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Exploitation and utilization of exotic germplasm accessions through variability and association studies in oat (*Avena sativa* L.)

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Abstract
The present study was conducted with 47 exotic germplasm accessions along with three checks of oat at Punjab Agricultural University, Ludhiana during *Rabi* season 2019-2020. The objective of study was to determine the extent of correlation among yield and its contributing traits and their effects. The high value of phenotypic coefficient of variation (PCV) and genotypic coefficient of variation (GCV) was observed for grain yield followed by green fodder yield and florets per panicle. High heritability was present for the grain yield (99.08%) followed by florets per panicle (98.76%) and tillers per meter row length (98.65%). The high genetic advance was observed for grain yield (139.09), then green fodder yield (79.38) and florets per panicle (70.64). Traits like plant height (0.18), followed by florets per panicle (0.13) and spikelet per panicle (0.09) had positive and significant correlation with grain yield. Positive and direct effect of plant height (0.23), followed by effective tillers (0.1785) and panicle length (0.1393) on grain yield was observed. The results suggested that traits like plant height, florets per panicle and spikelet per panicle were the main grain yield components.

Keywords: Correlation, Genetic advance, Heritability, Oat, Path analysis