the above fact, an experiment was conducted in south Odisha conditions at Bagusala Farm of Centurion University of Technology and Management to study the effect of biofertilizer *Azospirillum* and graded levels of chemical fertilizer on growth and yield of finger millet. The results of above research clearly indicated that application of 100% RDF was beneficial for increasing growth parameters like plant height, number of tillers, dry matter accumulation and leaf area index of finger millet. Grain and straw yield of finger millet were also increased by application of 100% RDF. The impact of biofertilizer application was not observed on growth and productivity.

Keywords: Finger millet, nutrient management, biofertilizer, chemical fertilizer, growth parameters, yield

Millets are ancient cereals, but they lost their importance due to promotional activities in favour of fine cereals, namely, rice, wheat and maize. During recent times, the nutritional qualities of millets have been re-evaluated and health-conscious consumers preferring to gluten-free millets in their diet (Banerjee & Maitra, 2020). Moreover, millets are considered as eco-friendly crops because of low input demands and tolerance to adverse climatic conditions (Brahmachari *et al.* 2018). Among different millets, sorghum and pearl millet are termed as major millets and rest are known as small or minor millets (Maitra, 2020). Finger millet (*Eleusine coracana* L. Gaertn) is the most important small millets in terms of area and production. In India, the area, production and productivity of finger millet are 1.27 million hectares, 2.61 million tonnes and 1489 kg ha^{-1}, respectively (Agriculture Statistics at a Glance, 2017). The distribution of finger millet in the country is commonly observed in Andhra Pradesh, Gujarat, Jharkhand, Karnataka, Maharashtra, Odisha, Uttaranchal, and Tamil Nadu (Harika *et al.* 2019a). In Odisha, the crop is grown in 1.58 lakh ha and production is 1.37 lakh tonne; however, productivity

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