## Heterosis for yield and yield related attributes in urd bean (*Vigna mungo* L. Hepper)

## Sanjay Kumar Sinha<sup>1</sup> and Sunil Kumar<sup>2</sup>

Received Noveber 16, 2016 and Accepted February 26, 2017

**ABSTRACT:** A field experiment was conducted to examine the desirable heterotic combination for yield and yield related traits involving,  $8 \times 8$  diallel mating design (excluding reciprocals). In, diallel mating analysis excluding reciprocals, it was found that several crosses exhibited negative heterosis over mid parent, better parent and over the check variety 'Birsa Urd-1' for seed yield per plant. Maximum heterosis was observed upto the extent of 71.01 % over mid parent whereas over better parent and check variety 'Birsa Urd-1' the maximum heterosis 70.19 % was observed. The best cross combination T9 × Birsa urd-1 showed highly significant heterosis over check variety is 70.19%. This cross also showed the highest and highly significant heterosis 70.01 % over mid parent. Crosses showing heterosis for seed yield per plant were heterotic for major yield related components. However, the cross T9 × TU-51 exhibited highly significant positive heterosis over mid parent (42.16 %), better parent (27.05 %) and over check parent 'Birsa Urd-1' (26.44 %). These identified hybrids may be utilized for enhancing the yield potential of crop as well as improving important economic traits to develop a high yielding variety or cultivar of Urdbean in future breeding programme.

Key Words: Urdbean, Vigna mungo, heterosis, combining ability.