RESEARCH ARTICLE

EFFECT OF NURSERY NUTRIENTS MANAGEMENT PRACTICES ON GROWTH AND YIELD OF SAMBHA MAHASURI RICE (*ORYZA SATAIVA L.*) UNDER FLOOD PRONE ECOSYSTEM

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Abstract: Present investigation was carried out to study the "Effect of nursery nutrients management practices on growth and yield of sambha mahasuri rice (*oryza sataiva* L.) under flood prone ecosystem" during wet season, 2013-14 and 2014-15. Experiment was laid out in randomized block design with three replication and one variety Sambha Mahsuri *sub1* in cemented pond (size; 21x17.50 m x1.25 m). Twenty five days old seedlings were transplanted in ponds. Recommended dose of nursery N, P, K& silicate @ 40:40:40 +120, 50 ppm Kg ha^{-1} was applied at 10 DAS. Main field accompined with nursery reframed with time schedule as (T_3N_2) N 30 Kg ha^{-1} with combination of P and K @ 60, 50 Kg ha^{-1} applied as basal before transplanting followed by (T_7N_4) N 30Kg ha^{-1} as top dressing at 5^{th} day after de-submergence and P full dose before transplanting and K 20 kg ha^{-1} at 5^{th} days de-submergence one week before flowering respectively (30Kg N ha^{-1} at each days), (T_3N_2), N 30 Kg ha^{-1} with 40 Kg ha^{-1} P and K as basal application @ N 30 Kg ha^{-1} at 5^{th} , 20^{th} days after de-submergence and one week before flowering and with 40Kg ha^{-1} P and K as basal further recommended dose of N applied during post flood @ 60, 30 and N 30 Kg ha^{-1} at subsequently at 5^{th}, 20^{th} days after de-submergence and one week before flowering as foliar respectively. fifthteen (15) days complete submergence treatment was given after 20 days transplanting. Results indicated that before submergence lower dose of N @ (30 Kg ha^{-1}) and potassium (1/2) 25, 20 kg ha^{-1} at 5^{th} days after de-submergence significantly increased the maximum plant survival ,plant height, dry weight, ear bearing shoot m^{-2} panicle length number of grain per panicle, test wt. in samba mahsuri *sub1* rice variety at par with T_7N_4 in which N was applied in foure split doses (N 30 Kg ha^{-1}) as basal top dressing was higher in comparison T_4N_2 T_5N_2 T_6N_4, T_2N_2 and T_1N_1 5^{th} days after de-submergence corresponded N 30 Kg ha^{-1} applied as basal at transplanting, mean while, plant mortality at recovery was higher (6.68 to 5.58%) in comparison to T_7N_4 (6.32 to 5.92%). Although maximum plant mortality (6.68 to 5.58%) was recorded with N 30 Kg ha^{-1} applied as basal. Moreover, lower dose of N 30 Kg ha^{-1} applied with P and K @ 50, 40 Kg ha^{-1} as basal at transplanting and rest N applied in three split doses (30Kg ha^{-1} each split) with time frame *i.e.* bfore 5^{th} days 20^{th} days and booting and panicle emergence after de-submergence and one week before flowering significantly improved survival and yield (Kg/plot) of samba mahsuri *sub1* rice variety. Above package and practice might be recommended for farmer practice after further validation.

Keywords: Nursery nutrient management, Plant height, Dry biomass, Panicle length

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