

2nd International Conference on Agricultural & Horticultural Sciences

Radisson Blu Plaza Hotel, Hyderabad, India February 03-05, 2014

Aerobic rice-An alternative cultivation method for water constrained Rice environments

B. Sreedevi, P. C. Latha, P. Senguttuvelu, T. Ram and B. C. Viraktamath
Directorate of Rice Research, India

The great global challenge for the coming years will be how to produce more food with less water. Of all the crops grown under irrigation, more than 50-60% of the irrigation water is used for rice, the staple food for nearly half the world's population. Water scarcity will be a threat to food security in Asian region, since >90% of the world's rice is produced and consumed in this region. Rice is unique that grows well both under aerobic and anaerobic conditions. Aerobic rice is grown on dry but irrigated soils like other irrigated dry crops like wheat and barley with the aim of minimizing the water requirements of rice, but at the same time retaining the high yielding ability and input responsive characteristics of irrigated lowland varieties. Results of the experiments conducted at DRR research farm showed that hybrids or high yielding varieties of mid early, medium duration, drought tolerance & weed competitiveness are suitable for dry seeding in lines of 20 cm, one week before/ immediately after the onset of monsoon. Fertilizer schedule of normal transplanted rice is sufficient with Nitrogen in $\frac{3}{4}$ splits and partial substitution of Nitrogen, Phosphorus by biofertilizers viz., Azospirillum, Phosphorus solubilising bacteria at 5 kg/ha for 20-25% chemical fertilizer requirement. The yields of aerobic rice are close (around 10% less) to those irrigated lowlands, but with water savings of around 40%. Weeds, one of the major constrains can be managed with pre-emergence application of pendimethalin and post-emergence application of bispyribacsodium at 2-5 leaf stage of weeds.

Biography

B. Sreedevi is a Principal Scientist (Agronomy) at Directorate of Rice Research, Rajendranagar, Hyderabad. She is working on agronomic aspects of different rice establishment methods and involved in Agronomy program of All India Coordinated Rice Improvement Program. She has published 12 papers and 11 popular articles in reputed journals and magazines, one Book, three Technical Bulletins.

sreedevi.palakolanu@gmail.com