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Effect of establishment methods and nutrient management on yield attributes and yield of finger millet (*Eleusine coracana* G.)

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ABSTRACT

The field experiment was conducted at the Central Farm, Central Experiment Station, Wakawali, Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth, Dapoli, dist. Ratnagiri (M.S.) during *Kharif* season of the year 2009 on terraced upland to study the effect of establishment methods and nutrient management on yield attributes and yield of finger millet (*Eleusine coracana* G.). The experiment was laid out in a split plot design. The Main plot treatments comprised four methods of crop establishment and sub plot treatments consisted of five nutrient management practices. Thus, there were 20 treatment combinations replicated three times. On the basis of results obtained from present investigation it was concluded that *Kharif* finger millet grown under south Konkan conditions be established by transplanting and supplied with FYM @ 5 t ha^{-1} plus 75 per cent RDF(60:30:00 kg NPK/ha) plus biofertilizers (*Azospirillum* + PSB), so as to obtain higher yield of finger millet.

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KEY WORDS : Establishment methods, Nutrient management, Yield attributed, Finger millet

Finger millet (*Eleusine coracana* G.) is an important food grain crop of semi arid tropics, particularly of India and East Africa. It is a staple food of tribes and lower income class of most of the villages in Konkan. This crop is generally grown in the Konkan on the moderate hill slopes and uplands which are less fertile and productive where rice cultivation is not possible. To get higher yield of quality finger millet, new high yielding fertilizer responsive varieties should be adapted with proper nutrient management practices. The productivity is low due to late transplanting, faulty methods of cultivation and little or no use of fertilizers. The secret of boosting its yields mainly lies in suitable planting method and properly fertilizing the crop. Keeping these views, the present investigation was undertaken.

RESEARCH PROCEDURE

The field experiment was conducted at the Central Farm, Central Experiment Station, Wakawali, Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth, Dapoli, Dist. Ratnagiri (M.S.) during *Kharif* season of the year 2009 to study the effect of establishment methods and nutrient management on yield attributes and yield of finger millet (*Eleusine coracana* G.). The experiment was conducted on terraced upland which was suitable for the cultivation of finger millet. The field experiment was laid out in a split plot design. The Main plot treatments comprised of four methods of crop establishment (S_1 :Line sowing of seeds at 20 cm spacing at onset of monsoon, S_2 :Line sowing of pre germinated seeds at 20 cm spacing after onset of monsoon, S_3 *:Awatni* (Farmer's practice-throwing of seedlings randomly) and S_4 :Recommended transplanting at 20 x 15 cm spacing (*Thomba* method)), whereas, the sub plot treatments consisted of five nutrient management practices *viz.,* F_1:RDF (80:40:00 kg N + P_2O_5 + K_2O ha^{-1}), F_2: FYM @ 5 t ha^{-1} + RDF , F_3: FYM @ 5 t ha^{-1} + 75% RDF + Biofertilizers(*Azospirillum* + PSB), F_4: FYM @ 10 t ha^{-1} + Biofertilizers (*Azospirillum* + PSB) and F_5: FYM @ 15 t ha^{-1} + Biofertilizers (*Azospirillum* + PSB.)). Thus, there were 20 treatment combinations replicated three times. The variety, Dapoli 1 of finger millet was used in the present investigation. The finger millet nursery area was manured with FYM and it was mixed thoroughly in soil at the time of seedbed preparation. Then, nursery beds of 3 m x 1 m