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Economical and Environmental Benefits of Aerobic Rice in India

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Abstract

India is one of the largest rice producing country with 20 per cent of world production. Rice is a major source of calories of eastern and southern population of the country. Traditionally, it is cultivated under submerged condition which demands sizeable quantity of water and labour for seedling transplantation. It is reported that 5000 litres of water is required to produce one Kilo gram of rice. The ever increasing issue of depletion of water resources in tropical and sub-tropical parts of India, questions the sustainability of production of paddy. One of the viable alternatives to overcome the problem is aerobic rice technology. Attempt for development of drought tolerant aerobic rice in India begun in 2007. This study aims to quantify the benefits of aerobic rice production in comparison with the puddle method of cultivation. Aerobic rice is advantageous over traditional rice cultivation by saving more than 60 per cent water use and 55 per cent of the labour. Requirement for application of fertilisers and insecticides is also less. Potential benefits of aerobic rice technology is estimated for state of Karnataka, where this technology was first initiated in India. With 25 per cent of rice producing area suitable for aerobic rice cultivation, the total economic surplus gain is estimated to be around US $ 80 million per year. Apart from benefit to consumers and producers, it will also contribute to the profits of seed producing companies. Furthermore, it contributes to societal welfare by severely reducing the green house gases, specifically, nitrous oxide and methane, hence improving the carbon foot printing status of the country.

Keywords: Aerobic rice, corbon foot printing, economic surplus, Puddled rice

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