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Farmer's friendly technique of raising mat type healthy seedling in cold environment

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Abstract

High mortality and slow growth of seedling generally occurred in tray due to cold, foggy weather and severe seedling blight. Mechanical transplanting is hampered, farmers having economic loss. A sustainable method for raising mat type seedling is necessary. Experiments were conducted on disease control and seedling growth in dry seasons. Fungicides treated/untreated seeds were sown 120-130g in each tray containing pulverized fine grain loam/sandy loam soils. Seed covered with a thin layer of soil and irrigated. It was polythene covered (PC) for 72h and then every night along with 2/3 sprinkler irrigation (SI) per day. Untreated seedlings infected 53-93%. Pyraclostrobin, Azoxystrobin and Azoxystrobin+Difeconazole treated seeds/sprayed (72h) seedlings had no disease. Seedling height was 11.7-13.2 cm with compact and thick root mat at 25 days. Seeds treated at 0.2-0.3% (18-20h) showed no disease but severely in untreated seeds in all locations. Seedling height (13.8 cm), leaf age (3.7) and root number (8.5) were better when NPK were applied at 3-4-3 g/tray. Spraying of urea (1%) in addition with MOP, theovit and ZnSo₄ at 0.6-0.6-0.2% on 7 and 15th days was also effective. PC showed significant growth (29.1-34.5%). Root mat was not good in flooded irrigation (FI). Disease was higher in SI (66.7-97.3%) than FI (0.7-3.7%) in untreated seeds regardless of polythene use. The protocol would be effective for raising mat type seedling in cold environment.

Key words: Cold environment, rice, seedling blight, tray/mat seedling.

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