

## RESEARCH NEWS

### POTENTIAL OF SEEDLING BROADCASTING IN FOUNDATION RICE SEED PRODUCTION

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The Seed and Planting Material Development Centre (SPMDC) of the Department of Agriculture is responsible for producing and supplying quality seed and planting materials of recommended varieties of crops. Rice seed production program is one of the biggest seed production programmes handled by SPMDC. Foundation seed production is the most important step in rice seed production and produced only at the government seed farms using limited quantity of breeder seeds. Producing high quality and adequate quantity of foundation seeds is very important for a successful seed production program.

Transplanting is the best establishment method for producing high seed paddy yield of good quality. However, due to shortage of labour, unavailability of farm machinery and irrigation water in time, direct seeding is practiced in many seed farms to produce foundation seeds despite many advantages of transplanting. Seedling Broadcasting (SB) technology is the most recently recommended technology by the DOA to reduce labour and seed paddy requirement in rice cultivation. In this technology 12-15 days old seedlings raised in plastic trays are broadcasted into the field (Jayawardena *et al.*, 2004). In this investigation the possibility of adopting SB technique in producing high quality seed from foundation seed was studied at the government seed farm Polonnaruwa during *maha* 2006/07 using four rice varieties, Bg 360, Bg 379/2, Bg 352 and Bg 454. All the varieties were grown under SB direct seedling and transplanted in 0.4 ha plots for comparison purpose. Data on labour and seed paddy use, advantage and disadvantages were recorded. Seed paddy requirement for SB system was 30 kgha<sup>-1</sup> compared to that of 100 kg and 50 kg respectively for direct seeding and transplanting (Technoguide 1989) and thereby around 70 kgha<sup>-1</sup> seed could be saved when compared with direct seeding.

The labour requirement for nursery management and field establishment was around 30 Man days (MD) ha<sup>-1</sup> compared to that of 50 MD ha<sup>-1</sup> in manual transplanting. SB system gave higher seed paddy yield in all varieties. The yield advantage ranged from 0.4-1.4 tha<sup>-1</sup>. Average yield advantage of SB system over direct seeding was 0.8 tha<sup>-1</sup>. This extra yield