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On-farm evaluation of paddy drum seeder (8 row) in farmers fields

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ABSTRACT : On-farm demonstrations were conducted to popularize the drum seeder among the farmers, feasibility of paddy sowing by drum seeder was done under supervision of DAATT Centre (Extension unit of Acharya N.G. Ranga Agricultural University, Andhra Pradesh), Anantapuram for two years during *Kharif*, 2010-11 to 2011-12. The comparison was made between direct sowing of paddy using drum seeder and farmers practice with an objective to reduce the cost of production of paddy and subsequently improve the returns from unit in farmers' fields. Demonstrations revealed that there were more number of tillers (406) and panicles (381) per metre square in direct sowing by drum seeder compared to 379 tillers and 354 panicles per metre square in farmers practice. In direct sowing by drum seeder plant height, number of tillers per metre square, panicles per metre square, panicle length and number of grains per panicle were increased by 4.8, 7.1, 7.6, 23.4 and 20.9 per cent, respectively over farmers practice. Direct sowing of paddy with drum seeder has recorded higher grain yield (5684 kg ha^{-1}) which was 12.7 per cent higher over farmers practice (5041 kg ha^{-1}). A saving of Rs. 4850/- (Rupees four thousand eight hundred and fifty only) on cost of cultivation per hectare was realized in direct sowing of paddy with drum seeder besides increasing paddy yield. Gross returns (Rs. 62867/-) and net returns (Rs. 42867/-) per hectare were with drum seeder method compared to farmers practice (Rs. 56777/- gross returns and Rs. 31927/- net returns). In drum seeder method cost of cultivation was reduced by 19.5 per cent whereas, gross returns and net returns were improved by 10.7 and 34.3 per cent, respectively over farmers practice. Seed rate can be reduced to 30 kg ha^{-1} against 68.7 kg ha^{-1} in farmers practice. Direct sowing with drum seeder helps in reducing the cost on nursery raising and transplanting besides increasing yield by 12.7 per cent, reduces the crop duration and cost of cultivation. The cost of cultivation was reduced by 19.5 per cent and net returns increased by 34.3 per cent.

KEY **W**ORDS : Paddy drum seeder, Yield attributes, Grain yield, Economics

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