Seed replacement rate in crops: A case study from arid western Rajasthan

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Abstract

Seed replacement rate (SRR) is an important criterion to measure the extent of use of certified/quality seeds. To estimate the SRR of crops in the locality a study was conducted in Ujaliya village in Jodhpur district of Rajasthan in 2017-18. Results based primary data of 120 farm households reveals that SRR for cotton was 100 percent since all the cultivars were *Bt* hybrids. SRR in pearl millet, castor and mustard were 89, 69 and 78%, respectively. Farmers generally used hybrids in pearl millet but composites/varieties were preferred by some farmers for domestic purposes. In castor and mustard crops, varieties, which were reused for 2-3 years earlier, were being replaced by hybrids. SRR in green gram, clusterbean, moth bean, sesame, cowpea and wheat were 44, 34, 27, 24, 20 and 22%, respectively. Since popular varieties of these crops are being used for 2-4 years. SRR in cumin and isabgol were 90 and 85% respectively. Varieties are ruling in both these crops but farmers replaced seed almost every year. These crops were grown under limited irrigation conditions and the quality of grain/seeds was not good enough to reuse. The SRR in onion, garlic and carrot were 34, 28 and 13%, respectively. Carrot was the most important commercial crop in the village. All the farmers produced their own seed and reused for more than six years without any deterioration in yield and quality. The farmers were found to have excellent seed production skills in carrot, onion and garlic as evident from high quality of seed/planting material in these crops though the SRR was very low. The SRR in crops was found to be affected by type of cultivar (variety/hybrid), presence/absence of informal seed sector, whether crop is grown for domestic or commercial purpose and availability of irrigation facilities.

Keywords: Certified seed, Hybrid, Informal seed sector, Seed Replacement Rate, Variety