

Editorial

Ever increasing demand for food due to alarming increase in population is very challenging for the scientists at the event of climatic change. Next to China, India has the highest population of 1.2 billion and likely to reach 1.7 billion by 2050. In order to meet the growing demands for our increasing production need to be increased. This can only be possible by bridging the existing yield gaps through improved technologies and by integrated natural resource management. For sustained agriculture production, a good quality seed is the most basic and essential input. Other inputs are contingent upon quality of seed for being optimally effective. The existing seed systems in India involve the formal seed sector, which is an official or private control of seed monitored through the various processes. The informal seed sector is simply the farmers themselves that provide each other and themselves with seed for sowing. At present the formal and informal seed sectors are contributing 78% and 22% of total seed, respectively. Nearly 80% of the farmers are using certified seed and truthfully labelled seed and remaining 20% farmers are using owned seeds as raised from their farms. Hence, the second Green Revolution would demand much faster growth of seed sector, especially to meet the demand of hybrid seeds and to replace old with new high yielding varieties. Seed material is the primary input in agriculture and the quality of seed is one of the determinants of output growth, given other complementary inputs. Improved/hybrid seed is an integral part of new technology which is scale neutral. The process of modernizing the Indian agriculture involves the intensive use of non-conventional inputs such as quality seeds, chemical fertiliser, pesticide, weedicide, irrigation, farm machinery and network of research and extension infrastructure. In spite of intensive usage of inputs, agriculture has witnessed stagnant/falling productivity levels in most of the crops and the cost of production has been increasing. As a result, the return to private investment on agriculture is falling. In this scenario, use of quality seed in enhancing the productivity is crucial. The introduction of new technology in Indian agriculture during the mid sixties enabled the country to achieve self-sufficiency in food production. It would not be an exaggeration to say that the green revolution was based on the use of high yielding varieties and crop hybrids responsive to high levels of fertilisers and irrigation. It has been reported that genetically good quality seed can alone increase crop productivity by 15 to 20 per cent. Understanding seed systems is crucial for managing seed on farm in locations where it is of both private value to farmers and social significance for future crop improvement and the resilience of the farming system. Community Based Seed System (CBSS) is also emerging as a complementary approach to formal and informal seed systems for making seed system inclusive and dynamic to meet the diverse needs of smallholder farmers in marginal farming systems.

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