



## Water Use Efficiency of Different Mustard Cultivars under Varying Thermal Conditions in Ludhiana, Punjab

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**Abstract:** A field study was conducted during two consecutive *rabi* seasons of 2012-13 and 2013-14 to observe the water use efficiency (WUE) of mustard varieties, viz, PBR 91, GSL 1 and Hyolla PAC 401 sown on three dates (D1-25<sup>th</sup> October, D2-5<sup>th</sup> November and D3-15<sup>th</sup> November). Three water application treatments were applied as per recommendations of package of practices of *rabi* crops published by PAU, Ludhiana. Water use efficiency of PBR 91 was higher in all the three dates of sowing during both *rabi* seasons due to higher seed and straw yield. Delayed sowing reduced the yield and yield contributing characters in all the cultivars under all the irrigation levels. Hence, delayed sowing increased the consumptive water use but decreased the water use efficiency of all the cultivars. The coefficient of determination for seed yield, straw yield and water use efficiency was 78, 84 and 64 per cent, respectively during *rabi* season 2013-14 and 92, 94 and 46 per cent, respectively during *rabi* season 2014-15 when water use efficiency was regressed against these. The relationship was observed to be fairly positive during both the *rabi* seasons.

**Keywords:** Water use efficiency, Mustard crop, Irrigation, Regression

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