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Quality assessment of berseem (*Trifolium alexandrinum* L.) seed traded through informal seed system in Bundelkhand region of central India

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Abstract
In the present study, seventeen berseem seed samples were collected from Bundelkhand region in central India, and were analyzed for their quality traits. It was observed that most of the samples had high admixture of weeds and other crop seeds resulting in poor physical purity (18.3-98.7%). Germination varied from 4 to 100% and so was the case with seedling length (1.41 to 9.18 cm). The seed vigour index-I was recorded highest (887) in variety Wardan (IGFRI) followed by open market samples OM-5 (775), OM-4 (773) and traders sample TS-4 (757). Field emergence (%) of samples available in market was also poor and positively correlated with percent seed germination. All the seed lots available in market except two failed to meet the required quality parameters as per Indian minimum seed certification standards (IMSCS, 2013). The results clearly indicated the reasons for low productivity in berseem and emphasized the need for rigorous quality control by seed law enforcement and certain policy changes to tackle the quest for quality seeds in Bundelkhand region.

Keywords: Berseem, Germination, Physical purity, Seed import, Seed quality, Seed vigour index